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The Tree of Life

Africa is called the "Cradle of Humanity". The wisdom of this continent is appealing in every domain including the question of demography with a population of 1.5 billion people characterised by a growth rate of about 100 million every three years.

"It takes a village to raise a child" – says the African proverb meaning that affords in the said field must be common and the results have a beneficial effect on the whole society.

If one cannot be as optimistic as Doctor Pangloss, the pedantic and unfailingly optimistic tutor of Voltaire's Candide, the question of demography needs to be addressed in the European Union.

The authors of the fourth special edition of *Európai Tükör/European Mirror* dedicated to the question of demography dress a gloomy picture of the demographic situation in the EU and call for an effective and EU level policy in this area.

The demographic decline resulting from low fertility rates, the increase in the ageing population in parallel with the continuous decline of the proportion of young people, which increases fiscal strains on healthcare and social security systems, which should be counterbalanced by the need to create a silver economy, and second, lower GDP per capita deriving from lower productivity and rising fiscal expenditure due to ageing constitute all elements that are strongly underlined by more than one factor. All these phenomena happen in a quasi-lack of EU initiatives in this domain.

"Jusqu'ici tout va bien."

What can be done? Answers may be found in the writings of Andrea Kuhl, Áron Drabancz, Piroska Mária Szalai Varga Zsoltné, Petra Szűcs, Andrea Szegedi, Ádám Csepeti, Márton Zsuráfszky, István Lóránd Szakáli, Attila Miklós Kovács, Tibor Tóth, Csaba Zalai, Mariann Tánczos, Csaba Lentner and Tünde Fűrész, who have dealt with the topic from different perspectives.

Krisztián Kecsmár
Editor-in-Chief

DOI: 10.32559/et.2024.1.1

Ádám Csepeti[1] – *István Loránd Szakáli*[2] –
Andrea Szegedi[3] – *Márton Zsuráfszky*[4]

The Effect of Demographic Trends on Competitiveness

A Methodological Experiment to Calculate the Loss of Human Capital

The paper provides an overview of global demographic trends, including a brief description of the situation in the European Union and Hungary. It is important not only to monitor these processes, but also to identify their causes and consequences. This is also the focus of the study, which highlights the general link between current demographic trends and competitiveness. In particular, it focuses on measuring the loss of human capital due to emigration and attempts to quantify the loss of human capital in Hungary due to the youth and skills drain in the central regions.

The study is a desk study based on published national and international sources (databases, studies). The authors of the study calculated the loss of human capital using a proprietary methodology in order to draw attention to the fact that in ageing societies, the competition for young and skilled workers intensifies and undermines the competitiveness and economic performance of the countries concerned.

Keywords: demography, demographic processes, ageing societies, competitiveness, emigration, brain drain, human capital

[1] Assistant Professor, Corvinus University of Budapest Rector's Office, Institute of Marketing and Media, Department of Marketing Management, e-mail: adam.csepeti@uni-corvinus.hu

[2] Strategic Director, Oeconomus Economic Research Foundation, Strategic Division, e-mail: szakali@oeconomus.hu

[3] Senior Researcher, Oeconomus Economic Research Foundation, Strategic Division, e-mail: andrea.szegedi@oeconomus.hu

[4] Junior Researcher, Oeconomus Economic Research Foundation, Strategic Division, e-mail: marton.zsurafszky@oeconomus.hu; PhD student, Corvinus University of Budapest, Doctoral School of International Relations and Political Science, e-mail: marton.zsurafszky@stud.uni-corvinus.hu

Introduction

The population of a region, a country or a municipality is determined by four factors: the number of births and deaths, emigration and immigration. The size of the population of a territorial community has consistently been a significant criterion, as the number and age composition of the inhabitants of a specific geographical unit exert a pivotal influence on the economic and, when applicable, military strength of the region. An excess of the population can result in food shortages and social unrest, whereas a deficiency in population numbers and an unfavourable age structure can jeopardise the economic and military stability of the area.

At the time of the emergence of demography as a discipline, international migration was less prevalent, and population trends were typically determined by births and deaths. In the contemporary era, migration has also emerged as a pivotal determinant of population trends, given the notable expansion in the potential for migration, or the propensity to migrate.

The processes of demography are typically gradual, with changes occurring at a slow pace. However, the discipline of demography is not solely concerned with monitoring change; it is also concerned with identifying the underlying causes and consequences of such change.[5] It is also important to consider the impact of current demographic processes on other fields, including technology, the economy and culture. These processes are already affecting the performance and competitiveness of individual industries and markets. This study focuses on the latter, examining the impact of current demographic processes on competitiveness and the challenges that decision-makers must address. The authors of the paper attempt to calculate the loss of human capital in Hungary due to the current increasing migration potential.

Methodology

The study is a desk research project based on a comprehensive review of published national and international sources, including databases and studies. A number of databases were utilised throughout the course of the study. The UN population data and projections published in 2022 were employed as a point of departure, while for the European Union and the domestic outlook, Eurostat's most recent data, from either 2022 or 2023 depending on the dataset, were used for the purposes of comparability and continuity. In order to calculate human capital, the number of Hungarians residing abroad on a long-term basis was also based on data from the UN database. As the database provides data in five-year increments, trend calculations were employed in certain instances to extrapolate the data.

In addition to the databases, the authors drew upon national and international publications, which provided the foundation for the direction of the research. As demonstrated by Zsolt Spéder's[6] research, the adverse trends that have been observed in Western Europe for an extended period of time are even less pronounced in Hungary.

[5] Kapitány 2015.
[6] Spéder 2021.

However, in recent decades, the age at which mothers give birth has been gradually increasing in Hungary, and the proportion of childless mothers in the 35-year age group has reached a historical peak. For an extended period, Hungary has been spared the elevated rates of childlessness that have long been prevalent in Western Europe, particularly in German-speaking countries. The country remains among those with lower rates of childlessness, but the trend is unmistakably negative.

As posited by Áron Drabancz and Éva Berde,[7] the combination of economic growth and evolving social circumstances has resulted in a decline in fertility rates across all European countries by the advent of the 21st century, with the rates falling below the replacement level. In their view, current trends make it increasingly improbable that fertility will experience a meaningful upward trajectory. Furthermore, Drabancz and Berde highlight that Eurostat (2022) has developed a series of population projection scenarios for Hungary. The baseline scenario indicates that Hungary's population could decline to 8.93 million by 2070, 7.36 million in the event of a significant decline in fertility, and 10.62 million in the case of a positive turnaround in fertility rates. Nevertheless, in either scenario, the process of ageing will continue, albeit at a slower rate. The ratio of the elderly to the working-age population is set to increase significantly in all three scenarios. By 2070, the baseline scenario projects a ratio of 524 elderly people per 1,000 working-age individuals, while the low fertility scenario anticipates a ratio of 641 and the higher fertility scenario a ratio of 438.

In their analysis of the age structure of the Hungarian population, the authors also considered the findings of Csilla Obádovics and Csaba G. Tóth,[8] which similarly confirm that the dependency ratio is deteriorating, with a projected 470 elderly people for every 1,000 working-age population by 2050.

In this study, the authors employed data from the Hungarian Central Statistical Office (KSH) to quantify the impact of family support programmes. Their approach aligns with the model proposed by Drabancz–Berde,[9] which estimates the trajectory of the Hungarian fertility rate between 2011 and 2019 in the absence of family support programmes introduced since 2011. This estimation is based on linear and polynomial trends. The linear model would have resulted in an average of 25,000 fewer children per year, whereas the polynomial model would have resulted in almost 12,000 more children being born in Hungary. As the polynomial model predicts an increase in the total fertility rate, it can be compared with the data released by the KSH. Despite discrepancies in the data, the polynomial model lends support to the KSH calculations.

The authors' calculations are further validated by the research of Szabolcs Pásztor,[10] who investigated the relationship between the total fertility rate and the average maternal age at birth based on Walker's neoclassical model. Given the salience of the fertility rate decline in Hungary, the study is of particular interest. In his study, Pásztor highlights the relationship between the propensity to have children and changes in earnings and tax rates. Specifically, he asserts that well-considered economic policy decisions,

7 Drabancz–Berde 2021.
8 Obádovics–Tóth 2021.
9 Berde–Drabancz 2022.
10 Pásztor 2017.

personal income tax, and employee transfers can encourage childbearing. Conversely, the rise in maternal age is not typically attributable to financial considerations.

In examining the influence of declining fertility on pension systems, the authors have referenced the work of László Árva,[11] who offers a historical analysis of the interconnections between demographic trends and the long-term viability of pension systems. His primary contention is that the demographic trough has precipitated the imminent collapse of pension systems.

In calculating the loss of human capital, the authors have taken the statement in the Competitiveness Report of the Hungarian National Bank[12] as their point of departure, namely that an economy is competitive only if it makes optimal use of its resources. Among numerous other factors, favourable demographic trends represent a pivotal element of a competitive economy. It is challenging to envisage long-term economic growth without an active and high-quality stock of human capital in the labour market.

Results

Population trends in the world

The global population reached one billion people by the early 1800s, a figure that was reached in less than a century and a half. The global population exhibited exponential growth until recently, experiencing a significant surge during the 20th century. By 1930, the global population had reached two billion. By 1959, it had increased to three billion, and by 2011, it had reached seven billion. In a period of slightly over ten years, the global population increased by a further one billion, reaching eight billion by 2023. According to projections by the United Nations, the global population is expected to exceed 10 billion by the 2080s, after which it may begin to decline at a gradual rate.[13]

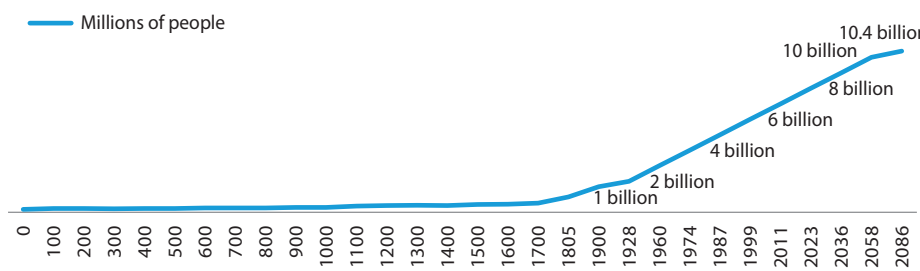

Figure 1: World population (estimates, facts and projections 0–2086, millions)
Source: UN [s. a.c]

11 ÁRVA 2019.
12 Magyar Nemzeti Bank 2023.
13 UN s. a.c.

The contemporary demographic landscape is characterised by a decelerating population growth rate, exhibiting a disparate pattern of decline and expansion. In developed countries, the decline in births is precipitous, whereas in Africa, the population continues to expand at a considerable rate. In 2023, the global total fertility rate is projected to be 2.3, a significant decline from the 4.7 rate observed in the 1960s. In 2023, Niger exhibited the highest total fertility rate, with an indicator of 6.6. In close succession, Chad exhibited a fertility rate of 6.1 per woman, while Somalia demonstrated a total fertility rate of 6.09. These rates indicate that, on average, a woman in these countries will give birth to at least six children over the course of her lifetime. In 2023, the countries with the lowest fertility rates were Macao (0.66), Hong Kong (0.71) and South Korea (0.72). In these countries, a woman of childbearing age has a relatively high probability of having one child. However, it is notable that many women in these countries choose not to have children, a conscious decision that is influenced by various socio-cultural factors.[14]

Currently, 54% of the world's countries have a total fertility rate below 2.1, indicating that the number of children being born is insufficient to maintain population levels over the medium term. The United Nations projects that the global total fertility rate will decline from 2.3 in 2023 to 2.1 by 2050.[15]

If we narrow the analysis to the European Union, we find that the number of live births has been falling steadily since the 1960s. While in 1964, 6.4 million children were born in today's EU Member States, in 2022 only 3.88 million will be born. The total fertility rate is also falling: while in the 1960s it was above 2.1 in all current Member States, in 2022 it was below 2.1 in none, with an average fertility rate of 1.46. In 2022, France had the highest total fertility rate among EU Member States (1.79), followed by Romania (1.71) and Bulgaria (1.65). In contrast, the lowest total fertility rates in 2022 were recorded in Malta (1.08), Spain (1.16) and Italy (1.24). For Hungary, the total fertility rate was 1.56 in 2022, according to Eurostat.[16]

Despite a decline in global fertility rates, life expectancy at birth has increased as a result of economic growth and advances in medicine and public health. While in the 1800s no country had a life expectancy at birth of more than 40 years, in just 150 years the gap between countries has widened significantly. In 1950, for example, life expectancy in Norway reached 72 years, while in Mali it was only 26 years.[17] The highest global indicator was recorded in 2019 with the world average life expectancy at birth reaching 73.1 years. Over the course of the 2000s, the indicator increased by six years. Following the advent of the SARS-CoV-2 pandemic, the figure declined to 72.5 years; however, the trajectory has since exhibited a positive shift.[18]

14 Earthly Data 2023.
15 Earthly Data 2023.
16 Eurostat 2024a.
17 Roser 2018.
18 WHO [s. a.].

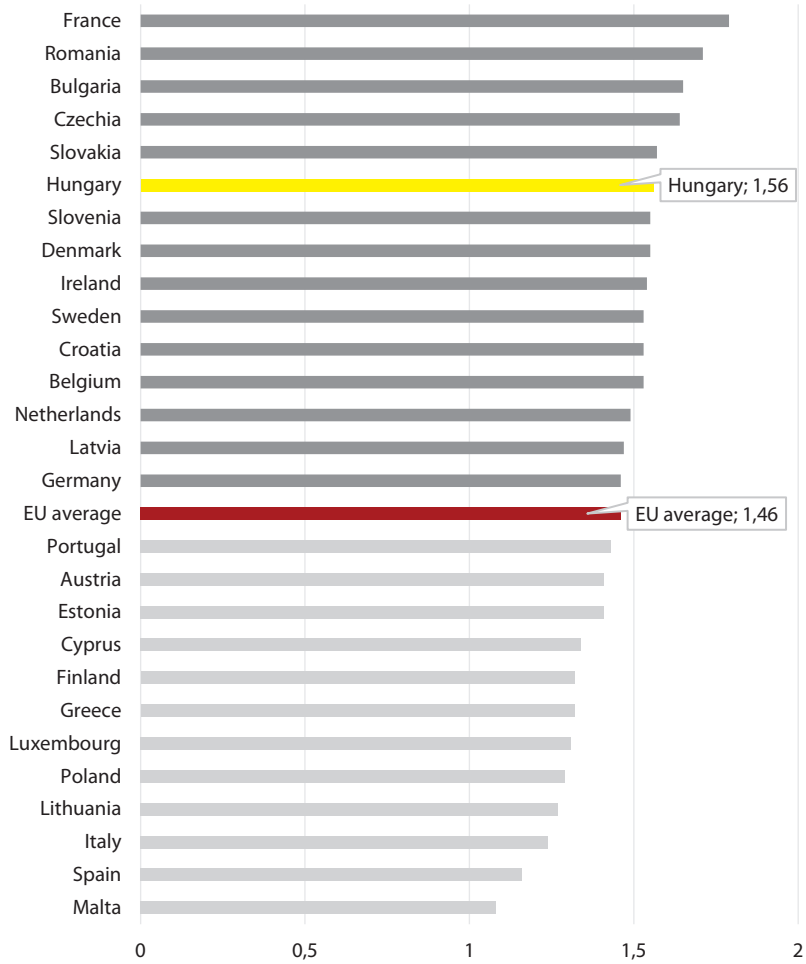

Figure 2: Total fertility rate in European Union Member States (2022)
Source: Eurostat 2024a

As life expectancy at birth rises and fertility rates decline, the proportion of the population comprising older individuals is increasing. The United Nations projects that the number of individuals aged 65 and above worldwide will reach 1.6 billion by 2050. By 2030, the number of individuals aged 65 and above in Europe will exceed the number of individuals under the age of 20. A similar trajectory is anticipated in Australia and New Zealand, as well as in East Asia, by 2050. The current median age of the global population is 30 with a projected increase to 36 by 2050. The median age is highest in Monaco, where it is over 56, while the youngest age is observed in Niger, Africa, where it is less than 15. By 2050, three-quarters of countries, representing 87% of the global population, will be classified as 'old' or 'ageing'. While life expectancy is increasing in all countries, the number of young people is also increasing in many developing countries as a consequence

of elevated fertility rates and a considerable reduction in infant mortality. A total of 82 countries have experienced a notable rise in the number of individuals within the 15–24 age bracket. In these countries, the number of individuals within the working-age population is projected to increase by 151 million by 2050, with Africa accounting for 73% of this growth.[19]

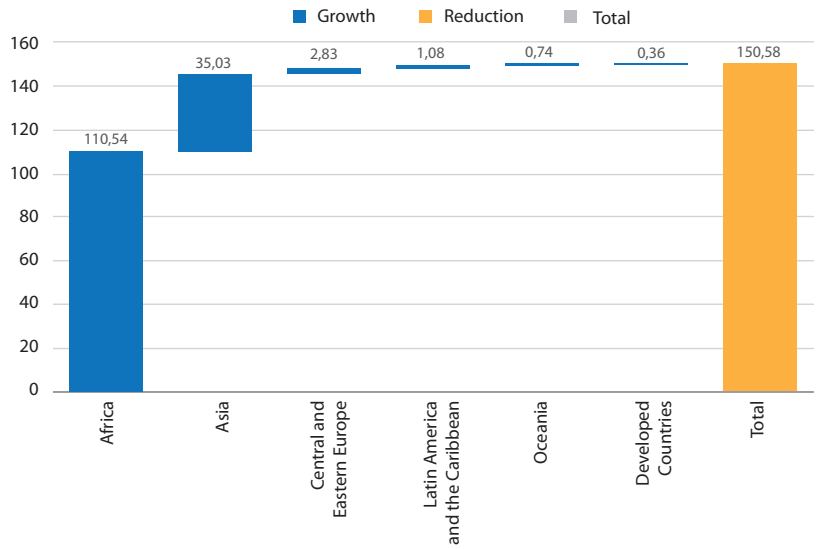

Figure 3: Projected growth in the 15–24 age group 2020–2050, by region

Note: Oceania excludes Australia and New Zealand, and the Developed countries category includes North America, Western European countries, Israel, Japan, South Korea, Australia and New Zealand.
Source: UN DESA 2023

In the European Union, over 20% of the population is aged 65 or over. Furthermore, the proportion of people aged 80 and over has almost doubled over the past two decades, while the number of people under 20 is falling. The countries with the highest proportions of people aged 65 and over are Italy (24%), Portugal (24%), Bulgaria (23.5%), Finland (23.3%), Greece (23%) and Croatia (22.7%). In contrast, Luxembourg (14.9%) and Ireland (15.2%) have the lowest proportions.

In the European Union, the median age is more than 14 years higher than the current global average of approximately 30 years, reaching 44.5 years in 2023. The country with the highest median age is Italy (48.4 years), while Cyprus has the lowest (38 years). The median age in the EU has increased by an average of 2.3 years over the last 10 years. However, there are Member States where the median age has increased by 4 years or more. The countries in question are Italy, Slovakia, Spain, Greece and Portugal. The exceptions to this general trend are Sweden and Malta, where the median age has decreased rather

[19] UN DESA 2023.

than increased over the last decade. It is also important to note that countries where the median age has either decreased or increased only slightly have a high number of babies born in the country to non-EU immigrant mothers.[20]

The third determinant, migration, is an integral part of human history. It is a phenomenon that is itself highly complex and multifaceted with numerous theories attempting to explain the underlying causes of migration processes. The United Nations Department of Economic and Social Affairs (UNDESA) Population Division estimates that the global number of international migrants reached 281 million as of 1 July 2020, marking a significant increase in migration globally. The proportion of the global population that is constituted by international migrants has increased from 2.8% in 2000 to 3.5% in the present era, and from 2.3% in 1980.[21]

Additionally, the number of migrants arriving in the European Union has increased, with a notable surge occurring in 2022. This influx can be attributed, at least in part, to the refugee crisis precipitated by the war between Russia and Ukraine.

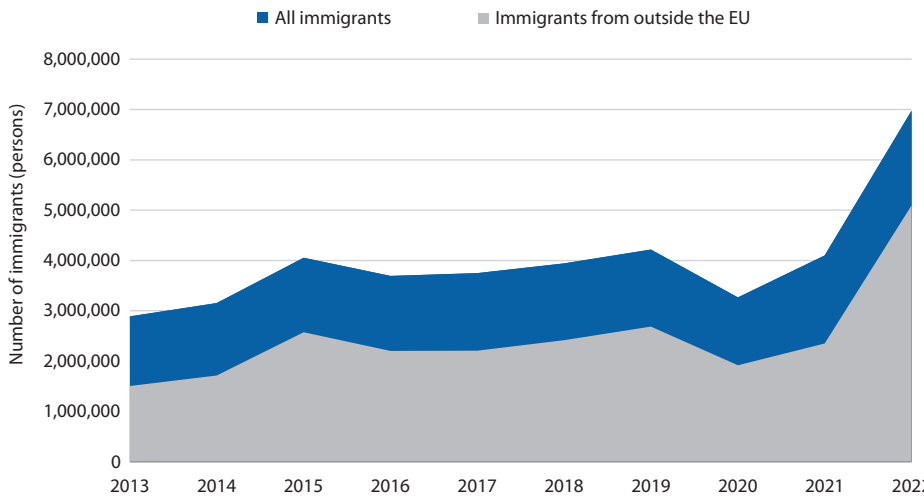

Figure 4: Number of immigrants to EU Member States 2013–2022

Source: Eurostat [s. a.d]

As of 1 January 2023, the European Union was home to 448.8 million individuals with over 42 million of these being born outside the EU. In the year 2022 alone, 5.1 million individuals who were not citizens of the European Union migrated to the European Union.[22]

20 Eurostat data.
21 UN DESA 2023.
22 European Commission 2024.

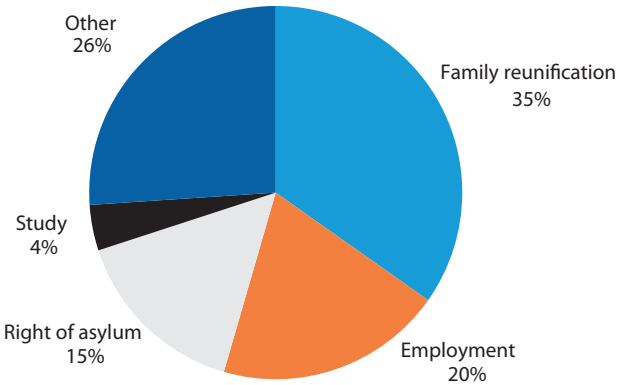

Figure 5: Grounds for residence permits issued in the European Union until 31 December 2022

Source: European Commission 2024

The rising number of immigrants in EU countries has resulted in an uptick in the number of children born to mothers who were either born in another EU country or in a country outside the EU. In 2022, the proportion of children born to foreign mothers reached 22%, with two-thirds of foreign-born mothers hailing from countries outside the EU.[23]

The impact of demographic trends on competitiveness

The issue of competitiveness, whether at the level of individual companies or national economies, has become a significant concern in the contemporary era. There is no single, universally accepted definition of competitiveness. The term is open to interpretation, and its meaning is often subject to differing interpretations by economists, researchers, and research institutions. In the context of firms, competitiveness is primarily conceptualised in terms of profitability. This can be defined as the capacity of a firm to produce goods or services that customers are willing to purchase at a price that ensures the desired returns and growth for the owners. In the context of national economies, the OECD definition is the most widely used. It defines competitiveness as the extent to which a country can produce goods and services under free and fair market conditions that are in demand on the international market, thereby increasing the real income of its inhabitants in a sustainable manner. While the two definitions are largely analogous, the crucial indicator for national economies is the increase in the real income of the population. Cohen's (1984) definition differs from that of the OECD in that it is not real incomes, but the continued rise in the welfare of the population, that is an important indicator of the competitiveness of national economies. This latter definition is also similar to that presented in the EU Competitiveness Report 2000, which states that an economy is competitive if it is able to raise the standard of living of its population and ensure high employment in a sustainable

[23] Eurostat 2023.

manner, that is to say, without endangering the well-being of future generations.[24] One of the principal novelties of the concept of competitiveness in the international literature is the incorporation of the capacity to innovate and renew, in addition to the capacity to change and adapt, at the analytical level.[25]

The competitiveness of a national economy is contingent upon the effective utilisation of the resources at its disposal. In addition to natural, physical and financial resources, the role of human resources is becoming increasingly significant in light of current demographic trends. As with all resources, it is of the utmost importance that human resources are available at the optimal time, in the optimal place, in the optimal quantity and of the optimal quality. This can be optimally achieved by increasing productivity and competitiveness. However, it is precisely in the case of this resource that the current demographic trends are bringing about changes.

In developed countries, the dual demographic pressures of low birth rates and ageing societies are exerting an increasing influence. The combined effect of these factors is becoming increasingly evident in the labour market, where the age composition of the population affects both labour supply and productivity. The economic growth of a nation is influenced by a number of factors, including labour market participation, birth rates, the age of workers, and their skills and qualifications. The demographic profile of a population can be a significant determinant of its economic growth potential. However, it is not necessarily the case that high population growth will lead to economic growth. Rather, it is the education and skills of the workforce that matter most.[26] The phenomenon of increased longevity has created a set of opportunities and challenges. These dual demographic pressures are giving rise to substantial shifts, while the persistently low fertility rates observed across the majority of countries are already engendering significant challenges. The competitiveness of ageing societies is being negatively affected by a decline in the working-age population and an increase in old-age dependency ratios. This is closely related to rising health and social costs, which are placing an increasingly unsustainable burden on pension systems. The question of how to maintain pension or healthcare systems while the working-age population is in decline has become a fundamental question of policy.

The evidence indicates that fertility rates will not increase in developed economies, whereas life expectancy is expected to rise. The number of years spent in retirement is increasing, yet the number of children being born is insufficient to offset the number of older individuals in the population. Furthermore, dependency ratios are expected to decline considerably in developing economies, particularly in Northern Asia and Eastern Europe.[27]

In its July 2018 report, the UK's Office of Budget Responsibility stated that "demographic change is one of the most significant pressures on public finances".[28] The demographic trends that have been identified are exerting an increasing influence on public policy, fiscal and monetary policy, and the labour market.

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24 Csath 2022.
25 Chikán et al. 2019.
26 Hayes 2023.
27 Goodhart–Pradhan 2023.
28 Goodhart–Pradhan 2023: 227.

An increase in the size of the working-age population leads to a rise in labour market participation, which in turn drives economic growth and productivity. Those in this demographic are more likely to save a greater proportion of their income, which in turn allows for further investment-led growth and development. A youthful and dynamic population introduces novel concepts and vigour to the economy, thereby stimulating innovation and entrepreneurship. Furthermore, the working-age population serves as a catalyst for consumer demand, stimulating domestic production and creating new employment opportunities. Furthermore, a higher proportion of the working-age population relative to dependants can also serve to alleviate the financial burden on social services and government support systems. It is possible that a larger and better-educated working-age population will result in accelerated economic growth, an improvement in living standards and enhanced global competitiveness. The reduction in the proportion of the population of working age may be linked to the rising costs of healthcare in societies where people are living longer, the growing burden of pension commitments and the effect of shifting patterns of demand on the economy.

Table 1: International competitiveness of ageing and ageing societies

High proportion of working-age, educated population in the total population	**High proportion of retirement age population**
Mobilising labour reserves can increase the propensity to invest.	The ageing of the working-age population is leading to labour shortages and a reduced willingness to invest.
High entrepreneurship, a young and skilled workforce open to innovation.	Low entrepreneurship, declining innovation potential.
The working age population is the driving force behind consumer demand.	Declining and changing demand structure.
Pension systems are easy to balance.	The sustainability of pension systems is becoming increasingly difficult to ensure.
Pressures on health and social care systems are low.	The pressures on health and social care systems require increasing and additional interventions.
Increasing private and public savings, lower interest rates, easier to balance the budget.	With private and public savings falling, interest rates rising, financing the budget is becoming more expensive.
Less pressure on the budget, lower taxes.	Taxes are also higher because of the pressure on the budget.
INCREASING INTERNATIONAL COMPETITIVENESS	**DECLINING INTERNATIONAL COMPETITIVENESS**

Source: compiled by the authors

It is evident that the ratio of the active and inactive populations, and the interconnections between them, do not constitute a definitive solution to the issue of competitiveness. The macroeconomic relationship between population ageing and economic growth is inherently intricate. Indeed, other factors, such as education, technology and the institutional system, exert a more pronounced influence on labour productivity than the increase in the age of the workforce. Furthermore, an ageing workforce has a positive effect, as older workers have accumulated knowledge and experience that can contribute to productivity growth.

The overall impact of an ageing population on economic growth and productivity is also contingent upon the response of firms. The digitalisation and automation of processes can lead to increased productivity, with the potential to replace a proportion of the living workforce. However, this depends on the ability of firms to finance the necessary investment and the availability of a skilled workforce that is adept at new technologies.[29]

Situation in Hungary

Hungary is no exception to the global trend whereby developed countries are facing the challenges of a declining birth rate and an ageing population. The following two age groups demonstrate the evolution of the proportion of individuals belonging to the older age cohort within the total population since 1900.

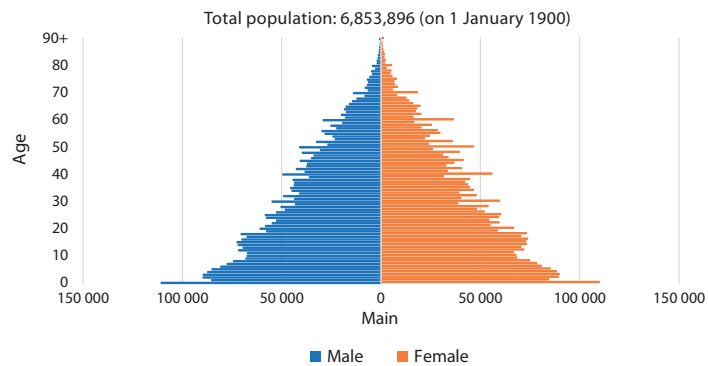

Figure 6: Population of Hungary by sex and age on 1 January 1900

Source: compiled by the authors based on KSH data

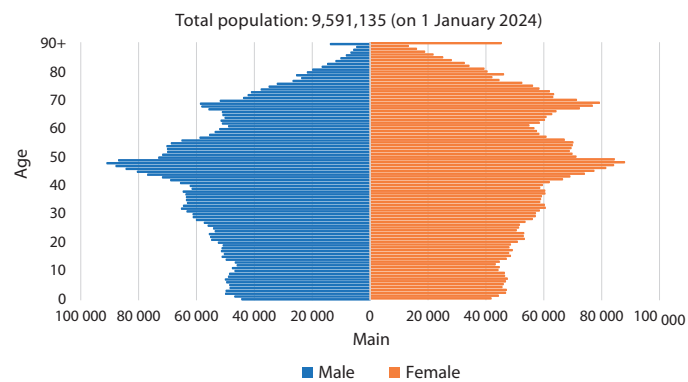

Figure 7: Population of Hungary by sex and age on 1 January 2024

Source: compiled by the authors based on KSH data

[29] UN DESA 2023.

The family policy measures implemented over the past decade have contributed to a reduction in the demographic pressure. However, according to the Central Statistical Office of Hungary (KSH), if the total fertility rate had remained at the 2011 level (1.23), there would have been 178,000 fewer births between 1 January 2011 and 1 January 2023. Hungary is situated at an intermediate position within the European Union with regard to both the proportion of the population aged 65 and over and the median age. The proportion of the population aged 65 and over is below the EU average, at 20.5%. The median age is 44.2 years.

Despite Hungary having one of the lowest dependency ratios in the European Union, the proportion of elderly people is increasing, which is leading to a corresponding rise in the dependency ratio. The ratio is projected to increase from 3.1 elderly dependants per working-age person in 2023 to 2.1 in 2050, representing a rise from 31.9% in 2023 to 45.5% in 2050.[30]

As is the case with other developed or developing countries, Hungary is also experiencing the effects of dual demographic pressure. However, as is also the case with other Eastern European countries, emigration and brain drain are also a complicating factor. As has become evident from the aforementioned analysis, the demographic challenges that have emerged have now assumed the form of a competitiveness challenge, which is also faced by the Member States of the European Union. The accession of Hungary to the European Union in 2004, together with nine other countries, has gradually opened up the labour markets of developed countries, among many other opportunities. Since Hungary's accession to the European Union in 2004, there has been a notable increase in migration within the European Union. The ageing societies of developed countries are experiencing a significant labour shortage, and the economic centres are experiencing a labour drain that is affecting millions of people, including those in Hungary. EU accession has not only opened up new prospects for the labour market in the new Member States, but has also provided the opportunity for the former Member States to recruit new workers in order to alleviate labour shortages. Those states offering higher wages and more attractive job opportunities have been responsible for the emigration of labour from the Member States that joined in 2004 or afterwards. While emigration is a problematic phenomenon, as countries of origin are losing young people who are fit for work, it is also important to consider that some of those who emigrate do not return. Consequently, their children no longer contribute to the population and dependency ratios of the country of origin. Nevertheless, even if they do return, their economic performance is not reflected in the country of origin for a period of time that may be either longer or shorter. The countries affected by emigration suffer multiple losses. Firstly, they lose the capital invested in the 'production' of human capital. Secondly, their economies lose output and competitiveness due to labour shortages. Thirdly, their tax burden increases. Finally, the lost labour has to be replaced.

[30] Eurostat 2024b.

In Hungary, the factors that increase the willingness to work abroad are as follows: young age, high level of foreign language skills, higher education, especially a university degree or a master's degree, family ties and the absence of children, and the expected higher income.[31]

In regional terms, Hungary is one of the countries with relatively low rates of net emigration in terms of population.

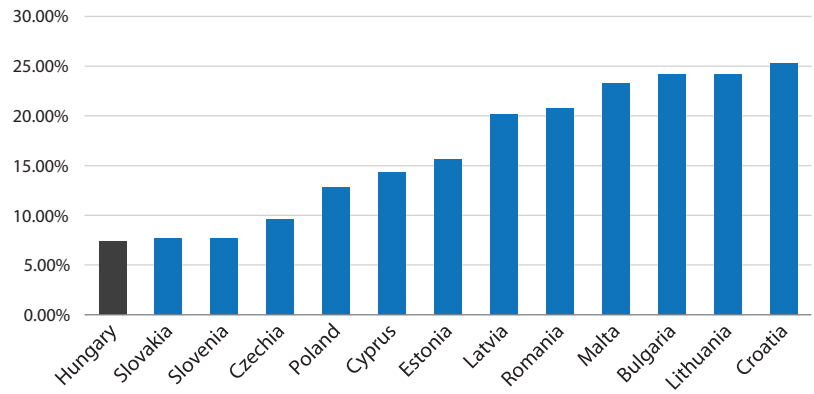

Figure 8: Emigration rates as a share of population in EU Member States that joined after 2004 (2020)
Source: UN Our World in Data

Additionally, the reduction in out-migration has resulted in notable challenges for the economy. Employers are encountering difficulties in identifying individuals with the requisite skills, and labour reserves have been diminishing since the late 2010s. While employment in the EU continued to grow in 2023, reaching over 70% (15–64 age group), the expansion compared to 2011 was nearly 8 percentage points. In Hungary, both the employment rate and the number of people in work increased by more than the EU average between 2011 and 2023. The employment rate reached close to 7%, representing an increase of more than 17 percentage points. For the 20–64 age cohort, the rate is even higher, at 75.3% in the EU and 80.7% in Hungary.[32]

In some countries, the negative balance of labour migration also contributes to the depletion of labour reserves, which has the potential to negatively impact economic growth and development. Human capital is as integral to a nation's wealth as its material and natural resources. However, while the latter are relatively straightforward to quantify, measuring human capital represents a significant challenge. Article 38 of the Fundamental Law states that: The management and protection of national property must serve the public interest, meet common needs, preserve natural resources, and consider the needs of future generations.[33] If human capital is considered a form of national wealth, it is necessary to assign a monetary value to the loss of human capital

31 HÁRS 2020.
32 See: https://ourworldindata.org/migration
33 The Fundamental Law of Hungary, Section 38.

due to emigration, at a minimum. In light of this line of inquiry, the authors of this paper have devised a methodology to attempt to quantify this loss.

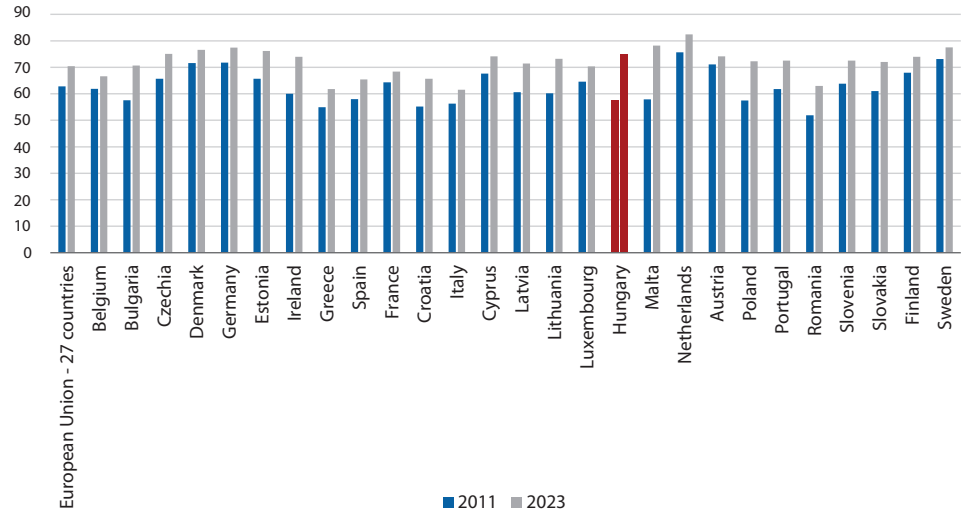

Figure 9: Employment rate of 15–64-year-olds in EU Member States

Source: Eurostat

The measurement of human capital and its calculation for the state

The term 'human capital' is used to describe the productive capacity, talent and knowledge of an individual. It is also known as a relevant factor of production and a key factor in the economic growth of a country. As a result, it has become a priority area for macro-level studies. The role of human capital can be examined from a historical perspective, namely in terms of the accumulated human capital over a given period of time, which is a determinant of output growth. Alternatively, one may consider changes in the stock of human capital, which represents an important input factor of production. In the context of emigration, both approaches are significant when considering the value of human capital. It is essential to develop a methodology that enables the estimation of the loss incurred by the country of origin as a result of emigration, as well as the gains realised by the destination country. It is essential that the methodology incorporates monetarily quantifiable indicators to demonstrate to both the public and decision-makers the financial loss incurred by the country of origin, in this case Hungary, as a consequence of emigration, and the financial gain for the host country.

Theoretical approaches to the measurement of human capital can be divided into two distinct groups. The first is an income and cost-based approach, or a combination of the two, according to which the value of human capital can be expressed in monetary terms by the market. The second approach does not focus on the monetarisation of

human capital, but rather employs an education-based indicator that considers related outcomes.

The cost-based method begins with the cost of 'producing' human capital. Engel (1883) was the first to estimate the financial burden on parents to raise their children to the age of 25. Engel's calculation methodology, primarily based on the cost of education and schooling, was adopted and refined by other researchers. Judson (2002) was the first to include government expenditure on education. The cost-based method is primarily concerned with the financial outlay on education and seldom incorporates other costs associated with the upbringing of the child, such as medical expenses and other educational costs.[34]

The authors of the study have conducted a detailed examination of the costs associated with the production of human capital from the perspective of the state, rather than from that of parents. The calculation of the human capital balance in the context of emigration represents a significant challenge for the state, given the lack of validated methodologies from open sources, the presence of uncertainty in the data employed, and the absence of reliable data on certain costs.

- The same difficulties that have arisen in the calculation of parents' expenditure, for which a methodology exists, have also manifested in the case of state expenditure. These include the question of what to include in the costs, the availability of data, the inability to take into account depreciation of human capital, the lack of sufficient data to calculate the future value of past expenditure, and the necessity of making assumptions in many cases.
- The initial basis for calculating the fundamental costs of education and training was the existing family and other allowances, given that the replacement of emigrants is currently being borne by the state, even if the costs of emigrating human capital were incurred in an earlier period.
- The numbers of people emigrating and then returning to their country of origin are largely unaccounted for. There is no single, wholly reliable statistical source that provides comprehensive data on this phenomenon. Furthermore, there is a lack of information on the proportion of all emigrants who return and re-emigrate, the number of individuals who have taken employment in their destination country, and whether those individuals have done so in a position that matches their qualifications. It was thus decided that the top 10 destination countries would be included in the analysis, on the assumption that all emigrants are potential workers in those countries.
- The contribution of Hungarian emigrants to value added in the destination country is calculated using real GDP per capita. However, this figure is likely to be biased downwards, given that the ratio of active to inactive emigrants may be positively biased compared to the total population of the country.
- In order to eliminate the former uncertainty, a calculation was performed using the more likely and more accurate average income as a measure of income contribution.

[34] T. Kiss 2012.

– In light of these considerations, it can be posited that the data yielded by the methodology are adequate for quantifying the loss of human capital due to emigration.

The financial obligations of the state include the provision of family allowances, which are considerable given that in recent years the Hungarian government has allocated substantial sums to families at the EU level. Additionally, the state bears the financial responsibility for the per capita amount of normative allowances for nursery and primary school, healthcare, and other benefits and subsidies provided by the state, including public meals, school books, travel allowances, language exams and driving licences. These constituted the fundamental costs on which the expenses associated with vocational training and higher education were based. This enabled the estimation of the cost to the state of a blue-collar and a white-collar worker up until graduation. In the case of blue-collar occupations, the training costs of skilled construction workers and social care workers were employed; in the case of white-collar occupations, the costs of bachelor's and master's degrees were also used for the following occupations: doctor, IT specialist, engineer, economist, tourism and catering professional. In order to obtain data regarding the professions included in the study and calculations, open-source data were used for Hungarian workers abroad. The proportion of blue-collar and white-collar workers was estimated primarily on the basis of LinkedIn data and secondarily on the basis of Facebook data. Accordingly, the proportion of blue-collar workers was estimated to be 78%, while the proportion of white-collar workers was estimated to be 22%. Subsequently, an average was calculated for both blue-collar and white-collar workers, resulting in an average cost to the state of HUF 38.75 million for a skilled worker and HUF 44.96 million for a tertiary graduate.

In order to ascertain the countries to which the greatest number of Hungarian workers are migrating, data on international migration from the UN's Our World in Data database was employed. The Central Statistical Office database was not selected for analysis as it records the number of emigrants and returnees for permanent residence purposes, which is markedly distinct from the number of individuals engaged in foreign employment. The majority of individuals do not pursue permanent residence abroad, but rather undertake temporary employment in another country, even if they do not relocate their residence but commute between the two.

According to the latest data from the UN Our World in Data, by 2020, 714.4 thousand[35] people born in Hungary will have emigrated to live permanently in another country.

[35] This figure does not include the number of Hungarian workers commuting to Austria, which was 39.8 thousand in 2020 according to the Austrian Ministry of Labour.

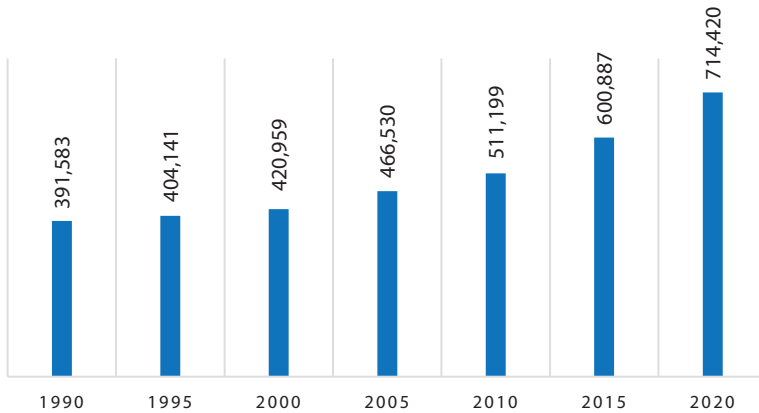

Figure 10: Number of emigrant Hungarians 1990–2020 (persons)

Source: https://ourworldindata.org/migration

According to 2020 data, most Hungarians lived in Germany, the UK and Austria. In the case of Austria, nearly 40,000 commuters were also counted, since these workers, even if they are not living in Austria, are not present in the Hungarian labour market and do not contribute to the Hungarian economic performance.

Table 2: Number of Hungarians born in Hungary but residing abroad in the TOP 10 destination countries

Destination country (TOP 10)	**Number of emigrant Hungarians (2020) (Austria's results were increased with the number of commuters)**
Germany	220,774
the United Kingdom	82,667
Austria	119,005
Switzerland	26,259
Sweden	17,227
the Netherlands	16,746
Italy	13,413
Spain	12,548
France	11,882
Ireland	9,409
Total 529,930	

Source: UN Our World in Data, Austrian Ministry of Labour (G7)

The value of the Hungarian human capital abroad in terms of public expenditure was calculated in monetary terms (in HUF) and in relation to the Hungarian GDP in 2020. This was done for the ten countries with the highest number of Hungarians abroad. The distribution of blue-collar and white-collar workers was also calculated on the basis of the results of the aforementioned social media survey, and the figures shown in the table are calculated with these figures in mind.

Table 3: The value of Hungarian human capital living abroad in HUF and as a share of Hungarian GDP in 2020

Value of Hungarian human capital abroad (2020)					
Destination countries (TOP10)	**Number of Hungarians residing abroad (persons)**	**Hungarian human capital abroad – blue collar (HUF billion)**	**Hungarian human capital abroad – white collar (HUF billion)**	**Hungarian human capital abroad – total (HUF billion)**	**Hungarian human capital abroad (in relation to Hungarian GDP in 2020, %)**
Germany	220,774	6,673	2,184	8,857	18.29
United Kingdom	82,667	2,338	1,004	3,342	6.90
Austria (including commuters)	119,005	3,551	1,231	4,781	9.87
Switzerland	26,259	733	331	1,063	2.20
Sweden	17,227	527	163	690	1.42
Netherlands	16,746	529	139	668	1.38
Italy	13,413	478	48	526	1.09
Spain	12,548	384	118	503	1.04
France	11,882	368	107	475	0,98
Ireland	9,409	266	114	380	0,79
Total	**529,930**	**15,848**	**5,438**	**21,286**	**43,96**

Source: compiled by the authors based on the calculations of the researchers involved in the development of the methodology, UN Our World in Data and KSH data

The calculations indicate that the human capital cost of Hungarians residing abroad for employment purposes in 2020 was HUF 21,286 billion, representing 44% of Hungary's gross domestic product (GDP) in the same year. As the ten most popular destinations for Hungarian emigration were examined, and as less than 70% of all emigrated Hungarians were found to have migrated to these countries by 2020, it can be inferred that the aforementioned amount and percentage may in fact be higher.

As a consequence of emigration, the country of origin not only forfeits the financial outlay associated with the development of human capital, given that the emigrant's expertise and abilities, acquired within their country of origin, are utilised elsewhere, but the country of origin also experiences a decline in its labour force. In order to gain a comprehensive understanding of the losses incurred by the country of origin, it is essential to consider not only the goods produced by the emigrant in the country of destination but also the goods not produced in the country of origin when the emigrant leaves.

Two approaches were employed to calculate this: firstly, the authors utilised real GDP per capita data for the destination country and the country of origin; secondly, they also conducted a calculation using average gross incomes for the destination country and the country of origin. The latter was justified by the fact that calculations were also made on the value to employers in the destination country of 'acquiring' a worker in a given labour market situation, namely the amount they are willing to spend to find a worker with the requisite skills and abilities. In the present context, where labour shortages represent the most significant competitiveness challenge for EU countries, this indicator is as crucial as GDP per capita.

Utilising authentic gross domestic product (GDP) per capita data and hypothesising that all emigrated Hungarians are prospective employees in the destination country, it can be posited that Hungarians in Germany alone contributed EUR 7.6 billion to the German economy in 2020. The aggregate contribution of emigrant Hungarians to the economic performance of the ten most popular destination countries in 2020 is in excess of EUR 19 billion. Conversely, the outflow of emigrants from the domestic labour market, also based on the assumption that all emigrants are potential domestic workers, will result in a reduction of the domestic economy's output by EUR 6.7 billion. The calculations are based on real GDP per capita in 2020 for each destination country. The calculation of the economic output lost in Hungary is based on real GDP per capita in Hungary in 2020.

Table 4: Economic output generated abroad and lost in Hungary (GDP per capita, 2020)

Destination countries (TOP10)	Number of Hungarians residing abroad (persons,2020)	Real GDP per capita (EUR, 2020)	Economic performance of Hungarians working abroad (EUR, 2020)	Economic output lost in Hungary due to Hungarians working abroad (EUR, 2020)
Germany	220,774	34,550	7,627,741,700	2,810,453,020
United Kingdom	82,667	32,910	2,720,570,970	1,052,350,910
Austria (including commuters)	119,005	35,390	4,211,586,950	1,514,933,650
Switzerland	26,259	60,190	1,580,529,210	334,277,070
Sweden	17,227	42,910	739,210,570	219,299,710
Netherlands	16,746	40,130	672,016,980	213,176,580
Italy	13,413	24,910	334,117,830	170,747,490
Spain	12,548	22,250	279,193,000	159,736,040
France	11,882	30,630	363,945,660	151,257,860
Ireland	9,409	63,120	593,896,080	119,776,570
Total	**529,930**		**19,122,808,950**	**6,746,008,900**

Source: compiled by the authors based on the calculations of the researchers involved in the development of the methodology, based on UN Our World in Data and Eurostat data

An alternative approach is based on the calculation of average gross earnings. From an economic perspective, wages can be defined as the price of labour, which is itself influenced by the state of the labour market. A recent survey of employers across the EU revealed significant challenges in identifying candidates with the requisite skill sets. This gives rise to competition between countries, with developed Western countries engaging in the transfer of workers from other countries at higher wages. By attracting workers from less developed countries at higher wages, they enhance their own productivity and competitiveness, whereas the economic performance and competitiveness of the countries of origin are undermined as they lose skilled labour. In Germany alone, the hiring of skilled Hungarian workers represents a financial benefit to employers amounting to EUR 9.5 billion, in comparison to the EUR 22.7 billion benefit observed in the top 10 destination countries. The emigration of Hungarian workers has resulted in a loss of EUR 6.2 billion in income-generating capacity within the Hungarian economy.

Table 5: Economic output generated abroad and lost in Hungary (average gross earnings, 2020)

Destination countries (TOP10)	Number of Hungarians residing abroad (persons)	Average earnings (EUR)	Economic performance of Hungarians working abroad (EUR, 2020)	Economic output lost in Hungary due to Hungarians working abroad (EUR, 2020)
Germany	220,774	43,116	9,518,891,784	2,606,899,392
United Kingdom*	82,667	41,049	3,393,397,683	976,131,936
Austria (including commuters)	119,005	46,669	5,553,844,345	1,405,211,040
Switzerland*	26,259	80,586	2,116,107,774	310,066,272
Sweden	17,227	44,084	759,435,068	203,416,416
Netherlands*	16,746	49,970	836,797,620	197,736,768
Italy	13,413	28,275	379,252,575	158,380,704
Spain	12,548	27,743	348,119,164	148,166,784
France	11,882	37,848	449,709,936	140,302,656
Ireland	9,409	48,890	460,006,010	111,101,472
Total	**529,930**		**23,815,561,959**	**6,257,413,440**

*Source: compiled by the authors based on the calculations of the researchers involved in the development of the methodology, based on UN Our World in Data, *OECD[36] and Eurostat data*

The loss of human capital in the Hungarian economy since EU accession

The aforementioned calculations project the losses incurred by the Hungarian economy as a result of emigration over a specified period. Additionally, the researchers sought to examine the cumulative loss of human capital in the Hungarian economy following its accession to the EU between 2005 and 2020. As the UN Migration Database provides data on emigration and immigration on a five-yearly basis, a trend calculation was employed in order to extrapolate the data in order to obtain the number of emigrants for the missing years.

For the 15-year period, the average gross earnings for the specified years were employed to calculate the economic gains of the destination countries from the utilisation of skilled labour, while the identical methodology was utilised to examine the losses to the Hungarian economy from the emigration of skilled labour.

Over the 15-year period under consideration, Hungarian workers in Germany generated EUR 90.7 billion of income, while the Hungarian economy lost EUR 25 billion of income-generating capacity. In these calculations, only the value of the income generated by Hungarian emigrants was taken into account, with the cost of 'producing' human capital excluded. In the case of Hungarians emigrating to Germany in 2020, this cost is estimated at HUF 8.8 billion. The value of the Hungarian forint in relation to

[36] In the case of OECD data, the amounts are converted using the European Central Bank's 2020 central rates. 1 GBP = 1.125 EUR (2020), 1 CHF = 0.93 EUR (2020).

the euro was calculated using the average mid-market exchange rate published by the Hungarian National Bank in 2020. This resulted in a figure of EUR 25.3 million, which can be considered a gain for Germany and a loss for Hungary.

Germany is the most popular destination country for Hungarian emigrants, and thus it is to be expected that it will experience the highest gains and that Hungary will experience the highest losses.

Table 6: Economic output generated in Germany and lost in Hungary (average gross earnings, 2005–2020)

Current year	Hungarians emigrated to Germany (headcount)	Average annual German salary (EUR)	Labour costs of Hungarians working in Germany (EUR)	Cost of labour lost in Hungary due to Hungarian emigration to Germany (EUR)
2005	116,809	30,767	3,593,862,503	1,043,571,606
2006	121,275	31,357	3,802,807,632	1,070,854,718
2007	125,740	31,825	4,001,681,865	1,238,415,230
2008	130,206	32,797	4,270,359,623	1,372,499,338
2009	134,671	32,879	4,427,860,961	1,254,733,434
2010	139,137	33,741	4,694,621,517	1,377,317,163
2011	139,870	34,993	4,894,463,911	1,430,588,314
2012	140,603	36,000	5,061,693,600	1,420,226,863
2013	141,335	36,912	5,216,972,285	1,402,047,168
2014	142,068	37,798	5,369,893,824	1,357,319,583
2015	142,801	39,002	5,569,524,602	1,378,458,053
2016	158,396	39,872	6,315,549,363	1,546,574,638
2017	173,990	40,913	7,118,461,053	1,894,753,278
2018	189,585	42,105	7,982,468,004	2,168,470,942
2019	205,179	43,506	8,926,534,976	2,488,826,122
2020	220,774	43,116	9,518,891,784	2,606,899,392
Total			**90,765,647,502**	**25,051,555,842**

Note: The table shows the data from the UN database in dark grey and the data from the trend calculation in light grey.
Source: compiled by the authors based on the calculations of the researchers involved in the development of the methodology, based on UN Our World in Data and Eurostat data

In the case of the ten most popular destinations, the value of the labour force attracted by these countries, calculated using the aforementioned methodology, exceeds 240 billion euros over the period under review. Hungary, meanwhile, has suffered a net loss of over 63 billion euros. The financial cost of the human capital produced in Hungary that has emigrated to the ten most popular destination countries is estimated at 21.3 billion forints (equivalent to 60.7 million euros), representing an additional loss.

Table 7: Economic output generated in the TOP 10 countries and lost in Hungary (average gross earnings, 2005–2020)

Country	Price of labour of Hungarians working in a given country (2005–2020, EUR billion)	The cost of labour lost in Hungary due to Hungarians emigrating to the country in question (2005–2020, EUR billion)
Germany	90,76	25,05
United Kingdom*	36,3	9,4
Austria (including commuters)	54,1	14,8
Switzerland*	20,8	3,0
Sweden	10,0	2,5
Netherlands*	7,8	1,8
Italy	5,4	2,0
Spain	3,4	1,4
France	6,0	1,7
Ireland	5,4	1,3
Total	**240,3**	**63,1**

*Source: compiled by the authors based on the calculations of the researchers involved in the development of the methodology, based on UN Our World in Data, *OECD and Eurostat data*

Conclusion

The increasing significance of demographic trends for economic competitiveness is contingent upon the importance of human capital. In the absence of a youthful and proficient workforce, the potential for economic growth is diminished, and labour shortages can impede the advancement and innovation that are essential for sustainable development. Consequently, the improvement of the demographic situation constitutes a genuine economic issue. The authors of the study have identified and analysed a number of factors that influence a country's population, including the phenomenon of migration, which encompasses both immigration and emigration. The methodology employed to quantify the loss of human capital, despite its inherent uncertainties, effectively underscores the significant losses incurred by the outflow of labour, even in countries such as Hungary, where the propensity to emigrate is relatively low in comparison to the overall population. In order to counteract the outflow of labour from central regions, countries are attempting to implement programmes designed to encourage individuals to return to their place of origin. Concurrently, family policies are being introduced with the objective of enhancing the propensity to have children. The influence of demographic trends is inherently challenging to exert and their alteration occurs at a gradual pace. In the absence of a long-term, comprehensive strategy, these trends present an increasingly formidable challenge for national economies. A region or country that does not attempt to mitigate adverse trends may find itself at a disadvantage in the global marketplace.

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Áron Drabancz[1]

Are the Member States of the European Union Converging or Diverging Demographically?

In our study, we have compared the demographic processes in the Member States that joined the European Union before and after 2004 with the variables total fertility rate, life expectancy, net migration and old-age dependency ratio. The demographic prospects for the new Member States are bleak, with high emigration and low total fertility rates, which may make ageing problems more pronounced among the Member States joining after 2004 than among those that joined earlier. Our cluster analysis has shown that the newly acceding countries, both in 2004 and today, show some degree of separation from the centre countries in terms of the demographic variables examined, but the stability of the clusters is relatively low depending on the methodologies used.

Keywords: European Union, cluster analysis, demographic processes

Introduction

Hungary's relative economic development in the European Union is one of the most important issues in Hungarian economic analysis and public policy debates. Our relative economic development also has a significant impact on our long-term share of EU funding and on the potential adoption of the euro. Of these, looking at the deviation from the GDP per capita in the European Union is one of the simplest ways to reconstruct the catching-up of the Central and Eastern European countries since their accession to the European Union, identifying which Member States have moved closer or further away from the centre countries in terms of economic development.

However, in addition to the analysis of economic indicators, it is also very important to analyse the demographic situation of our region in the context of the European Union. In particular, while the Central and Eastern European (CEE) countries have been converging with the core countries in terms of GDP per capita over the past decades,[2] the demographic situation shows rather negative trends. Since joining the European Union, millions of people from the CEE region have moved to the EU core countries, significantly

[1] Economic Analyst, Magyar Nemzeti Bank, e-mail: aron.drabancz@gmail.com

[2] Medgyesi–Tóth 2020; Alcidi 2019.

reducing the region's labour force,[3] and the region's childbearing rate has remained below that of Western European countries for many years,[4] so it is projected that in the coming years, the 10 countries with fastest declining populations in the world will all be Eastern European, with seven of these countries joining the EU in 2004 and later.[5] These trends paint one of the bleakest pictures of the region's demographic situation in the world, as confirmed by the UN (2024) estimate: The countries of Southern, Eastern and Central Europe may be depopulated the fastest in the coming years. By 2100, the populations of Northern Macedonia, Ukraine, Lithuania, Latvia and Moldova could be less than half of today's levels.[6] Within our more immediate region, the UN projects a population decline of around 50% in Poland and 38% in Slovakia, while in the Czech Republic and Hungary, roughly a quarter of the population could disappear by the end of the century. The deteriorating demographic picture could also have a significant impact on the region's economic catch-up in the long term: according to the analysis of Batog et al. (2019), the GDP per capita in the Central, Eastern and South-Eastern European Member States could rise from the current 52% of the Western European average to 60% by 2050, but without the adjustment by demographic effects, the development could reach even 74%. Smaller aggregate population and employment, lower productivity and rising fiscal expenditure due to ageing could lead to a roughly one percentage point lower GDP growth per year in the region's Member States.[7]

The aim of this paper is to analyse the demographic situation in the European Union: in addition to presenting trends, we use cluster analysis to examine how the differences in key demographic indicators between Western and Eastern Europe have changed since the EU accession. Thus, we use data from 2004 and 2022 to analyse the composition of clusters in EU countries. In the second chapter of the paper, we briefly describe our variables and their main trends in the EU and in the western and eastern regions of the Community, in the meantime also presenting the literature on the subject. In the third chapter we describe the methodology of cluster analysis and the framework of our analysis. In the fourth chapter, we outline our main findings and conclude our analysis with a summary.

Demographic trends among older and newly acceding Member States

Population restructuring and the increasing ratio of the ageing population in society is a fundamental phenomenon in developed countries, which are already posing serious challenges to national economies, even calling into question the long-term sustainability of pension systems.[8] The extent to which society is being restructured is illustrated by the fact that for every three working-age people in the European Union today, there is

3 BATOG et al. 2019.
4 Eurostat data.
5 MOHDIN 2018.
6 UN, World Population Prospects 2024, see: https://population.un.org/wpp/
7 BATOG et al. 2019: 46–49.
8 BAJKÓ et al. 2015; GÁL–RADÓ 2019; KREISZNÉ HUDÁK et al. 2015; VARGA 2014.

less than one pensioner, but by 2050, there will be less than two working-age people to support one pensioner.[9] The rate and speed of ageing varies among European countries, but by 2050, all European countries without exception will see a significant increase in the proportion of older people in the society. The typical demographic trends are illustrated by Hungary's age structure, which has become increasingly beehive-shaped in recent decades, and the proportion of young people may continue to decline while the proportion of older people may increase in the future.

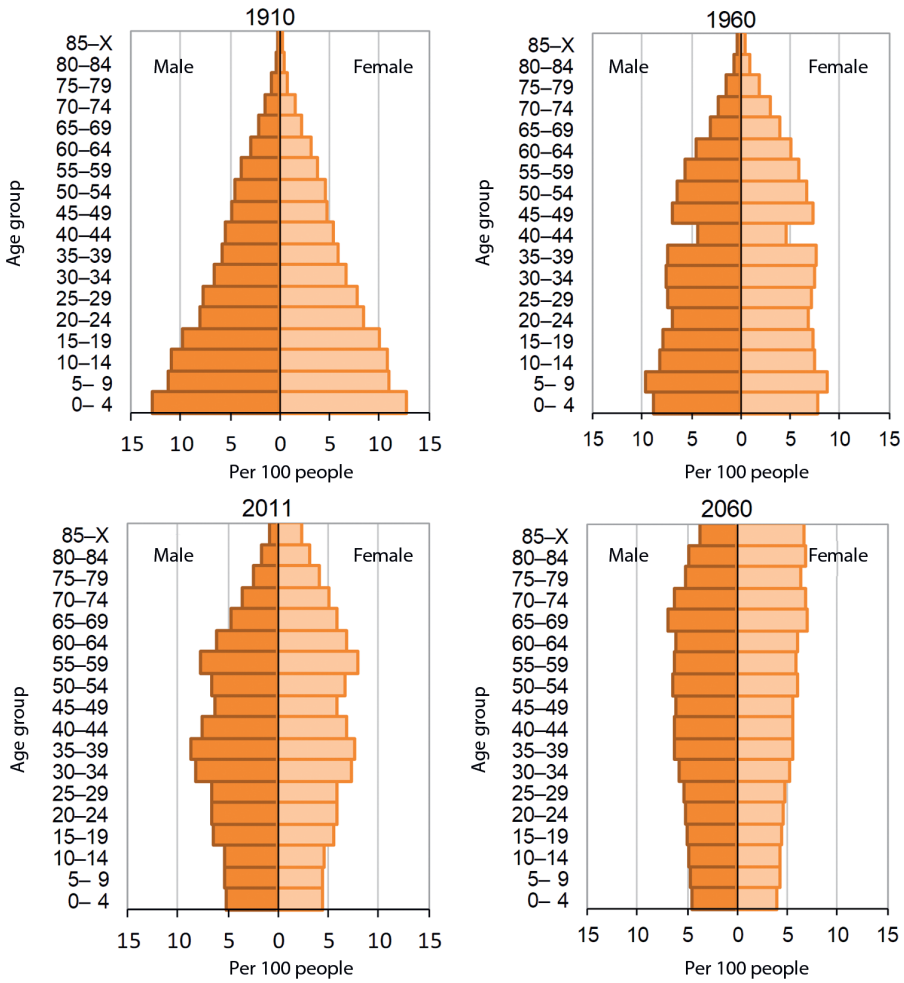

Figure 1: Changes in the age composition of the population of Hungary, 1910–2060

Source: Kapitány 2015

[9] Eurostat data.

According to the theory of demographic transition, demographic characteristics of countries should converge in the long run, as the death and birth rates in each country stabilise at low levels at the end of the transition. This is partly supported by Wilson's paper, which shows that in the second half of the 20th century, despite the remaining economic differences, the differences in fertility, mortality and life expectancy between developed and developing countries decreased considerably, and by the end of the century we see fairly similar demographic figures for most developing and developed countries.[10] Major regions of the world follow similar trajectories at different stages of the demographic transition, with the overall global catching-up faster for fertility and slower for mortality.[11] In contrast, Moser and his co-authors showed a modest convergence in mortality, which was reversed in 1980,[12] while Dorius was only able to show statistically significant convergence in fertility rates after 1990.[13] Through cohesion policy, the European Union aims to reduce demographic disparities at regional level, thus contributing to the reduction of regional differences.[14]

The dynamics of population structure change are influenced by three main variables: the number of children born, the evolution of mortality rates and migration processes. In the following, we will present the evolution of these three variables in the light of data from Hungary, the EU27, the older and the newly acceded Member States, and show the trends in the old-age dependency ratio, which approximates the ageing ratio of society. We will also use these four variables in our cluster analysis later on, where we will approximate the child-bearing rate by the *total fertility rate,* which indicates the number of children a woman would give birth to during her lifetime if fertility figures for the given year remained constant. In addition, the *average life expectancy at birth* variable, which reflects the evolution of mortality rates, and the *old-age dependency ratio,* which measures the proportion of elderly people (over 65) in relation to the working-age population (aged 15–64), are included in our analysis. Finally, the *net migration rate per 1,000 persons* provides the framework for the subsequent grouping, which compares the difference between immigration and emigration in a given period with the average annual population. The data required for the analysis were obtained from the Eurostat database, and mainly 2004 and 2022 data were used. In the cluster analysis that follows, the focus is on the individual Member States, so in this chapter the main demographic indicators of the older European Union Member States (acceded before 2004 – EU14) and the newly joined Member States (acceded in 2004 or later – EU13) are presented as a simple average of the demographic indicators of each Member State. For the EU27, official population-weighted values are given, except where only country-weighted values are available.

The long-term reproductive level of a society is determined by the evolution of the number of children born within the society, the change in which per woman of child-bearing age is usually measured by the total fertility rate. The decline in the total fertility rate due to changing cohabitation trends and social changes[15] has been a global phenomenon

10 WILSON 2001.
11 WILSON 2011.
12 MOSER et al. 2005.
13 DORIUS 2008.
14 KASHNITSKY et al. 2017.
15 BUCK–SCOTT 1994; CHERLIN 1992; ROSENFELD–BIRKELUND 1995; FURSTENBERG 1995.

in recent decades,[16] and by now, in all Member States of the European Union, the total fertility rate is well below replacement level, even in France, with the highest total fertility rate, parents have an average of only 1.79 children.[17] The gap in the total fertility rate of the Member States that joined the EU after 2004 has been completely closed in recent years; while the weighted average total fertility rate per country for the EU14 countries fell from 1.6 to 1.43 between 2004 and 2022, the indicator rose from 1.33 to 1.47 in the countries joining after 2004 (EU13) (Figure 2). Hungary's relative position has improved significantly over the past eighteen years: while in 2004 our total fertility rate was 22nd in the EU27, the 2022 data now place us 6th. However, the extent of the improvement is misleading, as the total fertility rate in Hungary, adjusted by time and parity, has rather tended to decline in the 2000s,[18] and the number of children per woman of childbearing age, up to a certain age, has not increased either.[19] In all countries, the number of children born are less, by a greater or lesser extent than the numbers of the previous generations, which has led to an increase in the median age. No Member State is estimated to reach reproductive levels approaching replacement level in the future, so the median age in Western Europe could rise from 39.5 years in 2005 to 43.2 years in 2023, and even up to 45.8 years by 2050.[20]

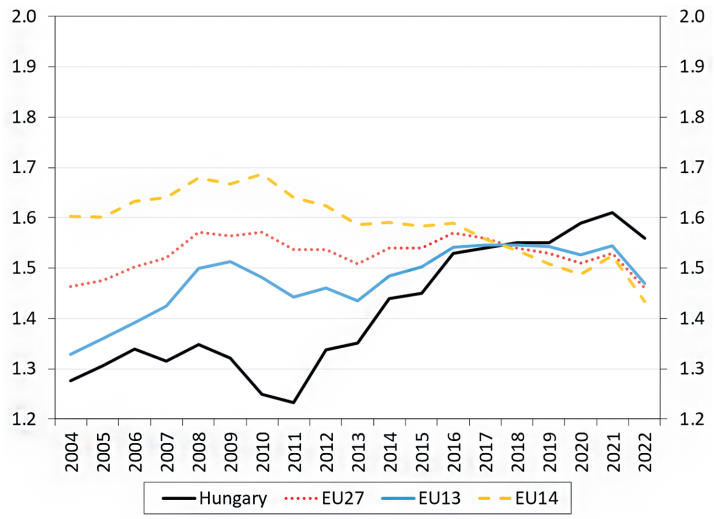

Figure 2: Trends in total fertility rates in Hungary and in the EU27, EU13 and EU14 countries, weighted by country, 2004–2022
Source: compiled by the author based on Eurostat data

16 Drabancz 2020.
17 See: https://ec.europa.eu/eurostat/databrowser/view/demo_find__custom_13911606/default/table?lang=en
18 Berde–Németh 2015.
19 KSH 2016.
20 See: https://ec.europa.eu/eurostat/web/population-demography/population-projections/database

Moreover, the low total fertility rates observed in the Member States today are barely above the 1.3 value defined by Kohler and his colleagues as "lowest low fertility", which, if maintained over the long term, other variables remaining constant, halves the population in 45 years.[21] However, in Europe, the increase in life expectancy and the positive migration process are partly offsetting the low fertility rate: according to Eurostat's 2023 projections, the population of the European Union could be only 0.8% below its current level in 2050.

A key factor in maintaining the stagnant population is the increase in life expectancy in recent years that is expected to continue in the future (Figure 3). It is important to point out that life expectancy in the new Member States has increased only slightly faster than in the older Member States over the past fifteen years, so people in the newly acceded Member States can still expect to live roughly 4 years less than citizens of the EU14 states. Unfortunately, there is no significant catching-up in Hungary either, since while in 2004 the citizens of the EU27 Member States lived 5.3 years longer, by 2022, this gap will have narrowed only moderately to 4.6 years.[22]

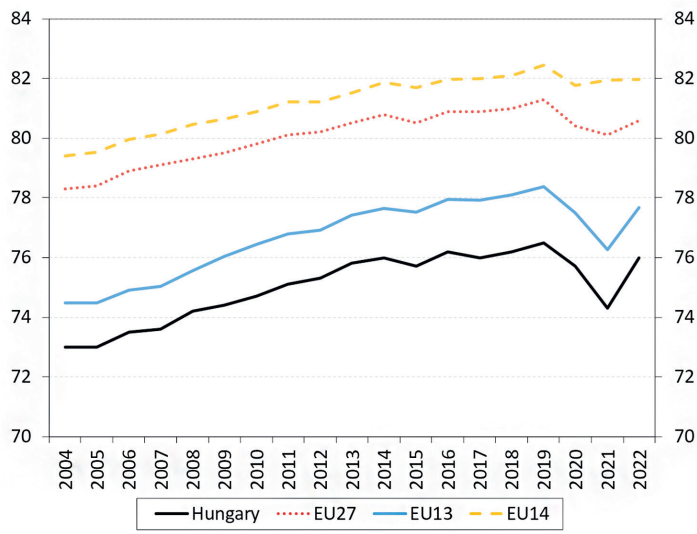

Figure 3: Trends in life expectancy in Hungary and in the EU27, EU13 and EU14, weighted by country, 2004–2022.

Source: compiled by the author based on Eurostat data

[21] KOHLER et al. 2002.

[22] See: https://ec.europa.eu/eurostat/databrowser/view/demo_mlexpec__custom_13911739/default/table?lang=en

In terms of net migration, the backlog of newly joined Member States is decreasing over time, but is still significant.[23] Until 2018, more people emigrated from the newly joined countries as a whole than the number of arrivals. This trend reversed in 2018, according to Eurostat data, but the positive migration balance is still significantly below that of Western Europe, and is probably largely due to the return of some of the citizens who have earlier migrated to Western Europe, rather than a significant turn in migration. Indeed, the accession to the European Union in the 2000s significantly accelerated migration from Central and Eastern Europe towards Western Europe. Atoyan and his fellow authors estimate the rate of emigration from the CEE countries to be at 0.5–1% per year relative to the 1990s population, which rate, however, accelerated significantly after the EU accession, and according to their calculation, the overall emigration from the countries of the region could have been as high as 8% of the 1990s population.[24] Comparing net migration data for 2004 and 2022, among the new Member States, the net migration rates for Bulgaria and Croatia have decreased significantly, while emigration has increased substantially, possibly due to the fact that in 2004 the European Union's markets were not yet open to nationals of these Member States. In other countries of the region, on the other hand, emigration was significant in the 2010s, but since the end of the decade there has been a slight positive migration balance. In addition to exacerbating demographic challenges, high emigration from the region to Western Europe also has a negative impact on the economic potential of the region, as emigrants tend to be younger and better educated than the population of their country of origin.[25] With the exception of 2022, Hungary has had a small positive migration balance throughout the period, but it has remained significantly below the average of the earlier acceded countries.

There has been a substantial catching-up by the newly joining countries towards the centre countries in respect of old-age dependency ratio. While in 2004, the ratio of the elderly compared to the working-age population was roughly 2.7 percentage points lower in the newly joining countries, by 2022 this has dropped roughly to its third, that is, to 0.9 percentage points. Looking ahead, according to Eurostat forecasts, the new Member States will be exposed to ageing at a slightly higher rate, with an old-age dependency ratio that will possibly be 1.4 percentage points higher in 2050 than that of the older Member States due to the trends observed in the three variables mentioned above. It is important to note that according to Eurostat's forecast, Hungary could perform better than the surrounding countries in this indicator, as the country's old-age dependency ratio in 2050 could be 3.7 percentage points lower than the average of the EU13 countries.

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23 Malta and Cyprus show a significant shift over the period and are therefore excluded from the calculation of the aggregate value for the newly acceded Member States. Due to the high volatility of migration figures, the net migration rate for a given year is defined as the ratio of the average net migration over 3 years divided by the average population.

24 Atoyan et al. 2016.

25 Medgyesi–Tóth 2020: 25.

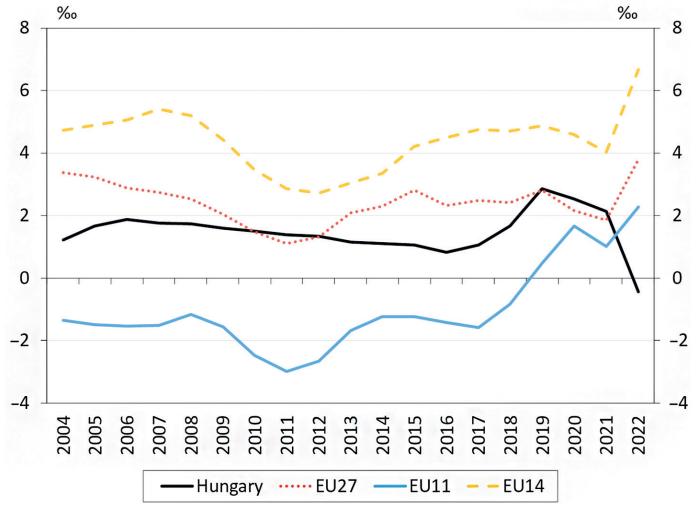

Figure 4: Net migration trends per mil in Hungary and in the EU27, EU11 (EU13 excluding Cyprus and Malta) and EU14, weighted by country, 2004–2022
Source: compiled by the author based on Eurostat data

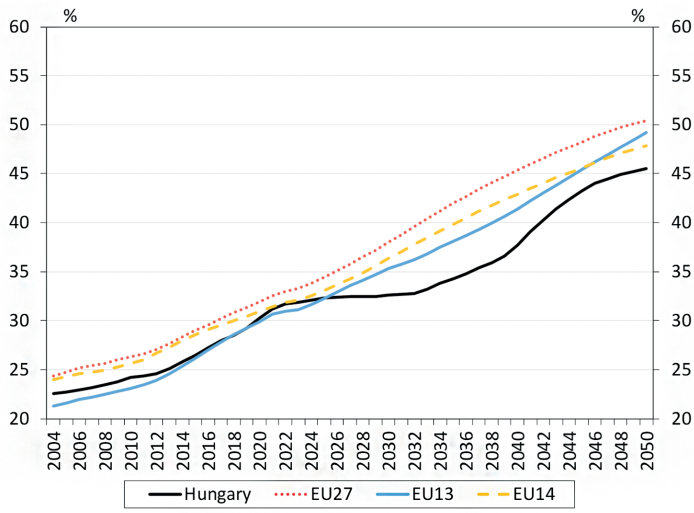

Figure 5: Trends in old-age dependency ratio in Hungary and among the EU27, EU13 and EU14 countries, weighted by country, 2004–2050
Source: compiled by the author based on Eurostat data

Methodology

In the following, we present the cluster analysis used in the study, a procedure that groups the observed population into the most similar clusters along the variables under examination. The procedure was run with 2004 and 2022 data. Our analysis may shed light on which groups of countries are most similar in terms of the demographic variables examined, and how the country blocks have changed between the two points in time.

Cluster analysis can be used with several algorithms, distance metrics and data manipulation tools.[26] In this study, a hierarchical cluster analysis was performed on data standardised by Ward's method, in which the program is optimised based on squares of Euclidean distances of points. The requirement of the cluster analysis is that the maximum number of elements should not exceed the root of the observations ($\sqrt{27} \approx 5.196$), besides, the $k \leq \sqrt{\frac{n}{2}}$ ($\sqrt{\frac{27}{2}} \approx 3.674$) rule of thumb is also used to select the desired number of elements.[27] In our study, we therefore examine the results with three and five clusters.

The cluster analysis was carried out for the European Union Member States. For the total fertility rate, life expectancy and old-age dependency ratio, 2004 and 2022 data were used, while the 2004 value of the net migration indicator is the average of the years 2002–2003 and 2004, and the 2022 data is the average of the years 2020–2021 and 2022, due to the relatively high inter-annual standard deviation of this indicator.

With one exception, the correlation between each of the four variables remained below 0.6 and it also shows relatively high variability in respect of time, which may make the separating property of cluster analysis more valid (Table 1). The direction of the correlation is broadly in line with intuition, since, for example, the primary destinations for higher net migration are likely to be the most developed Member States, where life expectancy is therefore also high, and this correlation may explain the positive correlation of 0.5 and 0.7 between the two variables.

Table 1: Correlations between each of the four demographic variables based on 2022 (2004) data

	Total fertility rate	**Life expectancy**	**Net migration**	**Old-age dependency ratio**
Total fertility rate	1 (1)			
Life expectancy	–0.31 (0.5)	1 (1)		
Net migration	–0.37 (0.29)	0.46 (0.74)	1 (1)	
Old-age dependency ratio	–0.1 (–0.01)	–0.1 (0.2)	–0.46 (–0.06)	1 (1)

Source: compiled by the author based on Eurostat data

[26] Kovács 2014.
[27] Kovács 2014.

Results

In the clustering exercise, we first looked at the formation of three clusters for the 2004 data, then the formation of five clusters, and then did the same for the 2022 data. In the first run, based on 2004 data, 10, 11 and six countries were grouped together, respectively (Table 2). The first group includes only EU Member States that were members before 2004, while the second group includes only newly joined Member States. This somewhat confirms our initial assumption that the demographic characteristics of old and new Member States may greatly differ. However, the hypothesis is weakened by the fact that when using different distance metrics (e.g. nearest/farthest neighbour, centroid/median method), cluster groups show a high degree of variability. The third group consists of Austria, Cyprus, Ireland, Luxembourg, Malta and Spain, the common characteristics of which were that in 2004 they had relatively low old-age dependency ratio and a high positive net migration balance. For while in all the countries together, the values of the two variables were 22.71 and 2.4, in these countries the average old-age dependency ratio was only 20.14 and the average net migration value per 1,000 inhabitants was 9.08 (see Table A.1 in the Annex).

Table 2: Hierarchical cluster analysis using Ward's method with four demographic variables, 27 observations, three clusters, 2004

cluster 1	Belgium, Denmark, Finland, France, Greece, Netherlands, Germany, Italy, Portugal, Sweden
cluster 2	Bulgaria, Czech Republic, Estonia, Croatia, Poland, Latvia, Lithuania, Hungary, Romania, Slovakia, Slovenia
cluster 3	Austria, Cyprus, Ireland, Luxembourg, Malta, Spain

Source: compiled by the author based on Eurostat data

If five clusters were created, the first and second clusters in a 3-cluster case were split into further clusters (see Table 3 for the formation of cluster 1 and cluster 4, and cluster 2 and cluster 3). The first group of core countries consisted mainly of countries with higher fertility rates, and slightly lower life expectancy, old-age dependency ratios and net migration, while the fourth group included the other older EU Member States (see Annex Table A.2). Among the newly joined countries, group 3 has a relatively better demographic situation, except for the total fertility rate, while group 2 has a worse demographic situation, since new Member States with higher life expectancy, net migration and lower old-age dependency ratios were included in group 3. The six countries in the fifth cluster have not changed after the new run.

Table 3: Hierarchical cluster analysis using Ward's method with four demographic variables, 27 observations, 5 clusters, 2004

cluster 1	Belgium, Denmark, Finland, France, Netherlands, Sweden
cluster 2	Bulgaria, Estonia, Croatia, Latvia, Lithuania, Hungary, Romania
cluster 3	Czech Republic, Poland, Slovakia, Slovenia
cluster 4	Greece, Germany, Italy, Portugal
cluster 5	Austria, Cyprus, Ireland, Luxembourg, Malta, Spain

Source: compiled by the author based on Eurostat 2024

Performing the three-cluster group analysis regarding 2022 data, each group was formed by 12, six and nine countries, respectively. Most of the countries that were EU members before 2004 became part of the first cluster, with the addition of Slovenia. The second cluster was formed by the newly admitted Member States that are (with the exception of the total fertility rate) demographically in a worse situation, while the third cluster that included the six countries that were already together in 2004 was joined by Lithuania, Estonia and Poland (Table 4). The group averages of cluster 1, which is largely composed of older Member States, and cluster 2, which is composed of new Member States, show the largest variance in life expectancy (cluster 1: 81.48; cluster 2: 75.75) and net migration (cluster 1: 5.33; cluster 2: –3.54). In contrast, the differences among the cluster averages of the total fertility rate and of the old-age dependency ratio are smaller (see Annex Table A.3), although it is important to note that cluster 2, which includes the newly joined Member States, has the highest total fertility rate of all cluster averages. Cluster 3 countries have in common a low total fertility rate, a low old-age dependency ratio and a very high net positive migration balance, however in the case of older Member States (Estonia, Lithuania, Poland) the latter is probably a unique phenomenon – a wave of refugees due to the Russian–Ukrainian war.

Table 4: Hierarchical cluster analysis using Ward's method with four demographic variables, 27 observations, 3 clusters, 2022

cluster 1	Belgium, Czech Republic, Denmark, Finland, France, Greece, Netherlands, Germany, Italy, Portugal, Sweden, Slovenia
cluster 2	Bulgaria, Croatia, Latvia, Hungary, Romania, Slovakia
cluster 3	Austria, Cyprus, Estonia, Ireland, Lithuania, Poland, Luxembourg, Malta, Spain

Source: compiled by the author based on Eurostat data

If 5 clusters were created, the first and third clusters in a three-cluster case were split into further clusters (see Table 5 for the formation of cluster 1 and cluster 5, and cluster 3 and cluster 4). When the first cluster was broken up, the new first cluster included countries with typically higher total fertility rates and net migration, while the fourth cluster included countries with presumably higher life expectancy and old-age dependency ratios. The split in cluster 3 is likely to have been determined by life expectancy at birth, separating the more developed older (except Cyprus and Malta) and the less developed newly joined Member States.

Table 5: Hierarchical cluster analysis using Ward's method with four demographic variables, 27 observations, five clusters, 2022

cluster 1	Belgium, Czech Republic, Denmark, France, Netherlands, Germany, Portugal, Sweden, Slovenia
cluster 2	Bulgaria, Croatia, Latvia, Hungary, Romania, Slovakia
cluster 3	Estonia, Lithuania, Poland
cluster 4	Austria, Cyprus, Ireland, Luxembourg, Malta, Spain
cluster 5	Finland, Greece, Italy

Source: compiled by the author based on Eurostat data

Summary

In our paper, we analysed the demographic homogeneity of the European Union countries using cluster analysis; we examined whether or not the demographic situation of the countries that joined the EU before 2004 and after 2004 differs substantially. The factors that contribute most to population change: changes in the total fertility rate, changes in life expectancy and net migration were included in the analysis, supplemented with the old-age dependency ratio.

The age pyramid in the European Union countries becomes increasingly urn-shaped: low fertility rates are reducing the ratio of young people within the society in all countries, while due to increasing life expectancy, the number of elderly people grows. Overall, net migration contributes positively to population growth in the European Union, but within the EU, migration from less developed to developed countries has led to a significant decline in the ratio of young people in the societies of some of the most recently joined EU Member States. In terms of total fertility rates, the new Member States have caught up with the older Member States over the last 15 years. There has been only minimal catching-up in life expectancy in the region, since children born in older Member States are still expected to live roughly 4 years longer than those born in Member States that joined the EU since 2004. The old-age dependency ratios in the newly joined countries have converged significantly over the past fifteen years to those of the older Member States, but the proportion of the elderly per working-age population is still slightly higher among those who joined before 2004. There were significant differences in net migration between the older and the newer Member States both in 2004 and in 2022. This difference is even more pronounced for the most recent acceding countries, with Bulgaria and Croatia showing a negative trend in net migration when comparing 2004 and 2022 data.

The results of the cluster analysis show a certain degree of demographic homogeneity between older and newly acceding Member States in respect of the above variables. During the individual runs, the Member States that joined the EU in the 20th century and those that joined in the 21st century mainly clustered separately. The similar demographic structure is more observable in the 2004 data and less in the 2022 data, and the stability of the cluster groups formed is rather weak, as the clusters formed showed significant variations with different distance metrics.

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Annexes

Table A.1: Hierarchical cluster analysis using Ward's method with four demographic variables, 27 observations, three clusters, 2004, group averages

	Fertility rate	**Life expectancy at birth**	**Old-age dependency ratio, %**	**Net migration rate**
cluster 1	1.61	79.41	25.16	2.51
cluster 2	1.31	73.62	21.87	–1.34
cluster 3	1.54	79.33	20.14	9.08
Overall average	1.47	77.03	22.71	2.40

Source: compiled by the author based on Eurostat data

Table A.2: Hierarchical cluster analysis using Ward's method with four demographic variables, 27 observations, five clusters, 2004, group averages

	Fertility rate	Life expectancy at birth	Old-age dependency ratio, %	Net migration rate
cluster 1	1.78	79.35	23.95	2.13
cluster 2	1.34	72.51	23.52	–2.36
cluster 3	1.24	75.55	18.99	0.44
cluster 4	1.35	79.50	26.98	3.09
cluster 5	1.54	79.33	20.14	9.08
Overall average	1.47	77.03	22.71	2.40

Source: compiled by the author based on Eurostat data

Table A.3: Hierarchical cluster analysis using Ward's method with four demographic variables, 27 observations, three clusters, 2022, group averages

	Fertility rate	Life expectancy at birth	Old-age dependency ratio, %	Net migration rate
cluster 1	1.49	81.48	34.04	5.33
cluster 2	1.58	75.75	31.80	–3.54
cluster 3	1.32	80.59	27.73	11.29
Overall average	1.45	79.91	31.44	5.35

Source: compiled by the author based on Eurostat data

Table A.4: Hierarchical cluster analysis using Ward's method with four demographic variables, 27 observations, five clusters, 2022, group averages

	Fertility rate	Life expectancy at birth	Old-age dependency ratio, %	Net migration rate
cluster 1	1.55	81.44	33.11	6.89
cluster 2	1.58	75.75	31.80	–3.54
cluster 3	1.32	77.03	30.77	9.31
cluster 4	1.31	82.37	26.22	12.28
cluster 5	1.29	81.60	36.83	0.67
Overall average	1.45	79.91	31.44	5.35

Source: compiled by the author based on Eurostat data

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Attila Miklós Kovács[1]

Legislative Activity and Connectivity in the European Parliament[2]

The Case of 'Demography'

This article analyses the legislative activity and connectedness of the Members of the European Parliament (MEP) who dealt with the topic of 'demography' in the 2019–2024 EP term. A novel dataset of legislative amendments was analysed to identify those MEPs who were the most active and connected in the last five years in this policy domain.

We found that MEPs from Spain, France and Germany were the most active ones and the ones from the S&D (Socialist & Democrats), RE (Renew Europe) and EPP (European People's Party) groups. Slovenia and Hungary were the most impactful countries, while the number of successful amendments was the highest for RE, EPP and S&D.

The social network analysis identified the S&D Group as the biggest and most connected community, which was corroborated by the rankings of different network centralities. The rankings also highlighted that Spanish MEPs played a key role in the legislative network.

Keywords: European Parliament, demography, connectivity, social network analysis

Introduction

The role of the European Parliament (EP) in the legislation and political decision-making of the European Union (EU) has been in the forefront of political and scientific discussions since the establishment of the institution. These discussions have intensified since 1979 when Members of the European Parliament (MEPs) were first directly elected.

1 Founder, CEO, Eulytix, e-mail: attila.kovacs@eulytix.eu

2 „A cikk elkészítésére a „Big-data alapú, innovatív megoldások az Európai Unió jogalkotásának elemzésére: új irányok és lehetőségek a tanácsadói és lobbiiparág forradalmasítására" című, 2021-1.1.4-GYORSÍTÓSÁV-2022-00041 azonosítószámú projekt keretében, a projekt eredményeinek felhasználásával került sor. A Nemzeti Kutatási, Fejlesztési és Innovációs Hivatal által támogatott projekt kedvezményezettje az Eulytix Kft., a projekt összköltsége 250 588 800 Ft, melyből a vissza nem térítendő támogatás összege 199 820 160 Ft."

Further impetus has been given to this discussion in the 1990s and early 2000s, when a series of treaty changes – Treaty of Maastricht in 1992, the Treaty of Amsterdam in 1997, and the Treaty of Nice in 2001 – gradually empowered the European Parliament.

Nevertheless, the breakthrough was the signing of the Treaty of Lisbon in 2007. It was a consequence of the mounting pressure after the 2004 'big-boom' enlargement and a response to the increasing need for changes in the institutional setup of the EU to ensure a smooth decision-making. The Treaty of Lisbon opened a new page in the history and role of the European Parliament.

Since the entering into force of the Treaty of Lisbon in 2009, the EP has been a co-legislator in several important EU policy areas, including high-budget policies like regional policy, Common Agricultural Policy, etc. Demography, nevertheless, is not a European policy, although it has implications at EU level. Demographic challenges in the EU, including ageing European society, falling birth rates across the continent, the current and future imbalances of social security funds make this policy domain to the forefront of political discussion. Therefore, it is of interest to both the scholarly community as well as the broader readership to understand better the legislative processes related to demography.

Demography is truly a multidisciplinary topic which has connections and implications with several European policies both at EU and Member States level. These policies include migration, competitiveness and healthcare, among others.

According to the European Commission's report,[3] demography is interlinked to various aspects of social life in Europe, including life expectancy, mortality, migration flows, health shocks and the exposure of the economy to both gradual aging and quick health shocks, like Covid–19. Another related pre-pandemia report of the Commission[4] also highlighted the implications of changing demography on the labour market and skills, on public budgets, while also emphasising the regional and local dimensions of demographic transition. The recently published Draghi report[5] analysed the link of adverse demographic trends with productivity, labour force trends and skill gaps. Eurostat data shows[6] that after two years of decline (2020–2021), the population of the EU has started to increase again and now reaches almost 450 million. Behind the overall numbers, there are some important tendencies to highlight. Of those aged 80+ increased from 3.7% to 6.0% between 2003 and 2023. The median age increased in the period 2003 to 2023: it was 39.0 years in 2003 and 44.5 years in 2023. This means an increase of 5.5 years in the median age in the EU during this 20-year period. The crude birth rate, showing the number of live births per 1,000 persons, was 10.1 in 2002, went up to 10.6 in 2008 and has decreased since then to 8.7 in 2022. All these alarming statistics put the topic of demography high on the political and policy agenda in the European Union.

In sum, we can conclude that demography is in the centre of the latest political discussions as well as public discourse. It justifies the need for a more fine-tuned, in-depth analysis on what role EU institutions, especially the European Parliament play in demography-related policy areas.

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3 European Commission 2023.
4 European Commission 2020.
5 Draghi 2024.
6 Eurostat 2024.

The objective of this article is to give a comprehensive picture and highlight some of the insights of demography-related EU legislation, with focus on the European Parliament. To fulfil these objectives, we compelled a novel dataset of legislative amendments tabled to demography-related legislative procedures in the European Parliament. Besides the descriptive analysis of this dataset, we applied social network analysis to highlight the main focal points of the legislation as well as to reveal the main patters of cooperation of Members of the European Parliament (MEPs), Member States and EP Groups.

Literature review

The relevant existing literature can be categorised into four main groups: 1. literature on the power and the empowerment of the European Parliament; 2. literature on the role of the EP in various EU policies; 3. literature on the application of a data-driven approach to analyse EU legislation, especially in the European Parliament; 4. social network analysis (SNA) in the European Parliament.

First, regarding the literature on the power and empowerment of the European Parliament, there are conflicting views whether the EP's power increased after the entering into force of the Treaty of Lisbon. Some scholars[7] claimed that the co-decision procedure didn't increase the power of the Parliament. In his opinion, under the ordinary legislative procedure (OLP, former co-decision procedure), the most influential EU institution is the European Commission. Another group of scholars[8] stated that, under co-decision, the EP's power is decreased by the loss of its agenda-setting power. The mainstream view is nevertheless that the OLP increased the power of the EP.[9] When analysing the institutional implications and balance, the main research focus includes the empowerment of the European Parliament[10] and the EP's power under different EU legislative procedures.[11]

Second, regarding the role of the EP in different policy domains, there are a variety of EU policies the EP has a say in: European foreign policy,[12] cohesion policy,[13] Common Agricultural Policy[14] Common Fisheries Policy,[15] environmental policy,[16] social policy[17] and energy policy.[18]

Third, regarding a data-driven analytical approach, network analysis and connectivity, we see that several scholarly articles used legislative amendments as a data source

7 For example, Steunenberg 1994.
8 See Tsebelis 1995 and Tsebelis et al. 2001.
9 For example, Bureau et al. 2012 and Greer–Hind 2012.
10 Hix–Høyland 2013.
11 Tsebelis–Kalandrakis 1999; Kreppel 2002; Lučić 2004.
12 Van Hecke – Wolfs 2015.
13 Hübner 2016.
14 Knops 2012.
15 Zimmermann 2019.
16 Rasmussen 2012.
17 Roos 2021.
18 Buzogány–Ćetković 2021.

to analyse the role and influence of the EP.[19] The other relevant source of data is voting records.[20]

Fourth, social network analysis in the context of the European Parliament. SNA has already been applied in different EU policy areas, including regional development policy,[21] Common Security and Defence Policy,[22] Common Agricultural Policy.[23] Häge and Ringe (2018) analysed networks of rapporteurs and shadow rapporteurs, while Jäckle and Metz (2019) applied SNA for oral questions in the European Parliament. Walter et al. (2023) carried out a social network analysis of debate networks in the EP.

There are various other sources of data for parliamentary network analysis including Twitter account data,[24] interest group data from the Transparency Register of the European Union,[25] oral questions,[26] and debate interactions in the EP.[27]

Dataset

In this article, we use a novel dataset of legislative amendments from the EP. The scarcely available data have been put into a clean dataset by Eulytix.[28] The thematic filtering was based on the official policy and subject categorisation of the Legislative Observatory of the European Parliament under the number of "4.10.14 Demography". With this filtering, the relevant legislative procedures, their rapporteurs, the tabled amendments, the sponsors of the amendments as well as the texts of all the amendments have been identified.

The dataset contains the legislative amendments tabled to the following four legislative procedures.

Table 1: Demography related legislative procedures in the 2019–2024 EP term

Procedure ID	Procedure title	Rapporteur	Member State	EP Group
2019/2850(RSP)	Resolution on the 25th anniversary of the International Conference on Population and Development (ICPD25) (Nairobi Summit)	Evelyn Regner	Austria	S&D
2020/2008(INI)	Old continent growing older – possibilities and challenges related to ageing policy post 2020	Beata Szydło	Poland	ECR
2020/2039(INI)	Reversing demographic trends in EU regions using cohesion policy instruments	Daniel Buda	Romania	EPP
2023/0008(COD)	Statistics on population and housing	Irena Joveva	Slovenia	RE

19 KREPPEL 1999; TSEBELIS–KALANDRAKIS 1999; YORDANOVA 2010.
20 FERTŐ et al. 2020 and ARINIK et al. 2020.
21 ANSELL et al. 1997 and ANSELL 2000.
22 MÉRAND et al. 2011.
23 FERTŐ–KOVÁCS 2015.
24 PRAET et al. 2021.
25 IBENSKAS–BUNEA 2021.
26 JÄCKLE–METZ 2019.
27 WALTER et al. 2023.
28 See: www.eulytix.eu

Source: European Parliament & Eulytix

Altogether, 1,583 amendments were tabled to these four legislative procedures as follows.

Table 2: Number of EP legislative amendments in the field of demography

Legislative procedure	Number of amendments
2019/2850(RSP)	209
2020/2039(INI)	502
2020/2008(INI)	676
2023/0008(COD)	196
Total	**1,583**

Source: European Parliament & Eulytix

Methodology

In this article, we apply a methodology based on three pillars.

First, we provide the readers with the descriptive statistics of the dataset.

Second, we analyse the legislative impact and success of Member States and EP Groups. Legislative amendments are either adopted or rejected in their entirety, or sometimes find their way into so-called compromise amendments, which are the merger of several amendments. Hence, when assessing the success of an amendment a simple binary categorisation is inadequate. To alleviate this issue, we break down amendments into elementary changes: deletion, replacement or addition. Every amendment is a composition of these elementary changes. A feasible approach is to map amendments to fractional values ranging from zero to one; values which correspond to the ratio of elementary changes present in both the tabled and the adopted amendment.

In this classification, entirely successful and rejected amendments have a score of one and zero, respectively, while amendments included in a compromise have a score somewhere in between. It logically follows that the aggregate impact of an entity, be it MEP, Member State or political group – measured as the sum of amendment success scores – is a fractional number. This impact measure thus reflects the effective number of successful amendments tabled by the entity. The use of fractional scoring can be justified based on two grounds. First, the number of amendments adopted in their entirety is low, so limiting the research only to these amendments would leave partially adopted amendments with significant impact outside of the scope of the analysis. Second, if only fully adopted amendments were to be taken into account, it would seriously distort the aggregate level legislative impact, be it at MEP, Member State or EP Group level, sidelining the individually small but numerous impacts.

Third, we carry out social network analysis based on the co-sponsorship of legislative amendments. We calculate three separate rankings, then "merge" them into one.

Degree centrality gives high value to nodes with a high number of connections in the network. In a network graph, degree centrality is measured by the total amount of direct links with the other nodes.[29]

The eigenvector centrality suggests the idea that a node is more central as it is connected to important (central) nodes.[30] Eigenvector centrality is high among influential people in the network.

We calculate the closeness centrality of nodes with respect to the distance and shortest path concept.[31]

These three partial rankings capture different aspects of connectivity. In order to 'merge' these three rankings, we use a Condorcet method: a method that makes sure the rankings are such that in every pairwise comparison the winner is in possession of the majority of votes.[32] Partial rankings have uniform weights, which means that they have equal importance. The result of the calculations is an aggregate ranking, which balances the various aspects of connectivity.

Regarding the limitations of the methodology, it shall be noted that legislative amendments form only one source of legislative data in the EP. Nevertheless, extending the dataset would be beyond the scope of the analysis presented in this paper. Another limitation is that SNA doesn't make a difference between the weight – i.e. policy importance – of amendments, giving them all an equal weight.

Results

In line with the different methodologies applied, this section contains four main pillars. First, we present the most important descriptive statistics, then we present the results of calculations on legislative success and impact. The third pillar deals with connectivity, presenting the networks and connections of MEPs, Member States and EP Groups.

Descriptive statistics, legislative activity

Table 1 gives an overview of the number of co-sponsored amendments in the analysed dataset. MEPs from S&D Group was the most active one, tabling more than 50% of all amendments. MEPs from Renew Europe (RE) took the second place, followed by the European People's Party. The least active EP Group was the Greens/EFA.

Table 3: Number of co-sponsored amendments by EP Group

#	EP Group	Number of amendments co-sponsored
1	S&D	3,169
2	RE	1,101

[29] Zhang–Luo 2017.
[30] Bonacich 2007.
[31] Opsahl et al. 2010.
[32] See Kemeny 1959 or Young 1988.

#	EP Group	Number of amendments co-sponsored
3	EPP	645
4	ECR	370
5	ID	304
6	GUE/NGL	242
7	NI	173
8	Greens/EFA	84
Total		**6,088**

Note: the 'Number of amendments co-sponsored' column is multiplied by the number of co-sponsors to better express the weight of each EP Group.
Source: European Parliament & Eulytix

Table 4: Number of co-sponsored amendments by Member States

#	Member States	Number of amendments co-sponsored
1	Spain	903
2	France	808
3	Italy	574
4	Germany	522
5	Portugal	393
6	Romania	349
7	Poland	320
8	Sweden	291
9	Slovenia	277
10	Netherlands	269
11	Lithuania	213
12	Hungary	174
13	Malta	144
14	Bulgaria	135
15	Czechia	131
16	Denmark	98
17	Latvia	87
18	Croatia	78
19	Slovakia	72
20	Belgium	64
21	Austria	58
22	Ireland	41
23	Greece	30
24	Cyprus	22
25	Luxembourg	16
26	Estonia	13
27	Finland	6
Total		**6,088**

Note: the 'Number of amendments co-sponsored' column is multiplied by the number of co-sponsors to better express the weight of each Member State.
Source: European Parliament & Eulytix

As for the activity of MEPs from different Member States, we can conclude the most active MEPs were from Spain, followed by France and Italy. The least actives were Luxembourg, Estonia and Finland.

Figure 1 presents the number of legislative amendments by political groups. S&D tops the ranking with 375 amendments, followed by EPP. Noteworthy to mention that the relatively smaller groups of ID and ECR are ahead of the leftist (GUE/NGL) and the green (Greens/EFA) group.

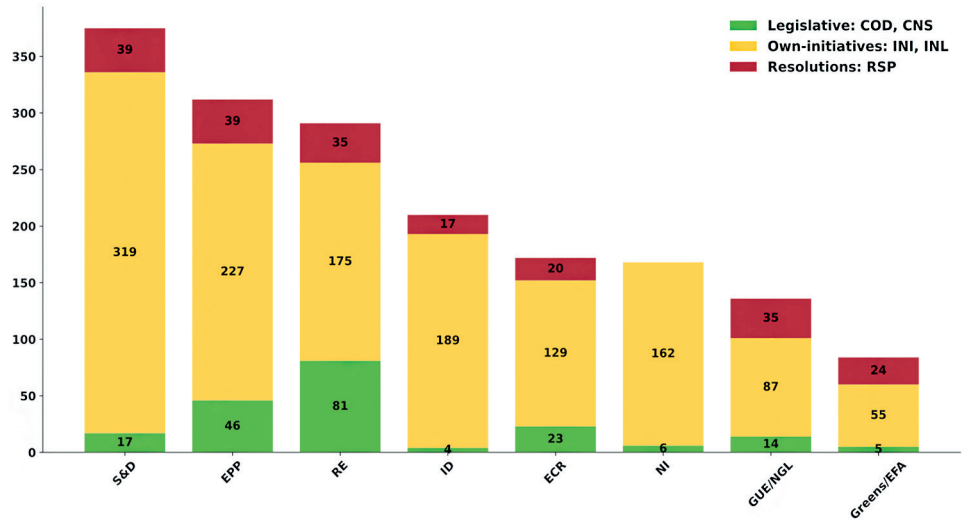

Figure 1: Number of amendments sponsored by political groups

Note: co-sponsored amendments mean one sponsored amendment for each co-sponsor

Source: European Parliament & Eulytix

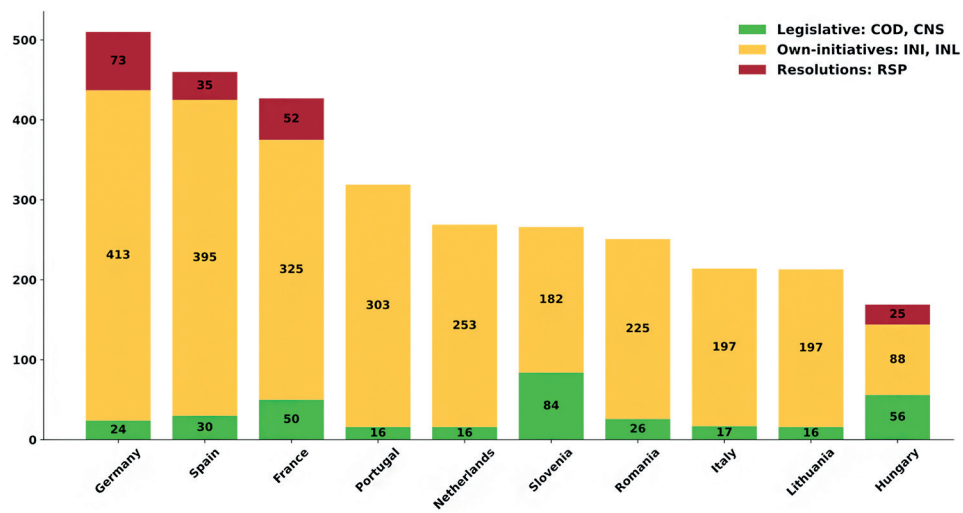

Figure 2: Member States with the highest number of sponsored amendments (top 10)

Note: co-sponsored amendments mean one sponsored amendment for each co-sponsor

Source: European Parliament & Eulytix

Figure 2 contains the top 10 Member States regarding legislative activity in the field of 'demography'. The most active MS was Germany, followed by Spain, France and Portugal. Hungary takes the 10th position out of 27 Member States, showing a more active attitude from Hungarian MEPs. It is also worth mentioning that in the top 10, four MSs are from CEE countries, Slovenia, Romania, Lithuania and Hungary.

Legislative impact and success

As for the ranking of MSs by legislative impact, we can see that Slovenia takes the first place, followed by Hungary and France. Lithuania also managed to make it into the top 10, taking the 8th position. Luxembourg and Sweden are the two countries which were not among the top 10 regarding activity but made it in terms of legislative impact.

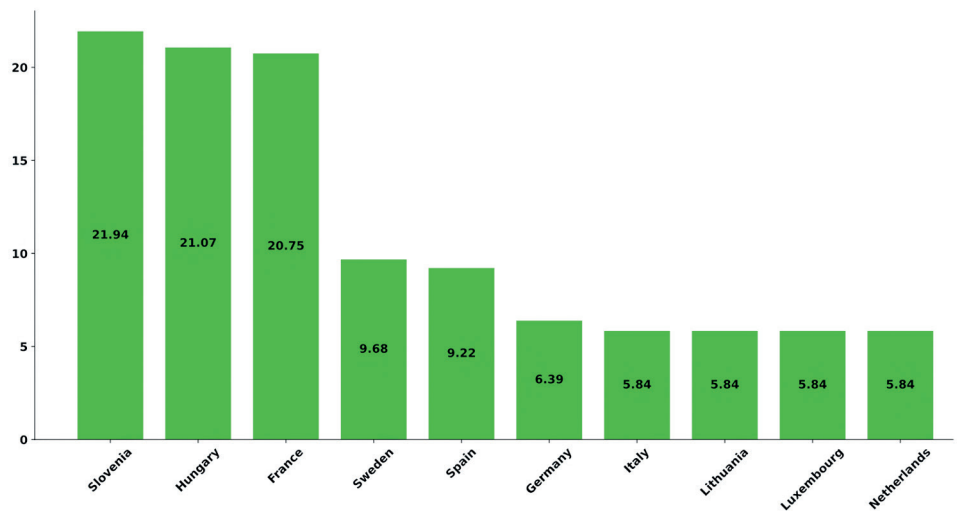

Figure 3: The impact of Member States (top 10)

Note: Each amendment is assigned a value between 0 and 1 representing the ratio of proposed changes accepted by the Committee. By effective number of successful amendments, we mean the sum of these ratios.

Source: European Parliament & Eulytix

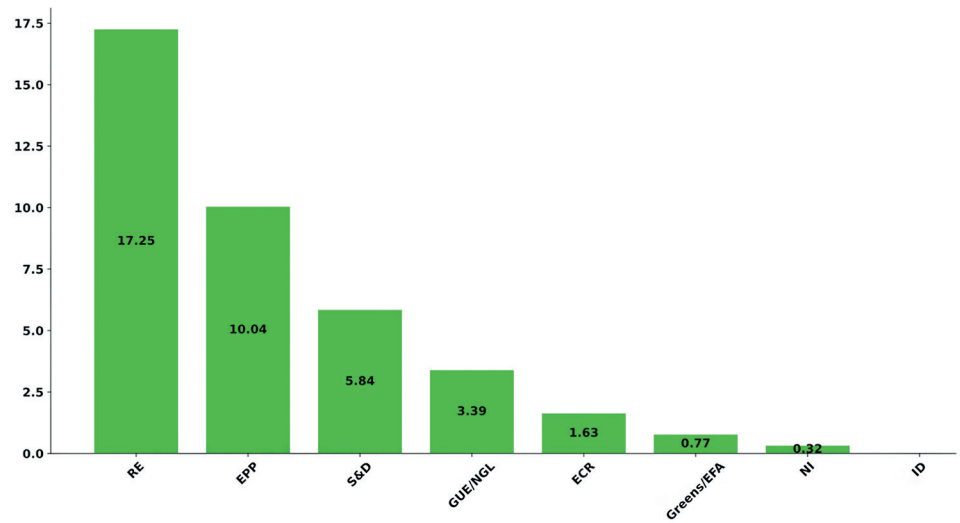

Figure 4: The impact of political groups
Source: European Parliament & Eulytix

As for the impact of political groups, the Renew Europe takes the first position with a commanding advantage, followed by the EPP and S&D. The ECR, the Greens/EFA and ID are lagging behind other EP groups in terms of influence. Two tendencies to observe here: the RE and ID took average positions regarding legislative activity, but while RE tops the impact ranking, ID became the last one.

Networks and connectivity

In this section we present the role of MEPs, EP Groups and Member States they play in the co-sponsorship network. First, we present the co-sponsorship network of MEPs.

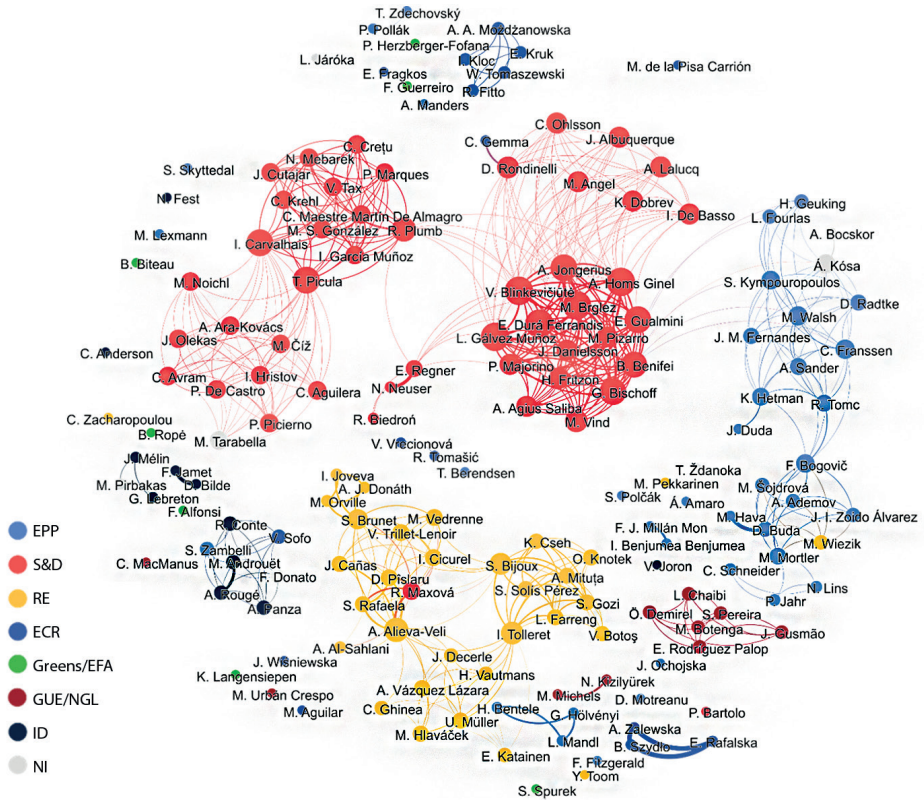

Figure 5: The co-sponsorship network of procedures related to demography

Note: Node sizes increase with the number of connections the node has. Edge thickness increases with tie strength.

Source: European Parliament & Eulytix

We see a very dense and well-connected core of S&D MEPs, slightly tied to EPP MEPs but without any direct link to Renew Europe. Green MEPs are very sporadically connected to others, with minimal cohesion. GUE/NGL MEPs form their own community with zero cross-party connections. The same applies to ECR MEPs. ID MEPs also form a separate community, with minimal ties to other EP Groups' members. The dominance of S&D MEPs is even more striking on the network picture of successful amendments. Besides the very dense S&D community, we find some ties within RE (second group), EPP and ECR members. There are also some lone MEPs from RE and EPP.

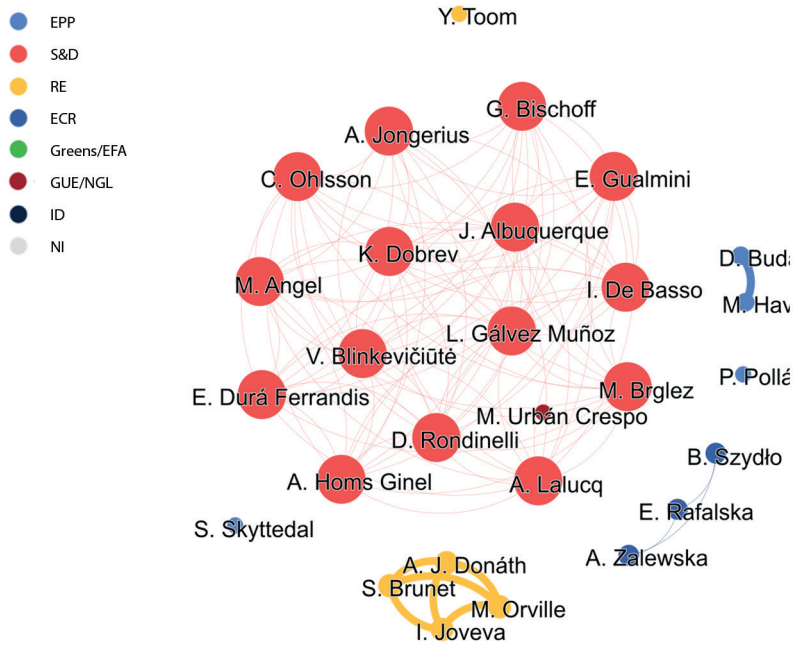

Figure 6: The co-sponsorship network of procedures related to demographics (successful amendments only)

Note: Node sizes increase with the number of connections the node has. Edge thickness increases with tie strength

Source: European Parliament & Eulytix

As a summary of the MEP-level network analysis, we present the ranking of Members of the European Parliament regarding their network position and power. As described in the 'Methodology' section of this article, we calculated the degree centrality, the eigenvector centrality and closeness centrality and set up the relevant rankings accordingly. Finally, we calculated the aggregated Kemeny ranking. Based on the above network graph visualisations, it comes with no surprise that S&D MEPs are on the top of all the rankings, including – obviously – the aggregate one. In the Top25 MEPs, we find 20 MEPs from S&D, 4 from RE and only one from EPP. Broken down by Member States, we find a trio from Spain, followed by MEPs from a diverse group of MSs. In the Top25, we also find 3 MEPs from both Italy and France, 2 MEPs from Portugal and Sweden. Altogether, 17 MEPs are represented in the Top25.

Table 5: Ranking of MEPs along different network centrality measures

MEP name	Member State	EP Group	Degree centrality	Eigenvector centrality	Closeness centrality	Degree rank	Eigenvector rank	Closeness rank	Kemeny rank
Estrella Durá Ferrandis	Spain	S&D	59.3	0.3	0.3	1	2	1	1
Lina Gálvez Muñoz	Spain	S&D	59.3	0.3	0.3	1	1	1	2
Alicia Homs Ginel	Spain	S&D	59.3	0.3	0.3	5	3	1	3
Vilija Blinkevičiūtė	Lithuania	S&D	59.3	0.3	0.3	1	4	1	4
Milan Brglez	Slovenia	S&D	59.3	0.3	0.3	1	4	1	5
Gabriele Bischoff	Germany	S&D	55.4	0.3	0.2	6	6	7	6
Agnes Jongerius	Netherlands	S&D	55.4	0.3	0.2	7	6	7	7
Elisabetta Gualmini	Italy	S&D	55.2	0.3	0.2	8	8	9	8
Brando Benifei	Italy	S&D	51.4	0.2	0.2	9	10	6	9
Manuel Pizarro	Portugal	S&D	42.7	0.2	0.2	10	9	11	10
Pierfrancesco Majorino	Italy	S&D	42.5	0.2	0.2	11	11	12	11
Heléne Fritzon	Sweden	S&D	40.6	0.2	0.2	12	12	13	12
Marianne Vind	Denmark	S&D	39.6	0.2	0.2	15	14	10	13
Johan Danielsson	Sweden	S&D	40.6	0.2	0.2	12	13	13	14
Alex Agius Saliba	Malta	S&D	35.7	0.2	0.2	18	15	16	15
Atidzhe Alieva-Veli	Bulgaria	RE	39.1	0.0	0.2	16	163	15	16
Rovana Plumb	Romania	S&D	33.7	0.0	0.2	20	23	17	17
Irène Tolleret	France	RE	34.6	0.0	0.2	19	169	18	18
Tonino Picula	Croatia	S&D	39.7	0.0	0.2	14	33	21	19
Stéphane Bijoux	France	RE	31.7	0.0	0.2	21	166	19	20
Maria Walsh	Ireland	EPP	17.7	0.0	0.2	41	25	20	21
Sylvie Brunet	France	RE	29.5	0.0	0.2	22	139	22	22
Evelyn Regner	Austria	S&D	16.7	0.0	0.2	44	24	23	23
Isabel Carvalhais	Portugal	S&D	37.8	0.0	0.2	17	34	24	24
Cindy Franssen	Belgium	EPP	15.5	0.0	0.2	48	27	25	25

Source: calculations of the author using data from European Parliament & Eulytix

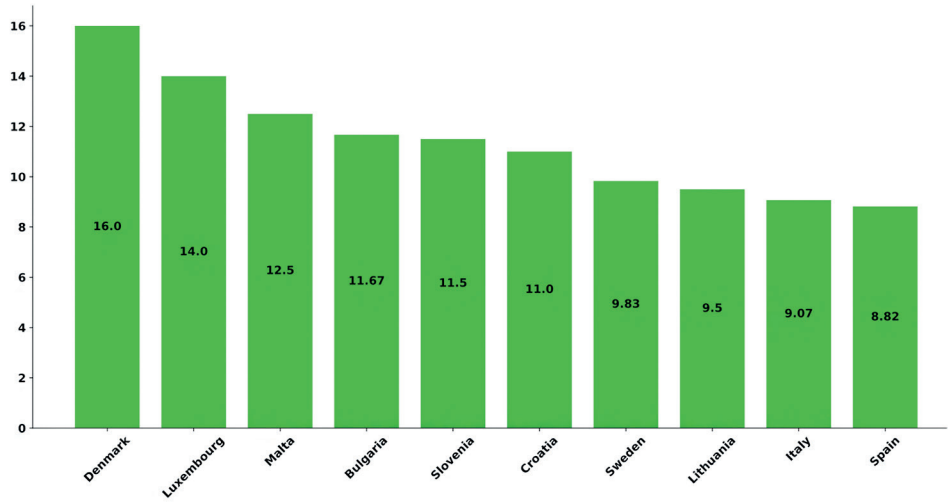

Figure 7: Member States with the most partnerships (average number of partners)
Source: European Parliament & Eulytix

Figure 7 presents the Member States with the most partnerships (MEPs). The ranking is topped by Denmark, followed by Luxembourg and Malta. In the top 10 Member States we see that relatively small Member States dominate the ranking (except Italy and Spain in the 9th and 10th position). It is in line with the assumption that MEPs from smaller MSs must build broader coalitions, which requires the involvement of multiple co-sponsors from different Member States.

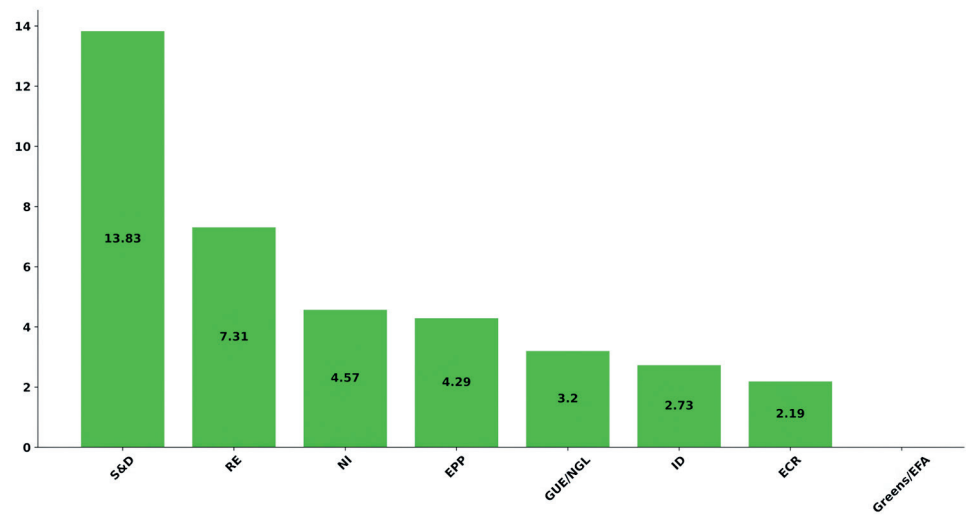

Figure 8: Partnerships of political groups (average number of partners)
Source: European Parliament & Eulytix

As for the partnerships of EP Groups, we see that the S&D Group had the most partnerships in the analysed four legislative procedures. RE can be found in the second position, followed by the non-attached members. EPP and GUE/NGL are taking the 4th and 5th positions, respectively. ID, ECR and the Greens/EFA are at the bottom of the ranking, the Greens having zero partnerships.

Discussion, conclusions

In this paper, we presented the legislative analysis of demography-related legislative procedures in the 2019–2024 EP term. We focused on legislative amendments tabled to the 4 procedures concerned.

First, we analysed legislative activity and success. We found that MEPs from 'big' Member States, namely Spain, France and Germany were the most active. As for EP Groups, MEPs from the S&D, RE and EPP were the most active ones.

As for the impact of Member States, Slovenia, Hungary and France top the ranking. For EP Groups, the number of successful amendments was the highest for RE, EPP and S&D.

The social network analysis of the co-sponsorship network of MEPs revealed that S&D MEPs form the biggest and most connected community in the network graph of both tabled and successful amendments. This is also reflected in the rankings of different network centralities, which also shed light on the fact that Spanish MEPs played a key role in the legislative network.

Although this paper is a descriptive analysis, it also reveals some policy and political implications. First, it identifies Member States whose MEPs play a key role – be it activity or legislative influence – in the field of demography. This could provide valuable information both for MEPs and Member States for building influential coalitions to put their relevant policy agenda through the EP.

A more fine-tuned textual analysis could reveal the context, topics and policy directions that MEPs from each Member State represent.

In the future, an increase in the importance of the topic of demography is expected not only because of the deteriorating demographic tendencies but also given the increasing political importance of related policy areas, including migration, public health and labour market.

Further research could address the topics which were covered by the amendments related to demography. Also, the approach presented in this paper could be applied to other policy areas in the EU decision-making process to make thematic comparisons. Finally, the subject of future research could be to analyse and compare the positions of MEPs and their respective national parties on demography in the European Parliament and their national parliaments. This could give a valuable insight into the similarities and differences represented in the EU institutional setup of multilevel governance.

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Andrea Kuhl[1]

Child Protection and Legal Standards for Children in Criminal Justice with Regards to the EU Strategy on the Rights of the Child[2]

Children are the most vulnerable members of our society and cannot manage the risk of poverty and social exclusion alone. Crimes against children are common. The European Unions's (EU's) Strategy on the Rights of the Child is a policy framework that enforces children's rights as a horizontal issue in EU policies and legislation. The implementation aims to support European and national efforts to promote children's well-being and reduce child poverty. The issue of age is of paramount importance from the point of view of criminal prosecution and applicable legal consequences, notably whether we speak about child protection or a criminal justice case. The EU Strategy on the Rights of the Child follows a holistic approach, and its overall goal is to create a better society in the EU and worldwide in six major areas, containing the child-friendly justice, which is in the focus of this study. The aim of the study is to explore the deepening of children's rights in criminal proceedings, to list some relevant case law of the European Court of Justice (CJEU) and the European Court of Human Rights (ECtHR), and to point out that the incorporation of European legal standards into Hungarian jurisprudence is crucial for improving the protection of children's rights. The relationship between EU standards and child-friendly justice in Hungarian criminal proceedings is complex and requires careful consideration; it can help to ensure a more child-centred enforcement of children's rights, while at the same time highlighting the European requirements already in place in our criminal proceedings.

Keywords: children's rights, EU policy framework, child-friendly justice, special treatment, criminal procedure, international legal norms

[1] Debrecen University Geza Marton Doctoral School of Legal Studies, e-mail: kuhl_andrea@yahoo.fr

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Introduction

Making the justice system child-friendly is not an end in itself, as it provides an important cornerstone for the rule of law, the protection of our children, and can serve as a yardstick for future generations of adults in terms of social responsibility as well. In my opinion, child-friendly justice prevails not only at the level of legislation, but also in everyday life, at the level of practice, i.e. the application of the law.[3] The role of children in society is of particular importance. The decisive role of age is also highlighted by the research results, according to which the younger the crime occurs, the greater the chance of recidivism and the development of a criminal lifestyle. The decisive role of childhood experiences in our adult life is emphasised by the research results, according to which abuse suffered in childhood and becoming the victim of a crime increase the chance of becoming a repeat victim in the future.

We establish our trust in the justice system in childhood or we lose. It is a requirement that prevails both at individual level and at the level of society, that we can take responsibility for our actions with dignity while respecting our rights, and the law enformcement power of the state is given space in this way from childhood.

Children's rights

Children's rights are the human rights of those under the age of 18. Article 3(3) of the Treaty on European Union (TEU) and Article 24 of the Charter of Fundamental Rights of the European Union state that the protection of children's rights is one of the goals of the European Union (EU). The Council of Europe supports and protects the human rights of children based on the European Convention on Human Rights, the children's rights strategy and other relevant legal standards. The Charter of Fundamental Rights is also important in the field of European criminal law, as the provisions of the Charter may have a fundamental impact on legislation, interpretation and application of the law. The Charter summarises and codifies (state of the art) the acquis of EU fundamental rights protection and does not in principle create new rights or extend the scope of protection, but merely confirms it. The Charter aims to limit EU power directly to the limits of fundamental rights, i.e. to ensure that this acquis is not only indirectly enforced through the protection of Member States' fundamental rights and the protective functions of the ECHR.

The Charter does not provide for the protection of fundamental rights in general, but only within its scope (Article 51).

If a provision of a Member State (in the context of the implementation of EU law) is in conflict with the Charter of Fundamental Rights, the national authority (court) is obliged, as with other primary sources of law, to ensure the full application of the Charter, to interpret national provisions in the light of the Charter and, if necessary, within its own competence, to refrain from applying, even ex post, provisions of national law which are contrary to the Charter, without having to seek or wait for their annulment

[3] GYURKÓ 2013: 240.

by legislative or other constitutional means. The same applies, mutatis mutandis, to criminal law. Finally, it should be noted that the ECHR – its jurisprudence in criminal matters – must be fully respected, since the Charter of Fundamental Rights itself clearly regulates its relationship with the ECHR in Article 52(3). This provision creates consistency between the Charter and the ECHR and continues to impose an obligation on Member States' legislatures and law enforcement authorities to operate their legal systems in the light of the ECtHR acquis and to introduce restrictions on fundamental rights only in the context of the systems developed by the ECtHR. However, there is a possibility for the EU to provide a higher level of protection than the ECHR, as is typical in the area of criminal justice (e.g. transnational recognition of ne bis in idem).[4]

According to the United Nations (UN) Convention on the Rights of the Child (UNCRC), everyone in the world under the age of 18 is entitled to the same rights. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and the United Nations Sustainable Development Goals (UNSDG) also affect this issue.

The annual children's rights forum is a platform, which started in 2007 and enables dialogue and monitors EU actions on children's rights every year. In 2011, the European Economic and Social Committee (EESC) adopted the EU Roadmap for the Rights of the Child, in which it invited member states to support children in all possible ways.

In 2013, the European Commission adopted recommendations to strengthen children's rights. In 2015 the European Parliament (EP) called on the European Commission and EU Member States to introduce the Child Guarantee and provide programs that offer support and opportunities to help parents break out of social exclusion and enter the labour market.

In 2017, the EP, the Council and the European Commission announced the European Pillar of Social Rights, which prioritises "child care and support for children" (Principle 11). It also declares the right to protection against poverty, as well as the right to concrete measures to improve equal opportunities. The European Commission launched after a public consultation the implementation of the EU Strategy on the Rights of the Child in August 2020.

In 2021 the European Commission, with the EP, adopted the first comprehensive EU Strategy on the Rights of the Child for the period 2021–2024.

The EU Strategy on the Rights of the Child

The EU Strategy on the Rights of the Child stands out as a policy framework specifically designed to anchor the protection and promotion of children's rights in the EU area.

The aim of the strategy is to reduce the number of children at risk of poverty or social exclusion and to promote equal opportunities. During the preparation of the two initiatives, the Commission, in cooperation with leading global children's rights organisations, sought the opinions of more than 10,000 children.[5]

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4 Karsai 2023: [43]–[44].

5 European Commission 2021a: 1.

The overall goal of the strategy is to create the best possible conditions for children in the European Union and worldwide. It reviews children's rights and their role in our society. Children are at least as much citizens and leaders in the present as they will be leaders in the future. This strategy seeks to fulfill our shared responsibility to join forces to respect, protect and promote the rights of all children; and to build together with children healthier, more resilient, fairer and more equal societies for everyone.[6]

By adopting this first comprehensive children's rights strategy, the Commission undertakes to place children and their paramount interests at the center of EU policies, both internally and through its external actions also ensuring the principle of subsidiarity. The aim of the strategy is to unite all new and existing EU policy, legislative and financing instruments in one comprehensive framework.

It proposes a series of targeted measures in six thematic areas, each of which sets the priorities for EU action in the coming years:[7]

1. Children as catalysts of change in democratic and civil life: The Commission proposes a number of measures ranging from the development of child-friendly legal texts to the implemention of the green deal for example.
2. The right of children to fully realise their talents, striving to improve EU-level standards for early childhood education and care and to create inclusive, high-quality education, combating child poverty.
3. Children's right to non-violence: The Commission calls on Member States to develop and improve integrated child protection systems, strengthen responses to school violence and adopt national legislation to end all forms of corporal punishment.
4. Children's right to child-friendly justice, which they are entitled to as a victim, witness, suspect or accused of committing a crime. The Commission invites Member States to support training or the development of effective alternatives to court proceedings, such as mediation.
5. The right to use the digital environment safely and take advantage of its potential: The Commission recently updated the European strategy on a child-friendly internet and the proposed legislation on digital services[8] in order to ensure a safe online experience. The Commission also urges IT businesses[9] to handle harmful online behaviour and remove illegal content.
6. Children's rights worldwide: The EU reaffirms its commitment to enforce these rights at the global level and in the context of multilateral relations.[10]

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6 European Commission 2021b: 1.
7 European Commission 2021b: 3.
8 European strategy for better internet for kids.
9 Information technology (IT) is a synonymous term with the concept of information and communication technology (ICT).
10 European Commission 2021b: 1.

In terms of the concept, child-friendly justice:

> "refers to justice systems which guarantee the respect and the effective implementation of all children's rights at the highest attainable level, bearing in mind the principles listed below and giving due consideration to the child's level of maturity and understanding and the circumstances of the case. It is, in particular, justice that is accessible, age appropriate, speedy, diligent, adapted to and focused on the needs and rights of the child, respecting the rights of the child including the rights to due process, to participate in and to understand the proceedings, to respect for private and family life and to integrity and dignity."[11]

The guidelines apply to all situations in which children engage with the justice system in criminal, civil or administrative law for any reason and in any capacity.

By placing this priority in the justice system, an institution that by its very nature is not child-centered, it is inevitable that we will encounter many difficulties and insoluble contradictions in practice. Such an institution, especially the institution of criminal justice, is inherently not particularly child-friendly and it is difficult to imagine it as such, or to make it so in practice.[12]

Children play a key role in our society and cannot manage their fate alone. We must underline that the Covid–19 pandemic has led to an intensification of some forms of violence in many Member States. In total, five children's rights organisations collected the opinions of more than 10,000 children during this period. These findings also made it clear that the EU's policy frameworks and priorities should be shaped with the help of children's opinions.

The EU Strategy on the Rights of the Child follows a holistic approach with the overall goal to create a better society in the EU in six major areas: 1. the participation of children in the political and democratic life of the EU; 2. socio-economic integration, education and health; 3. preventing and protecting against all forms of violence and discrimination; 4. child-friendly justice; 5. children in the digital age; and 6. the global dimension of children's children's rights. The proposal for a Council Recommendation on the establishment of a European Child Guarantee focuses on socio-economic integration and ensuring that children in need have access to key services: early childhood education and care (ECEC), education and school activities, health care, healthy nutrition and adequate for housing. The proposal contributes to the EU Strategy on the Rights of the Child, focusing on children living in the EU.

It aims to ensure that children grow up in an environment free from violence and exploitation. According to International Labour Organization (ILO) reports, many children are forced into forced labour on the labour market, including sexual exploitation and prostitution. The strategy also calls for a child-friendly justice system and points out that court procedures must be adapted to the age and needs of children, and that the child's best interests must be kept in mind. In order to fully recognise and enforce children's rights, access to justice must be ensured for children, while maintaining the

11 Council of Europe 2010: 17.
12 Solt 2018: 49.

effectiveness of court procedures, including specialised training of court officials.[13] The framework of the strategy is in line with the core values set out in the EU Charter of Fundamental Rights and reinforces the EU's commitment to the UN Convention on the Rights of the Child, ensuring that these rights are not just aspired to, but actively pursued and incorporated into EU law through its own legal standards, supporting and reinforcing it.

Child-friendly justice

Child-friendly justice is a key element in criminal proceedings involving children. In relation to child-friendly justice, a general problem arises in practice if the focus of criminal proceedings is not on ensuring the best interests of the child.[14]

However, Convention on the Rights of the Child Article 3. stipulates that "In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration".[15] However, if the child's interest 'disappears', then we can only speak of the formal fulfillment of the legal obligations without the application of the guarantee principles.[16]

During the enforcement of the criminal claim, the justice system is forced to face the complex difficulty that the past can never be reconstructed in its entirety during the discovery of the facts. Another difficulty is that it is not possible to check the correctness of the facts with purely objective methods, and the role of human judgment and the subject in establishing the truth cannot be replaced and may even have a distorting effect.[17]

The purpose of the criminal law investigation is not to fully understand the past, since in terms of the events that took place, it is the relevance that gives the answer to which facts are significant from the point of view of the criminal material and procedural rules and as such can be the subject of proof. Sometimes, however, it is precisely the method of verifying these relevant facts that poses the biggest problem.[18] We can agree that this is especially true in the child-friendly justice system, in which the primary goal of the investigating authorities is often at odds with the questioning that requires the child's safety.

In addition to reducing child poverty and improving appropriate policy measures, the importance of post-sentence social reintegration measures in terms of both human rights and children's rights should not be neglected. Whether it is the field of criminal law, civil law or administrative law, it can be said in general that the border line of state responsibility in the enforcement of children's rights needs to be extended as far as where or in which procedure children appear.

13 Opinion of the European Economic and Social Committee 2021.
14 UNCRC Article 3.
15 UNCRC Article 3.
16 NÉMETH et al. 2017.
17 KIRÁLY 2000: 218.
18 KUHL 2021: 52.

It is fundamental that the enforcement of children's rights cannot be examined in particular in one segment, since the cooperation between child protection, social services and victim protection cannot be separated either, but more attention is paid to the enforcement of children's rights in criminal proceedings.

The reason for this is the vulnerability of children, primarily due to their age characteristics, from which malpractices in this area can take a more serious form and strike the future generation, and their personal development also shaping the society. The higher the figure indicating the malpractices, the more decisive the procedural malpractice can be, which determines both the structure and development opportunities for the society as a whole. Therefore, in my opinion, a suitable framework is needed to monitor the procedural malpractices. The EU has put in place standards and regulations to ensure that children receive adequate protection and support in criminal proceedings. Where these are not enforced, concerns are raised and criminal proceedings do not comply with these standards, leading to children's rights being violated in the proceedings.

In criminal proceedings, more attention is needed regarding the enforcement of children's rights, the reason for this lies in the specificity and purpose of the institutional system. The risk of violation of fundamental rights, children's rights and procedural guarantees is even greater in the case of persons under the age of 18 who belong to a marginalised minority or have a cultural background different from the majority of society, especially if they engage with the justice system.

Although the situation of children in the justice system is regulated by general human rights provisions and the enforcement of their rights cannot be examined in isolation, independent of individual policies, it is typically necessary to proceed with more caution in their cases during judicial or official fact-finding, primarily due to their vulnerability resulting from their age characteristics.

The protection and promotion of children's rights is one of the main objectives of the European Union[19] within and outside its borders. This main objective is laid down in the Charter of Fundamental Rights of the European Union,[20] and it also guarantees the promotion and protection of children's rights during the implementation of EU law.

Criminalisation of children

In Europe, there are two different trends regarding the criminalisation of children. One of the trends is the lowering of the criminal age limit and thus the implementation of locking up as many children as possible for as many acts as possible. On the other hand, the other direction in accordance with the spirit of the United Nations (UN) Convention on the Rights of the Child strives to provide a family or other community-based alternative to imprisonment and to avoid criminalisation.[21]

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19 Article 3 of the Treaty on European Union (TEU) (3) requires the Union to promote and protect the rights of children. Paragraph 5 of Article 3 of the TEU states that the Union contributes "to the protection of human rights, in particular the rights of the child" in its relations with the rest of the world.

20 Charter of Fundamental Rights of the European Union.

21 Thomas Hammarberg a gyermekközpontú igazságszolgáltatásról 2013: 17.

The protection and enforcement of children's rights has been increasingly emphasised in the EU since the entry into force of the Treaty of Lisbon.[22] Article 24 of the Charter of Fundamental Rights recognises that children have rights independently and emphasises – following the basic principle of the UN Convention on the Rights of the Child – that the "best interests of the child" must be kept in mind primarily in all cases and procedures involving children.

The Commission has created structures that aim to strengthen the capacities of EU institutions to deal with children's rights issues, thus creating the foundations for fact-based policies.

The need to make the judiciary child-friendly is based on the European Convention on Human Rights and the case law of the ECtHR, together with the UN Convention on the Rights of the Child, according to the directive of the Council of Europe dated November 2010. The rights that make up the concept of child-friendly justice are basic rights in democratic societies that equally belong to children. The basis of the concept is the right to a fair trial, access to the law, and other related rights, such as the right to hearing, information, protection and representation.

The content elements of child-friendly justice appeared in international documents and recommendations much earlier than the concept itself had come to life primarily through its application.

In the UN's norm-making process for juvenile justice, the following can be considered as precedents: the minimum rules for the juvenile justice system, the so-called Beijing Rules (1985); the rules for the protection of juveniles deprived of their liberty, the so-called Havana Rules (1990); guidelines for the prevention of juvenile delinquency, the so-called Riyadh Guidelines (1990); the rules on the minimum rules for non-custodial sentences, the so-called Tokyo Rules (1990).

In 2005, the UN Directive on the Protection of Child Victims and Witnesses of Crime[23] was adopted, followed by guidelines on justice for children, and on alternative care in 2009. These documents still do not use the term "child-friendly justice" expressis verbis, but in their content they show the validation of the children's rights approach in the judicial system, prioritising the application of law according to the needs of children.

The 2008 UN document defines juvenile justice and emphasises – in accordance with the provisions of the Convention on the Rights of the Child – that the rights and fundamental interests of all children under the age of 18 must be respected. Either as a victim, as a witness or as a defendant, one can come into contact with the justice system, or perhaps within the state administration, a party involved in proceedings initiated to settle the issue of supervision, care, or protection.

Accordingly, the basic principles of the UN Convention on the Rights of the Child are:

- to ensure that the best interest of the child is taken into account first
- to ensure a fair and equal process for all children–free from all forms of discrimination
- to help the child to express his opinion freely and to be heard

[22] Thomas Hammarberg a gyermekközpontú igazságszolgáltatásról 2013: 13.

[23] See also as UN Directive on the Protection of Child Victims and Witnesses of Crime (ECOSOC Res 2005/20).

- to protect all children from abuse, exploitation and violence
- to treat all children with respect for their dignity
- ensuring legal guarantees and protection in all procedures
- emphasising the preventive approach (prevention) in the penal policy for juveniles
- deprivation of the child's liberty may only be used as a last recourse

The scope of special treatment in criminal proceedings

The European Court's decisions are binding on countries that ratify the ECHR and force them to adapt their national laws and practices to the Court's interpretations. This dynamic interaction between national jurisdictions and the ECtHR ensures that criminal proceedings in Europe continue to evolve towards greater respect for human rights and fundamental freedoms, thus promoting a common European standard of criminal justice which Member States strive to uphold.

These principles are integral in ensuring that criminal proceedings within Europe meet the highest standards of justice and fairness, reflecting a collective commitment to the rule of law and respect for human rights. According to the Act XC of 2017 on Criminal Procedure, the law basically details the rules for persons requiring special treatment in a separate chapter, unlike the previous regulations, although we can find relevant rules outside the chapter.

A comparison of the current provisions on special treatment with previous laws and regulations shows significant improvements in the legal framework for the protection of individuals in criminal proceedings. The modern approach is more holistic and inclusive, recognising a range of circumstances and conditions that may require special treatment.[24]

Unlike previous laws, which focused narrowly on victims as the primary beneficiaries of special treatment,[25] current legislation recognises the diversity of individuals who may require such consideration, including vulnerable witnesses and suspects. This development reflects the need to ensure justice and fairness for all participants in the criminal justice system, in line with contemporary human rights standards and societal expectations of fair treatment.

Looking at the differences and inequalities that manifest according to age, the disadvantaged position of children can be clearly established, which lays the foundation for the enforcement of positive rights, as well as the necessity of positive discrimination in the case of the persons with disabilities or the disabled. An interesting question is, depending on the recognition of the disadvantaged situation, positive discrimination and its placement in the effective law, how the special treatment is enforced, i.e. its form and scope beyond the general procedural guarantees.

Special treatment includes, but is not limited to, victims, witnesses and suspects who may have special vulnerabilities or needs that must be addressed in order to preserve

[24] Kiss 2021.
[25] Lencse 2018.

the integrity of the judicial process and to protect their rights and welfare.[26] The ultimate aim of these provisions is not only to facilitate the smooth conduct of criminal proceedings, but also to ensure that justice is administered with respect for the dignity and rights of all parties concerned and in accordance with the broader principles of human rights and legal fairness.[27]

In the case of a severely disabled person with special communication needs, for example, even despite the existing complex forensic medical expert opinion, the court regrets holding the trial in the absence of a specialist dealing with speech therapy or deaf-mute treatment, who could have played the role of an interpreter.[28] Such measures are critical in preserving the integrity of the judicial process and protecting the rights of all individuals, particularly those who may be disadvantaged by their circumstances. Highlighting these requirements underlines Europe's commitment to human rights and to the principles of fairness, equality and respect within the legal system.

Pursuant to § 81 of the Act on Criminal Procedure, a witness is a person requiring special treatment if, based on his personal characteristics or the nature and circumstances of the crime he is unable to understand, to exercise the rights or to fulfil the obligations specified in this Act, or hindered in his effective participation in the criminal proceedings. The circumstances justifying special treatment are, in particular, the age, the mental, physical and health condition of the person concerned, the violent nature of the act that is the subject of the procedure, and the relationship of the person concerned in the criminal proceedings to the other person participating in the procedure.

The court, the prosecutor's office and the investigative authority, starting from the contact with the person concerned, examine by virtue of the office (*ex officio*) or at the request of the person concerned whether he is classified as a person requiring special treatment, and always decide on the establishment of special treatment based on an individual assessment, according to the law.

According to § 82, a person who requires special treatment without a separate decision is a person who has not reached the age of eighteen, a person with a disability defined in the Act LXII of 2013 amending Act XXVI of 1998 on the rights of disabled persons and ensuring their equal opportunities, as well as anyone who can be classified as such, as well as freedom of sexual life and sexual victim of a crime against morality. The court, the prosecutor's office and the investigative authority shall apply a measure that is appropriate and proportionate to the circumstances justifying the special treatment in order to facilitate and protect the exercise of the rights and fulfillment of the obligations of the person requiring special treatment. It should be emphasised that, based on the current regulations, the rights of individuals classified under special treatment can only extend to the point where the rights of other participants in the procedure, such as those charged, begin, i.e. the extra rights granted to them cannot be asserted at the expense of others.

According to the measures listed in § 85, the court, the prosecutor and the investigating authority facilitate the exercise of the rights of the person who requires special

[26] 12/2018 (VI. 12.) IM Decree.
[27] NAGY 2023.
[28] Kúria Bfv. II/760/2015.

treatment taking also into account the interests of the procedure in accordance with the basic principle of the UN Convention on the Rights of the Child. According to which social protection is and its private institutions, the courts, the administrative authorities and the legislative bodies take into account the best interests of the child first and foremost in all their decisions concerning the child.[29]

The court, the prosecution and the investigative authority acts by taking into account the personal needs of the person concerned during the planning and execution of procedural acts, and conducts certain procedural actions requiring the participation of the person concerned without delay. During the special treatment, gentleness includes the possibility of excluding the public, increased protection of personal and especially health data, and the use of assistance. Other such requirements are the making of video and audio recordings of the procedural act with the emphasis on avoiding repetition, the closed handling of case files related to the initiation and investigation of the determination of special treatment, and other requirements of this law that ensure the facilitation and gentleness of the exercise of the rights and fulfilment of the obligations of the person requiring special treatment. European directives and standards on the protection of vulnerable persons in criminal proceedings stress the importance of personalised treatment and the recording of interrogations.

The criminal procedure act contains measures guaranteeing additional rights in the case of procedural actions requiring the participation of a person under the age of eighteen. In § 87, it is regulated that during the procedure, the court, the prosecutor's office and the investigating authority shall, if possible, make video and audio recordings, and may order that a forensic psychologist be present at the procedural act. Such an additional measure, which guarantees additional rights, is that the procedural act is carried out with the assistance of a forensic psychologist expert or consultant and is provided for in connection with criminal proceedings in Act LXIV of 1991 on the proclamation of the Convention on the Rights of the Child, signed in New York on 20 November 1989. The effective enforcement of children's rights as stated in the Convention on the Rights of the Child promulgated by law, the Child Protection Act and other laws. Another important special regulation is that the testimony of a witness who has not reached the age of 18 cannot be examined by means of an instrumented confession check, and his confrontation can only be ordered with his consent.

A person under the age of fourteen is given priority during the procedure, since in the case of a procedural act that requires his participation, the procedural act can only be performed if the evidence expected from it cannot be replaced by other evidence. The procedural act must be carried out in a room that serves or has been made suitable for it, except that the facilitation and protection of the exercise of the rights of the person concerned and the fulfillment of his obligations cannot be ensured in any other way or by other measures. Decree 34/2015 (XI. 10.) IM of the Minister of Justice on the establishment and control of hearing rooms for defendants or witnesses under fourteen years of age and victims requiring special treatment (IM Decree) sets out the rules relating to the establishment and occupation of special hearing rooms, formerly known as rooms for hearing children.

[29] Act LXIV of 1991, Article 3(1).

During the investigation, the investigative authority ensures that the procedural act is performed by the same person each time, the court, the prosecution and the investigative authority make a video and audio recording of the procedural act. However, the provisions of the Act could be further elaborated to explicitly include the European Recommendation on audiovisual recording of interrogations. If the questioning has already taken place during the investigation, and a video and audio recording has been made of it, the court can ex officio or upon request waive the questioning of the victim as a witness, avoiding, or at least substantially reducing secondary victimisation and its danger in order to protect the victim. Their testimony during the investigation can be used as evidence, regardless of this, ensuring the enforcement of their rights beyond the general procedural guarantees.

Interrogating a person under the age of fourteen is strengthened by the decision that if it can be established from the documents available during the procedure that a lot of indirect evidence was obtained during the procedure regarding the facts perceived by the child victims, which are suitable for supplementing their testimonies, therefore from this as a result, there is no longer a legal opportunity to question them in the second-degree proceedings.[30]

Another peculiarity regarding the procedural acts of persons who have not reached the age of fourteen is that the accused and the defender cannot be present in person at the scene of the procedural act requiring the participation of such a victim. When using the telecommunications device, it must be ensured that the victim can only see the acting judge, prosecutor or member of the investigating authority. After the indictment, the court may carry out the procedural act requiring the participation of the victim by means of an appointed judge or a requested court, and the right of persons present at the procedural act requiring the victim's participation to ask questions is limited, they may only propose to ask questions and the public must be excluded from that part of the trial, where the victim's participation in the procedural act is mandatory.

It should be mentioned that during the questioning of persons under the age of 14 as witnesses, the investigating judge must observe the special procedural rules laid down in the procedural law. These include the fact that such witnesses do not need to be warned of the consequences of false testimony, they can only be confronted if this does not cause them fear, and their guardian or legal representative can nevertheless be present at the meeting – they cannot be sent out for later possibly being questioned as a witness.[31] Relatives of incapacitated minors also have the right to refuse to testify, and a consent or refusal statement from a legal representative or guardian must also be obtained.[32]

In the criminal procedure – starting from its specific nature in connection with the goal of justice – the goal of the acting authorities is to obtain the widest and most accurate information. In addition to obtaining the most well-founded evidence possible, the interesting paradox of the simultaneous enforcement of special treatment and leniency calls to life a framework for the scope and form of enforcement of rights and obligations,

30 Szegedi Ítélőtábla Bf. I. 365/2005 no. Decision I.
31 Fővárosi Ítélőtábla 5. Bf. 1614/2004 no. Judgment I.
32 Fővárosi Ítélőtábla 5. Bf. 1614/2004 no. Judgment II.

in which the best interests and leniency of those receiving special treatment are realised in such a way that the procedure does not lose its purpose, and the converging effective exploration resulting in the coincidence of the perceived and the real truth is also valid.

The specific chapter of the current Code of Criminal Procedure on special treatment based on age sets out the rules and their implementation in law enforcement and can be seen as a kind of outline of child-friendly justice, which is evidence of the evolution of the hungarian legal system towards a more child rights-friendly justice system.

The reformed Criminal Procedure Act is more in line with European legal standards for the protection of victims and witnesses in criminal proceedings,[33] by refining the criteria for special treatment and creating more transparent and uniform procedures, including: adequate protection of the rights of persons entitled to special treatment throughout the entire duration of criminal proceedings, from initiation to completion;[34] enhancing the credibility and integrity of the criminal justice system in the eyes of the European Union, thereby strengthening international cooperation in criminal matters;[35] promoting more human and fairer treatment of victims and witnesses, which is a fundamental aspect of European legal principles. Overall, the current Code of Criminal Procedure holds the promise of significantly improving compliance with European requirements and thereby contributing to a fairer and more efficient criminal justice system.

European legal standards for children

Children face various obstacles during the criminal proceedings and want to assert their interests and try to achieve respect for their rights. An obstacle is, for example, the limitation of their capacity to act, as well as if they want to assert the right to special protection arising from childhood.[36] In the following, I present the European legal standards for children based on the 2015 Manual of the EU Fundamental Rights Agency (FRA) of the Council of Europe.[37]

For children, criminal justice objectives such as social integration and reintegration, education and recidivism prevention are the principles that are assessed. In terms of their protection, according to the principle contained in Article 24, their best interests must be taken as a basis during the proceedings, although the definition of this is not completely clear and it is necessary to examine each case on an individual basis, contributing to the outcome of the proceedings with a significant subjective element.

The right to a fair trial is one of the basic requirements of the rule of law. A juvenile involved in a crime, whether victim or perpetrator, has the right to a fair trial, which applies from the first questioning of the child and continues throughout the entire process.

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33 Nagy 2023: 624.

34 T/13972 with explanatory statement – on criminal procedure, see: https://jogkodex.hu/doc/2460571

35 Act XLIII of 2020, explanatory memorandum amending the Criminal Procedure Act and other related acts.

36 Németh et al. 2017: 1.

37 European Union Agency for Fundamental Rights and Council of Europe 2015.

Article 47 of the EU Charter of Fundamental Rights deals with the right to an effective remedy and a fair trial and includes the right to a fair and public hearing within a reasonable time, to advice, defence and representation, and to freedom of costs. The principles laid down in Article 49 are also of paramount importance in terms of legality and proportionality, but almost as important are the Directive on the right to information, the Directive on the right to interpretation and translation, and the Directive on legal aid.

The Council of Europe states the requirements for a fair procedure in Article 6 of the ECtHR, which is enriched by the extensive jurisprudence and jurisprudence of the ECtHR. The 2010 ET Guidelines on Child-friendly Justice are of particular importance to child suspects and accused persons. The Parliamentary Assembly of the Council of Europe, Resolution 2010 (2014) "Child-friendly juvenile justice: from rhetoric to reality" states the need for specific treatment. In order to ensure effective participation, procedures should, as a general rule, ensure that the child's age, maturity level and emotional state are taken into account.[38]

In the case of *T. v. United Kingdom,*[39] the ECtHR found that the applicant's right under Article 6 of the ECtHR had been violated; it was not able to effectively participate in the proceedings due to the publicity of the meetings, the intensive press presence, the limited lawyer consultation, and the lack of appropriate testimony.

One of the assertions of the right to a fair trial is the possibility of using a lawyer's assistance, which is included in the EU law in Directive 2013/48/EU, and in the human rights legislation of the Council of Europe, the use of a lawyer is ensured from the initial stage of the investigation.

In *Panovits v. Cyprus,*[40] the authorities seemed willing to allow the applicant to seek legal assistance at any time, without drawing his attention to his right to request the appointment of a lawyer free of charge. There was no evidence that the applicants expressly and unanimously waived their right to legal representation, so the ECtHR declared a violation of their rights in its decision.

The special situation of child victims and witnesses is recognised by both the EU Charter of Fundamental Rights and the ECtHR, they are entitled to protection against re-victimisation, the right to rehabilitation and reintegration, and the right to effective participation in criminal and alternative procedures. The rights of child victims are dealt with in the Directive 2012/29/EU of the European Parliament and the Council on the establishment of minimum rules for the rights, support and protection of victims of crimes, and primarily emphasises the child-centred approach, taking into account the best interests of the child (above all) on an individual basis in the procedures during. It is important to emphasise that the CJEU also stated that the protection of victims must be implemented in such a way that it does not violate the right of the accused person to a fair trial.

38 European Commission 2013.
39 *T. v United Kingdom* 24724/94 (1999) ECtHR.
40 *Panovits v. Cyprus* 4268/04 (2008) ECtHR.

In the *Pupino case*[41] the CJEU interpreted for the first time a provision relevant to the legal status of children as victims and witnesses participating in criminal proceedings. The CJEU emphasised that the national court should be able to testify in a way that ensures their protection, for example outside and before the public hearing. And stated that if the children claim that the teacher abused them, they are eligible to testify and all measures must be designed so that the accused continues to receive a fair trial.

In the practice of the ECtHR, in connection with the protection of child victims, it enables the proper and effective exercise of the rights of the defence, and for this reason the judicial authorities can be required to counterbalance the rights of the defence and ensure the protection of the interests of the accused.[42]

As part of this, the ECtHR deals with the rights of victims and their families.

In the case of *RR et al. v. Hungary,*[43] the exclusion of the family from the witness protection program endangered their lives, because the authorities did not prove that the danger that caused it had ceased. It is noteworthy from the point of view of the topic that the Economic and Social Council of the United Nations (ECOSOC), in its Decision 2005/20 Guidelines on Justice in Matters involving Child Victims and Witnesses of Crime, adopted the guidelines for child victims and witnesses according to which children's individual needs and protection of their rights are taken into account.

Concluding remarks

In terms of tasks and tools, child protection is related to many areas of law.[44] It is imperative to recognise that child protection standards across legal and institutional systems interact with different areas of law and aim to promote the upbringing of children within the family and reduce risks to their well-being. The issue of age is of paramount importance from the point of view of criminal prosecution and applicable legal consequences. When determining the responsibility assigned to the age, consideration must be given to the factors shaping the child's personality and socialisation background.

The general rules and system for the protection of children can be found in the Act XXXI of 1997 on the protection of children and the administration of guardianship, commonly known as the Child Protection Act. In accordance with the UN Convention on the Rights of the Child, the Child Protection Act prioritises the interests and rights of the child, giving priority to upbringing in the family. To this end, it provides a large spectrum of different aid for the family and the child and only allows removal from the family as a last solution, however, in this case as well, it defines reintegration into the family as a priority task.

The child protection system provides different services operated mainly by the government including official measures and different benefits, basic and specialised services providing personal care with the aim also to avoid growing criminalisation of children.

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41 *Pupino case* C-105/03. s. case, criminal proceedings against Maria Pupino (2005) CJEU.

42 *Kovač v. Croatia* 49910/06 (2006) ECtHR.

43 *RR and others v. Hungary* 9400 /11 (2012) ECtHR.

44 Fábos-Herke 2018.

The integration of our child protection standards into national laws is complex in itself, but it aims to improve national law.

The question of age is of paramount importance for the criminal procedure and the applicable legal consequences, and three main issues arise in relation to age: 1. When does a child or juvenile come into contact with the criminal justice system? 2. Is it the responsibility of child protection or the criminal justice system to determine the responsibility? 3. What kind of administrative official measure or punitive material or procedural legal measure will be ordered, and will it achieve its goal?[45]

Whether the determination of responsibility and the determination of the legal consequence falls within the competence of child protection or the criminal justice system depends on the capacity to commit a crime. The prevention network of the child protection system focuses primarily on the child at risk. In the criminal justice system, there is less opportunity to take into account individual aspects.[46]

EU law can also be of fundamental importance in the application of criminal law. In my view, in today's context, practitioners, under the mistaken assumption that they are not concerned, do not attach sufficient importance to this subject either as such or as a study of it, even though EU law can modify the assessment of the acts of the person being prosecuted, the legal consequences applied and the framework of criminal proceedings, independently of the legislation and the legal situation at the time.[47]

The integration of European standards and norms into national legislation is therefore essential not only to protect children, but also to provide alternative care when children are removed from their biological families due to interventions by public authorities.

The utopian vision of juvenile justice implies a steady and gradual progress towards criminal tolerance, where the 'best interests' of children prevail and where correctional intervention – especially imprisonment – is used only as a 'last resort', i.e. the approach to the consideration of juvenile offenders within the Hungarian criminal justice system reflects a balance between corrective measures and the provision of legal responsibility. It does not rule out imposing consequences, but does so in the light of their age and their potential for rehabilitation. This vision is supported by global and European human rights[48] and EU policies.

However, in line with the examples of legal malpractice in the cases presented, the use of legal representation in Hungarian criminal proceedings is limited and does not sufficiently protect the rights of suspects with limited access to legal representation, is not transparent and accountable, and is adapted to a specific – national – legal and cultural context, which the EU should respect with regard to the sovereignty of Member States in the area of criminal justice.

Hungary should be given the opportunity to develop its own criminal procedures while cooperating with the EU to improve its criminal justice system. The current legislative framework, in particular the Child Protection and Guardianship Act, provides

45 Németh et al. 2017: 2.
46 Németh et al. 2017: 3.
47 Karsai 2005: 53.
48 Nagy–Oross 2016: 12.

a solid framework for the protection and enforcement of children's rights in judicial proceedings. This is exemplified by the clauses that prevent the examination of minors by means of an instrumental confessional test, in order to ensure that the integrity and psychological well-being of the child are paramount. In addition, the involvement of forensic psychologists in trials underlines the obligation to be sensitive to children's rights and to enforce them. This advocacy approach is operationally supported by Article 87 of the Criminal Procedure Law, which serves as an important tool for transparency and accountability in the legal process. In my opinion, the Hungarian criminal procedure makes sufficient efforts to strike a balance between law enforcement and the need for special treatment of children under the age of 18, which is certainly evidence of progress towards a more rights-respecting justice system.

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Petra Szűcs[1]

Demographic Shifts and Economic Challenges in the European Union

Addressing the Impact of Aging Populations on Social Security, Healthcare and Labour Markets

This study explores the significant demographic shifts and economic challenges faced by the European Union (EU), focusing on the implications of an ageing population. As life expectancy increases and birth rates decline, the proportion of elderly individuals in the EU rises, placing substantial pressure on social security, healthcare systems and labour markets. This paper examines the multifaceted impacts of these demographic changes, including the strain on healthcare services and pension schemes, the potential for economic growth through the productivity of senior employees, and the necessity for holistic strategies that address regional and national variations. Additionally, the research delves into the effects of the Covid–19 pandemic on demographic trends, highlighting the need for proactive policies to support an ageing populace. Through a comprehensive analysis of demographic data, labour market trends and policy initiatives, this study aims to provide a nuanced understanding of the repercussions of an ageing population and proposes strategic measures to mitigate the associated challenges while leveraging opportunities for economic development and innovation.

Keywords: ageing population, demographic shifts, European Union, labour markets, economic stability, economic development, labour productivity, continuous learning, automation and technology, social security, healthcare systems

Introduction

In the 21st century, Europe grapples with numerous social challenges stemming from significant demographic transformations. This paper explores the multifaceted repercussions of these shifts, particularly emphasising the ageing populace in the European

[1] Assistant Lecturer, Ludovika University of Public Service, e-mail: szucs.petra@uni-nke.hu

Union (EU). The escalating proportion of elderly individuals presents substantial ramifications for social security and healthcare systems, labour markets and economic steadiness. As life expectancy climbs and birth rates plummet, EU member states must navigate the strains on their healthcare services and pension schemes. This demographic shift, while entailing challenges, also presents prospects for economic development and innovation. For instance, senior employees can boost labour productivity, and varied age cohorts can uniquely contribute to the economy. To effectively tackle these demographic transformations, holistic strategies that account for regional and national variances are imperative. Ensuring the sustainability of social security and healthcare systems, bolstering labour market flexibility, fortifying educational institutions, and deftly managing immigration policies are pivotal actions. The recent deceleration in population growth, exacerbated by the Covid–19 pandemic, further complicates the demographic landscape. This deceleration, characterised by dwindling birth rates, rising mortality rates and inadequate migration, underscores the necessity for proactive policies to support an ageing populace. Urban and rural areas manifest distinct demographic dynamics, each presenting distinctive challenges and opportunities. The primary aim of this research is to address the following research questions:

1. How do demographic changes, such as ageing populations and low birth rates, influence economic growth and labour market dynamics in the European Union?
   - An ageing population engenders amplified fiscal strain on healthcare and social security systems in the European Union.
2. How does the ageing workforce impact labour market productivity and economic stability in the EU?
   - Ageing workers substantially contribute to economic stability through their expertise and experience, notwithstanding potential physical and cognitive limitations.
3. What role can automation and technology play in mitigating the challenges posed by an ageing workforce?
   - Integration of automation and technology in workplaces will alleviate some of the physical strains on older employees, augmenting their productivity and job satisfaction.
4. How can continuous learning and adaptable work arrangements enhance the competitiveness and productivity of older employees?
   - Ongoing learning and training programs markedly elevate the employability and competitiveness of elder workers in the labour market.

Addressing the socioeconomic opportunities and problems brought about by the ageing population in the European Union (EU) is the aim of the study. Social security, healthcare systems, labour markets and economic stability are all significantly impacted by the demographic shift towards an older population as life expectancy rises and birth rates fall. The research intends to investigate how these changes impact labour market dynamics, healthcare demands and economic growth. It also looks at how older workers' experience and knowledge might benefit the economy.

The study adds to the problem of ageing by suggesting all-encompassing approaches to handling the demographic shift. These tactics include boosting labour market flexibility, encouraging legal immigration to alleviate labour shortages, supporting lifelong learning for older workers, and strengthening the sustainability of the healthcare and social security systems. The study also emphasises how automation and technology can help older workers with their physical demands, promote economic growth and ease the burden on public coffers. All things considered, it gives legislators a framework for putting policies into place that strike a balance between economic expansion and the welfare of the elderly population.

This study employs a methodology encompassing an exhaustive examination of demographic data, labour market trends, and policy endeavours within the EU. Through a blend of statistical analyses, literature reviews and case studies, the research endeavours to provide a nuanced comprehension of the repercussions of demographic variations. Principal focal points include the impacts of an ageing population on healthcare requirements, labour market dynamics, and the viability of social security systems.

Social challenges in the 21st century

The effects of demographic changes in the European Union

Addressing the challenges associated with demographic shifts holds paramount importance for states, particularly concerning social security and healthcare systems. An ageing population can exert significant pressure on healthcare services due to the increased likelihood of elderly individuals experiencing chronic ailments. Labour market obstacles stemming from low birth rates and demographic transformations may lead to elevated debt levels and budget deficits within states.[2] Despite posing formidable challenges, demographic shifts also present opportunities. For instance, a more diverse age distribution can foster economic growth, with minority groups contributing significantly to economic activities compared to the broader society. Moreover, enhancing the labour force participation of older employees can enhance labour productivity and spur economic expansion. States and societies must formulate comprehensive strategies to navigate demographic changes, considering both regional and national variances. Ensuring the sustainability of social security and healthcare systems to meet the needs of an ageing populace is imperative. Additionally, initiatives to enhance labour market flexibility, strengthen educational systems and manage immigration policies adeptly can play a crucial role in effectively addressing demographic transitions. While demographic alterations introduce challenges, they also bring about prospects, particularly in fields such as innovation, the digital economy and service industries. It is imperative that states acknowledge and leverage new technologies and societal shifts for the betterment of social and economic progress.

[2] On the further and more comprehensive effects of ageing, see for example Marton 2018.

In recent years, the rate of population growth has decelerated, reaching a critical point due to the impact of the Covid–19 pandemic. This deceleration is a consequence of decreased birth rates, increasing mortality rates, and diminishing net migration.[3] Alternative perspectives suggest that the combination of reduced births, increased deaths and insufficient migration failed to counterbalance population decline, marking a departure from previous trends. Projections indicate that the population of the European Union will continue to expand until 2029, after which a gradual decline, albeit slow, is expected.[4]

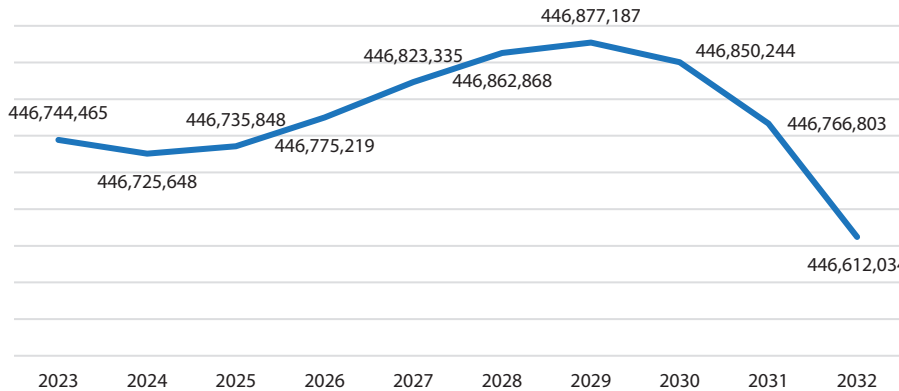


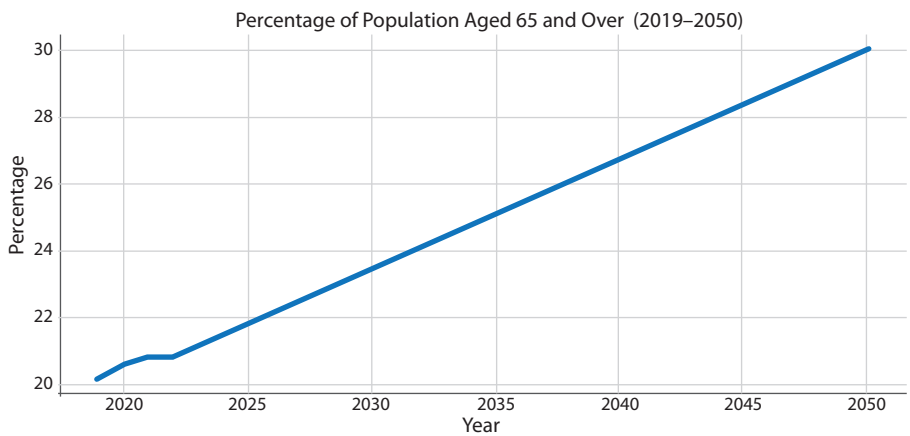
Figure 1: Population projections for the European Union between 2023 and 2030
Source: compiled by the author based on Eurostat 2022f

Population decreases manifests differently across various regions within individual countries. Rural areas in Europe continue to exhibit a higher average age compared to urban and suburban regions. Demographic shifts are intricately intertwined with challenges such as inadequate connectivity, subpar infrastructure, productivity issues and shortcomings in public services like education and healthcare, along with the decreasing appeal of rural areas for residency and employment. The aspirations of young individuals can catalyse substantial demographic transformations in specific geographical locations.[5] The preferences of newer and more highly educated generations fundamentally alter the population composition and economic landscape of cities. Certain major cities that draw in young, highly skilled professionals boast significant growth potential, which can enhance economic prosperity and urban infrastructure. Conversely, regions grappling with economic crises and high unemployment rates struggle to attract and retain workers, thereby impacting the urban milieu considerably. This shift also significantly influences the urban environment, prompting the need for novel sustainable development strategies. Urban planning and design approaches must tackle challenges related to sustainable energy sources, transportation systems, green spaces

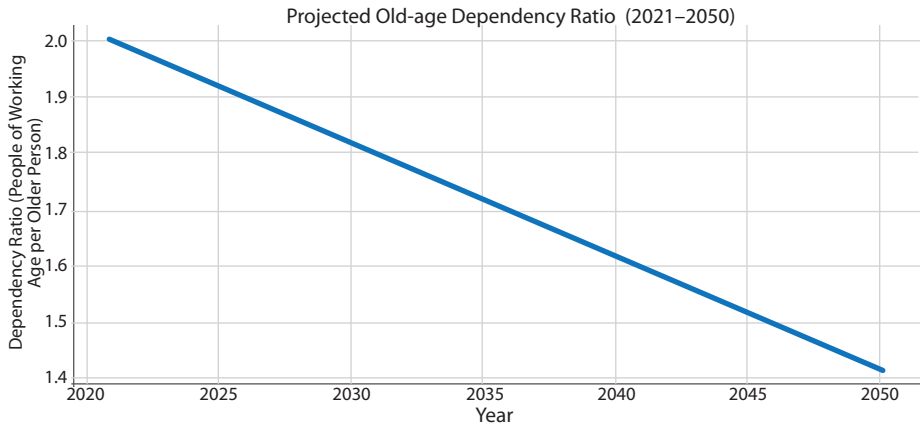
[3] Eurostat 2022e.
[4] Eurostat 2023a.
[5] GOUJON 2021.

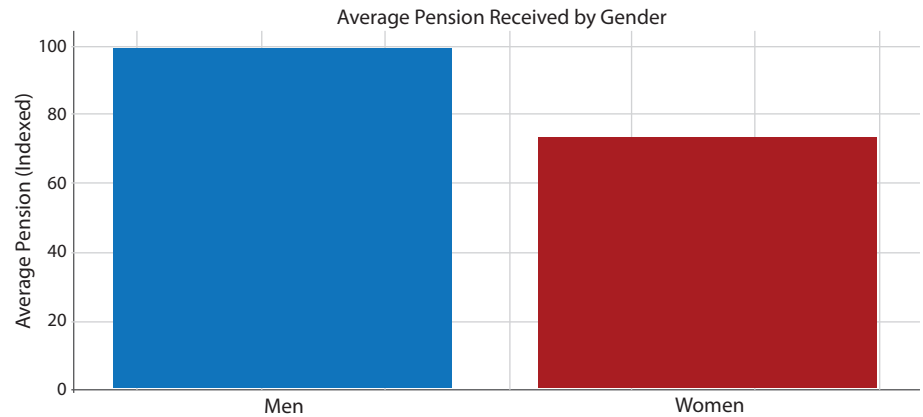
and environmental conservation. Social cohesion must be a focal point for cities to prevent social exclusion. Addressing economic and social disparities is crucial for ensuring the sustainable advancement of urban areas. Cities must adapt to emerging challenges and prospects to uphold sustainable development, economic welfare, social equity and environmental sustainability.

The phenomenon of population ageing is a long-term process that commenced several decades ago in Europe. This dynamic is characterised by a rising proportion of elderly individuals within the overall population, coupled with a diminishing share of the working-age demographic. Within the European Union as of 1 January 2021, individuals aged 65 and above constituted 20.8% of the populace – a 0.2 percentage point increase from 2020 and a 0.6 percentage point rise from 2019. Projections indicate that by 2050, the elderly segment in Europe will surpass 30%, leading to a heightened old-age dependency ratio, with fewer than two individuals of working age for each elderly person. This demographic shift is anticipated to persist in the future.[6] The expansion of the ageing population is magnifying issues related to fiscal sustainability. An ageing populace necessitates elevated healthcare and long-term care services, demanding augmented expenditure and infrastructural adjustments to ensure universal accessibility.[7] The presence of an elderly demographic poses challenges to sustaining adequate pension schemes, notably impacting women who, due to their longer life expectancy, frequently rely more on long-term benefits, receiving pensions averaging 26.9% less than men. The collective expenses associated with ageing, constituting 24% of GDP in 2019, are projected to surge by 1.9 percentage points of GDP by 2070 based on the assumptions outlined in the 2021 Ageing Report.[8]



6 Eurostat 2023b.
7 Eurostat 2022b.
8 European Commission 2021.





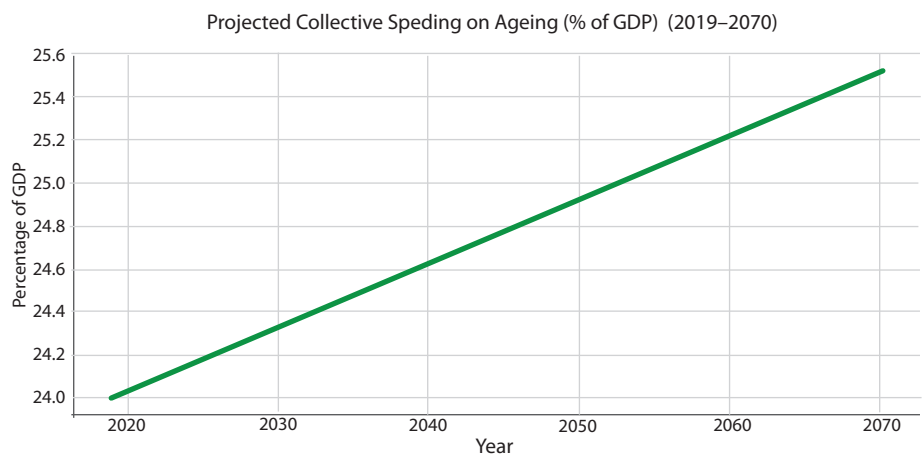


Figure 2: The consequences of ageing societies in different contexts
Source: compiled by the author based on European Commission 2021

In economic terms, imbalances in intergenerational transfers may arise, given the challenge of replacing the heightened labour productivity of middle-aged workers. This imbalance could act as a national and regional constraint on economic advancement. Addressing these challenges necessitates a cohesive, proactive ageing policy encompassing all relevant stakeholders. Collaboration between employers and employees is crucial to reshaping work environments and practices, as well as combating generational biases and stereotypes to support extended working hours. Such initiatives must not only entail reforms in employment and social security policies but also transcend them.[9]

The number of households in Europe is currently on the rise, while simultaneously, the size of individual households is decreasing. This shift indicates a preference for smaller living spaces such as apartments rather than larger detached houses. Factors contributing to this trend include evolving lifestyles and economic conditions. Smaller household sizes reflect changing needs for living space; for instance, smaller households typically prefer compact apartments that are easier to maintain and require less space. This optimised space utilisation leads to reduced maintenance costs. The growing demand for efficient and sustainable homes is underscored by the increasing count of homes and diminishing household sizes. This trend is expected to persist, prompting the housing market to adapt to these evolving preferences.[10]

The demographic makeup of the labour market in the European Union has demonstrated stability in recent years. Despite the increasing participation of women in the workforce, the gender employment disparity remained pronounced in 2021. Women exhibited an employment rate of 67.7%, contrasting with men at 78.5%, highlighting the substantial gender employment gap prevalent within the European Union.[11] Although strides have been made in narrowing this gap, the discrepancy persists as a pressing concern. To address this issue, the European Union has implemented various initiatives to enhance women's employment prospects. These encompass initiatives such as enhancing parental leave duration and offering flexible work arrangements. Moreover, the EU has established targets, including achieving a 75% female employment rate by 2020. Nonetheless, further actions are required to diminish the gender employment divide. Education and vocational training are pivotal in empowering women to secure suitable employment opportunities. Employers and governments play significant roles in fostering a supportive work environment conducive to women's career advancement within the EU. In the 15–29 age group, unemployment rates remained elevated across both genders in 2021, at 13% in the European Union. It is essential to recognise that youth unemployment rates vary among EU member states, with some nations exhibiting substantially higher rates, such as Spain with 32.3%, and lower rates observed in countries like the Czech Republic at 5.7%.[12] In recent years, the EU has implemented various measures to ameliorate the labour market conditions for young individuals. Initiatives include supporting educational and vocational training programs and launching schemes to promote youth employment.[13]

9 Mason–Lee 2022.
10 Eurostat 2022c.
11 Eurostat 2022a.
12 Statista 2023.
13 Eurostat 2022g.

It is indisputable that despite the relaxation of measures against the Covid–19 pandemic in the European Union and its member states, the proportion of individuals vulnerable to poverty or social exclusion has either stabilised or increased from 2020 to 2021. As per the European Commission's 2021 report on the annual monitoring of the pillars of social rights, the count of people at risk has surged to 95.4 million, constituting 21.7% of the populace. This phenomenon can be elucidated by the persistent harsh economic repercussions of the Covid–19 pandemic in both the EU and its constituent member states. Those already grappling with financial adversity or those who lost employment due to the pandemic persist in facing heightened risks of poverty and social exclusion. While the European Commission and individual Member States are implementing various measures to aid individuals in such circumstances – like extending job creation initiatives, social welfare provisions and housing subsidies – it is imperative that these efforts persist and are reinforced to mitigate the risk of poverty and social exclusion within the EU.[14] Escalating energy costs and surging inflation can significantly impact the financial well-being of energy consumers, thereby heightening the jeopardy of poverty and social exclusion. The REPowerEU framework is designed to ameliorate energy price volatility and enhance energy source diversification. By boosting energy efficiency and curbing energy consumption, the package seeks to reduce energy prices, ultimately alleviating the financial burdens of energy users and lessening society's reliance on energy. The initiatives outlined in the package encompass promoting the shift to renewable energy sources, establishing energy efficiency targets and fostering requisite investments. Moreover, enhancing energy supply security necessitates integrating energy production and delivery diversification into the package. Addressing energy poverty in energy policy is paramount, ensuring that energy prices and accessibility do not pose risks of impoverishment. Proficient management of energy prices and usage can be instrumental in promoting sustainable development and combating climate change.[15]

The ageing society is one of the biggest social and economic challenges of our time

Ageing societies are becoming a significant global challenge, impacting various aspects of life including healthcare, socio-economic structures and social inclusion. Ageing populations lead to increased prevalence of chronic non-communicable diseases (CNCDs), physical frailty and neurodegenerative diseases, which place a significant burden on healthcare systems.[16] There is a need for strategic healthcare planning, including annual health checks and affordable treatments, to manage the health of the elderly.[17] Ageing societies face economic challenges such as increased demand for pensions, social security, and healthcare funding, which can strain public resources.[18] The economic gap

14 Eurostat 2022d.
15 European Commission 2022.
16 CUI 2023.
17 FANG et al. 2020.
18 PASCHALINE et al. 2023.

between generations and the need for sustainable policies to support the elderly are critical issues.[19] Older adults often experience social isolation, loneliness and limited social participation, which can lead to mental health issues such as depression and cognitive disorders.[20] Urbanisation and changing family structures contribute to the psychological burden on older adults, necessitating social protective measures.[21]

The ageing populations present a significant challenge to societies and governments worldwide. Addressing these challenges involves enhancing healthcare, promoting active ageing and continuous learning and advocating for legal immigration to bolster the workforce. Enhancing healthcare is crucial due to the increased likelihood of medical care and support needed by the ageing population. Adequately preparing the healthcare system for the elderly's needs and considering the burdens associated with an ageing population is essential for the provision of social welfare services. Supporting active ageing and lifelong learning plays a vital role in the labour market and economy. Preserving and transferring the experience and knowledge inherent in the ageing population to newer generations can bring notable benefits. Promoting active ageing through activities like sports can foster the health of older individuals and enhance their participation in the labour market. Encouraging legal immigration is also significant in alleviating labour shortages. The challenge posed by an ageing population can lead to an imbalance between labour supply and demand. Legal immigration provides an avenue for younger workers to engage in the economy alongside the elderly, thereby sustaining economic growth. In conclusion, the issues related to an ageing population pose a profound challenge to societies and governments, yet there are viable solutions. Enhancing healthcare, endorsing active ageing and lifelong learning and advocating for legal immigration are all strategies to address these challenges.

Addressing the complexities linked with an increasingly aged society represents a significant undertaking for the community at large. Demonstrating reverence and support for the elderly not only aligns with our ethical obligations but also holds the potential to yield both economic and social advantages. Seniors possess a wealth of experiences and knowledge which can be transmitted to younger cohorts. By encouraging social engagement and economic involvement among the elderly, the collective income of society can rise, consequently enhancing overall quality of life. A fundamental aspect of effectively managing an ageing population involves the establishment of a robust health and social welfare framework. Given the usual necessity for long-term care among older individuals, it is imperative that governments and healthcare providers are adequately equipped to cater for their needs. Furthermore, promoting opportunities for social interaction and cultural engagement among seniors is vital to prevent feelings of exclusion. However, mitigating the challenges posed by an ageing society falls not only within the purview of governments but also demands action from families and individuals. Fostering financial reserves for old age and making judicious choices regarding healthcare and life insurance are pivotal in enabling individuals to age gracefully. Successfully addressing the predicaments of an ageing populace necessitates a comprehensive and

19 Sheykhi 2020

20 Kohli et al. 2020.

21 Carrera 2023.

enduring approach. The formulation and execution of appropriate social, economic and healthcare policies stand as indispensable measures for the well-being of senior citizens as well as for the society.

The presence of older workers in the labour market poses a multifaceted challenge necessitating resolution. Older employees bring a wealth of value to the workforce, showcasing remarkable experience and expertise. It is imperative to offer seniors age-appropriate roles that align with their physical and cognitive capabilities. Moreover, avenues for professional growth, remote work options and access to health and well-being initiatives should be extended to older individuals. Establishing age-friendly work environments stands as a critical step toward addressing this issue. Age-based discrimination is intolerable, and equal opportunities should be extended to all workers in the labour market. Involving older employees in decision-making and performance evaluation processes at work can aid in diminishing discriminatory practices. Extended participation of older workers in the workforce proves advantageous for the economy, fostering labour market stability and heightening economic vitality. Upholding support and opportunities for older individuals is not only vital for employers and employees but also for society at large, safeguarding the welfare of seniors and bolstering economic progress and stability. To conclude, the integration of older workers in the labour force is both crucial and indispensable, warranting employers and society to furnish them with suitable backing and prospects. Diversity in the labour sector and unbiased employment practices underpin a sound and equitable labour market strategy.

Study of the labour market effects of an ageing society

History – The impact of the Covid–19 pandemic on labour market processes

The Covid–19 pandemic significantly influenced global labour market trends, leading to a profound impact on economies worldwide. Various sectors experienced setbacks, resulting in a sharp rise in unemployment rates in numerous countries. Downsizing and layoffs surged as businesses either closed or scaled back operations to accommodate the new circumstances. Prolonged or short-term unemployment adversely affected individuals' financial stability and quality of life, exacerbating economic challenges. Nevertheless, the emergence of remote and online work presented fresh opportunities, enabling adaptable businesses to navigate the crisis successfully. Notably, the healthcare and technology sectors emerged as key job creators, capitalising on the increased demand for digital solutions and online communication during the pandemic.

The worldwide repercussions of the Covid–19 outbreak forced many enterprises to shut down or downsize operations, leading to substantial job losses. Industries such as hospitality, travel and entertainment bore the brunt of the impact, given their reliance on social interactions and personal engagements, which were impeded by pandemic-related restrictions and strict social distancing guidelines. Layoffs and reduced working

hours escalated unemployment rates, impacting the broader economy.[22] Governments and organisations endeavoured to alleviate the economic fallout through various measures like subsidies, tax relief and credit initiatives aimed at supporting businesses and individuals during the challenging times.

The economic aftermath of the coronavirus crisis brought about significant shifts in the labour market landscape. Essential roles such as healthcare, delivery, warehousing and grocery services experienced heightened demand due to the pandemic's exigencies and people's essential needs.[23] Conversely, the demand for labour in sectors such as hospitality, tourism and entertainment dwindled as restrictions curtailed travel and in-person leisure activities. Consequently, many employees in these domains lost their jobs, prompting operational difficulties for numerous establishments.[24] The enduring impact of these changes underscores the need to monitor industry-specific labour demands as circumstances evolve. Nonetheless, the persistent trend of digitisation and the expansion of online commerce within pandemic-resilient sectors are poised to sustain robust labour market demand over the long term.

The Covid–19 pandemic has led to a rapid increase in telecommuting[25] and the adoption of flexible working hours[26] across many global organisations. Working remotely has proven to be indispensable not only during the crisis for ensuring employee safety and well-being, but it is now gaining popularity and is anticipated to become a fundamental method of work in the long run. Telecommuting offers several advantages, including providing employees with greater flexibility in their work arrangements, enabling them to better tailor their work to suit their individual needs and personal obligations. Furthermore, remote work allows employees to save time on commuting, leading to potential enhancements in their quality of life and a reduction in stress levels. Employers also reap numerous benefits from telecommuting, such as cost savings, increased employee productivity, better work-life balance and the ability to recruit talented individuals from anywhere in the world more easily. With the scale of advantages outweighing the drawbacks, it is probable that remote work and flexible working arrangements will continue to gain traction in the future, with more organisations adopting this mode of operation. While challenges like supervising employees and cultivating a conducive work environment exist, these obstacles can be surmounted with the implementation of appropriate systems and policies.

Government interventions worldwide have exhibited varying levels of efficacy in mitigating the impacts on the labour market. Measures like vacation schemes, wage subsidies and unemployment benefits have been instrumental in helping workers retain their jobs or receive necessary assistance during periods of joblessness. However, the effectiveness of these measures has not been uniform across countries and industries. Some nations have prioritised supporting their labour markets by offering more wage subsidies, resulting in a lower unemployment rate, while others have struggled to lower their unemployment figures and facilitate reemployment opportunities for affected

22 Richter 2021.
23 HR Cloud 2022.
24 Vidovic 2022.
25 United Nations 2022.
26 International Labour Organization 2023.

individuals. Factors such as the sector and specific workplaces also play a crucial role in determining the success of governmental interventions. Industries severely affected by the pandemic, such as travel and hospitality, experienced significant job losses despite wage support initiatives. Conversely, sectors like healthcare and technology demonstrated greater job security. It is essential to acknowledge that the impact of the pandemic on the labour market is globally pervasive, albeit varying in intensity across different countries and sectors. Governments must vigilantly monitor the situation and implement suitable measures to support workers.[27] While the road to economic recovery and job restoration may be protracted, adaptability and flexibility are imperative for navigating the crisis and fostering future growth prospects.

The problem of an ageing workforce

The ageing workforce is a growing phenomenon in many developed countries, driven by demographic shifts and increasing life expectancy. This trend presents both challenges and opportunities for organisations, impacting labour costs, productivity and workplace dynamics. Understanding how organisations perceive and respond to an ageing workforce is crucial for developing effective management strategies. Many organisations recognise more advantages than challenges in employing older workers, such as their experience and reliability, but some still struggle to adapt training and work practices to accommodate them.[28] Employers often have negative attitudes towards the employability of older workers, despite their crucial role in knowledge transfer and human capital.[29] Organisations are modifying retirement policies, working conditions and employee benefits to address the ageing workforce.[30] There is a lack of formal age-related human resource management practices, with many organisations relying on informal, unit-level responses instead.[31] Some industries and countries, like Germany, have more formal practices and greater flexibility in managing an ageing workforce due to their employee relations systems and human resource planning.[32] Age discrimination in the workplace can lead to absenteeism, lower productivity and early retirement, highlighting the need for inclusive management practices.[33] The physical, cognitive, ergonomic, and well-being conditions of older workers are significant concerns, especially in industries adopting Industry 4.0 technologies.[34]

The issue of an ageing workforce pertains to the demographic phenomenon of a rising proportion of older employees within the workforce, leading to various economic, social and health implications. This shift is attributable to a confluence of factors, including extended life expectancies, declining birth rates and postponed retirement ages.

27 International Monetary Fund 2021.
28 EGDELL et al. 2021.
29 KOSOWSKI 2020.
30 CLARK–RITTER 2020.
31 CLARK 2020.
32 BERG–PISZCZEK 2021.
33 FILHO et al. 2023.
34 ALVES 2022.

One notable concern associated with an ageing workforce is the risk of labour shortages in specific sectors or geographical areas, especially those heavily reliant on physically arduous tasks or extensive specialised expertise. Such shortages can result in skills mismatches, diminished productivity and slower economic advancement. Furthermore, an ageing workforce poses challenges related to escalating healthcare expenses, as older workers are more prone to age-related health issues necessitating medical intervention. Moreover, it can elevate the demand for welfare benefits like social security and pensions, straining public finances and contributing to broader economic challenges. Additionally, an ageing workforce may engender social ramifications, such as potential age-based discrimination against older workers and difficulties in adapting to evolving technologies and work environments, leading to social isolation, reduced job satisfaction and diminished overall well-being. To tackle these issues, businesses and policymakers can implement strategies like enhancing training and educational initiatives to enhance older workers' skills, introducing flexible work arrangements tailored to accommodate the needs of older employees and bolstering investments in healthcare and retirement insurance schemes. Moreover, policies incentivising greater labour force participation among older adults, such as tax breaks or vocational retraining schemes, can help offset the adverse effects of an ageing workforce.[35]

Possible ways to eliminate labour shortages caused by ageing

The ageing workforce and global labour shortages have prompted organisations to consider retaining older workers as a strategic initiative to mitigate these challenges. Employers facing recruitment difficulties are more likely to support older workers continuing until or beyond retirement age and to hire retired individuals, especially if they have positive perceptions of older workers' experience and adaptability.[36] Older Worker-oriented HRPs, such as reducing ageism and improving work-life balance, are associated with lower psychological distress and higher retention of older workers.[37] Ambivalent ageism (stereotypes of fragility and incompetence) negatively impacts older workers' well-being, perceived employability and increases their intentions to leave. Reducing ageism can improve retention.[38] Adjusting work conditions to match the health and functional capacity of older workers can mitigate labour shortages and improve occupational safety, particularly in physically demanding jobs.[39] Providing training opportunities and fostering a climate that supports older workers' growth needs can enhance their retention, even among those eligible for retirement.[40] Positive work environment adaptations, re-employment of retired employees and favourable views of older workers' productivity help avoid early retirement and extend working lives.[41]

35 Verlinden 2022.
36 Riekhoff et al. 2023.
37 Farr-Wharton et al. 2023.
38 Lagacé et al. 2023.
39 Peng–Chan 2020.
40 Li et al. 2022.
41 Qvist 2023.

Designing jobs with characteristics that support older workers' needs, such as autonomy, mentorship and flexible working hours, can sustain their employability across different job types.[42] Understanding changes in cognitive function and tailoring training programs to older workers' needs can enhance their skills and retention, providing a competitive edge for organisations.[43]

Ageing labour shortages pose a significant challenge that can be mitigated through the promotion of legal immigration. Integrating skilled workers into the economy and workforce has the potential to fuel economic expansion and enhance competitiveness. Streamlining visa processes and relaxing policies pertaining to legal immigration would facilitate the entry of more skilled workers into the nation. Nevertheless, these initiatives must prioritise the security and economic concerns of the country, exercising caution to prevent excessive pressure from legal immigration or societal issues. Beyond immigration policies and visa simplification, additional strategies may be required to attract skilled workers. These could encompass providing top-tier educational and training opportunities, along with ensuring competitive wages and benefits. It is essential to recognise that stimulating legal immigration alone cannot fully address the labour shortage issue. Supporting an ageing workforce necessitates ensuring the sustainability and ample funding of the public pension system, as well as creating avenues for retired individuals to engage in the labour market.[44]

Promoting continuous learning and training programs plays a crucial role in enhancing the competitiveness of older workers within the labour market. Governments play a pivotal role in endorsing these endeavours and fostering a culture of lifelong learning and development among employees. Training and ongoing education for older workers empower them to enhance their skills in emerging technologies and work methodologies, thereby bolstering their adaptability to evolving work environments. Companies stand to gain from providing opportunities for continuous learning and training to older workers. This approach can heighten employee motivation and loyalty by demonstrating employer support for their professional growth and contributions. Moreover, trained and upskilled workers tend to be more efficient and productive, offering a distinct advantage to employers. Overall, backing for lifelong learning and training programs can enable older employees to maintain their competitiveness in the labour market while delivering benefits to employers in terms of retaining skilled and dedicated workforce.[45]

Implementing flexible work arrangements fosters the employment of older workers and prolongs their tenure in the labour force. Part-time work options afford older employees the chance to extend their careers with reduced workloads and lower stress levels. Remote work further enhances flexibility, allowing employees to work from home and curbing travel time and expenses. Embracing flexible work schedules can also be advantageous for employers as they retain knowledgeable personnel who bring valuable expertise to the organisation. Moreover, flexible work arrangements can curb

42 BOER et al. 2021.
43 TAYLOR–BISSON 2020.
44 LANGTON 2022.
45 OECD 2023.

turnover rates and hiring costs by enhancing employee satisfaction and longevity with the company. The commitment and experience of older workers hold significant value for businesses. Leveraging flexible work arrangements enables these individuals to remain active in the labour market, ensuring that companies retain skilled staff.[46]

Automation and technology undoubtedly have the potential to mitigate the challenges posed by the ageing workforce gap. Through automation and robotisation, repetitive and physically strenuous tasks can be mechanised, allowing older employees to concentrate on more intricate and less physically demanding assignments. The utilisation of automation offers numerous advantages to older workers, such as reduced physical strain and a more serene work environment. Furthermore, by embracing automation and technology, work productivity can be enhanced, consequently boosting employee performance and contentment over the long term. Older workers can contribute valuable insights by leveraging their wealth of experience and expertise to optimise and refine automation processes. However, it is crucial to acknowledge that while automation can streamline operations, it cannot wholly supplant human labour. Hence, older workers must adeptly acquire new technologies and systems to successfully navigate the evolving landscape of the job market.[47]

Social innovation presents an opportunity to combat labour scarcity resulting from demographic ageing. As the elderly population continues to grow in significance, innovative solutions are essential to enhancing their quality of life amidst longer lifespans. Developing products and services tailored to the needs of the elderly not only addresses labour shortages but also enriches the lives of seniors. For instance, the advancement of smart home technologies streamlines daily tasks, promoting safe and comfortable living for the elderly. Additionally, services like virtual health consultations and remote health monitoring aid seniors in managing and improving their well-being. Entrepreneurial ventures could be established to provide personalised services for older individuals, including home care assistance, social engagement activities and delivery services for essential goods and medications.[48]

An ageing workforce remains a pivotal component of labour markets, presenting opportunities for mentorship and skills development among younger employees. Collaborative work environments comprising of multi-generational teams facilitate the transfer of knowledge and experience. Older workers stand to benefit from the fresh perspectives and innovative solutions brought forth by their younger counterparts. The accumulated experience and expertise of elderly employees are highly valuable to businesses, offering unique advantages such as effective customer communication and complex problem-solving abilities. Conversely, younger workers can glean invaluable insights from older generations on workplace decorum, communication efficacy and leadership skills. Mentoring programs involving older workers provide younger employees with an avenue for skill enhancement and professional growth. Ultimately,

46 Allen et al. 2021.
47 Wyman 2023.
48 Klimczuk–Tomczyk 2020.

fostering collaboration between employees of varying age groups proves advantageous for both organisations and individuals, serving as a key strategy to alleviate workforce shortages and enhance organisational efficiency and success.[49]

Summary, drawing more important conclusions

The 21st century has introduced significant social challenges to Europe, primarily propelled by demographic changes like ageing populations. This paper delves into the multifaceted repercussions of these transformations on the European Union (EU), with a specific focus on their implications for social security, healthcare systems, labour markets and economic stability. As life expectancy rises and birth rates decline, EU nations experience pressures on healthcare services and pension systems, alongside opportunities for economic growth and innovation stemming from the unique contributions of older workers. Demographic shifts present both challenges and prospects for the EU. The ageing population escalates fiscal strains on healthcare and social security systems, potentially resulting in heightened debt levels and budget deficits. Nonetheless, enhancing the labour force engagement of older employees can amplify productivity and propel economic expansion. Comprehensive strategies that address regional and national variations, sustainability of social security, labour market adaptability, educational systems, and immigration policies are imperative to navigate these transitions. The pace of population growth has decelerated, exacerbated by the Covid–19 pandemic, resulting in reduced birth rates, increased mortality rates and inadequate migration. This demographic change exhibits distinct impacts in urban and rural regions, each encountering unique challenges and opportunities. Urban areas benefit from attracting young, highly skilled professionals, while rural areas encounter difficulties with connectivity, infrastructure and public services. The phenomenon of population ageing, characterised by a growing proportion of elderly individuals, poses substantial economic and social hurdles. By 2050, Europe is projected to witness the elderly segment surpassing 30%, escalating the old-age dependency ratio and heightening fiscal sustainability concerns. The surge in healthcare and long-term care services will necessitate augmented expenditure and infrastructural modifications. The Covid–19 pandemic has notably shaped global labour markets, leading to elevated unemployment rates, particularly in sectors like hospitality and entertainment. Nevertheless, remote and online work have emerged as new prospects. An ageing workforce gives rise to challenges related to healthcare costs, social security obligations and potential labour scarcities. Strategies to alleviate these impacts encompass legal immigration, ongoing education, flexible work arrangements and the adoption of automation and technology. Encouraging legal immigration can help address labour shortages, while continuous learning initiatives enhance the competitiveness of older workers. Flexible work setups, such as part-time and remote options, can prolong the engagement of older employees in the labour market. Automation and technology have the potential to reduce physical strain and bolster productivity, while social innovation can enhance the quality of life for the elderly.

[49] BOATMAN 2021.

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Mariann Tánczos[1]

The EU's Answer to the Migration Crisis

The Road to the New Pact on Migration and Asylum[2]

Over the past decades, the Member States of the European Union have increasingly become migration destination countries. This trend was reinforced by the migration and refugee crisis of 2015–16, which forced the European Community to reform its migration policy. However, reforming this policy area of shared competence has been more challenging than expected. The Council of the European Union adopted the New Pact on Migration and Asylum in May 2024. However, this act was a long time in the making and the undertaking is far from complete. This study, based on a literature review and document analysis, examines the process leading to the creation of the New Pact up until the decision of the Council of the EU.

Keywords: European Union, New Pact on Migration and Asylum, shared competence, migration policy, provisional agreements

Introduction

The Council of the European Union (EU) approved the New Pact on Migration and Asylum on 14 May 2024.[3] This landmark event is an important milestone for the EU to establish its common system to manage migration. The EU became aware of the pitfalls of its migration and asylum system during the 2015–16 migration and refugee crisis. During the last decade the community has seen an unprecedented number of migrants both irregular and legal who crossed the EU's external borders *en masse*. The figures reached as high as 1.3 million in 2016 and did not grow significantly further only because of the so-called EU–Turkey deal.[4] It was quickly recognised that the EU's existing migration and

[1] Assistant Lecturer, Ludovika University of Public Service, e-mail: tanczos.mariann@uni-nke.hu

[2] TKP2021-NVA-16 has been implemented with the support provided by the Ministry of Innovation and Technology of Hungary from the National Research, Development and Innovation Fund, financed under the TKP2021-NVA funding scheme.

[3] Council of the European Union 2024.

[4] Eurostat 2017.

asylum system could not handle the situation at hand, thus the reform of the Common European Asylum System (CEAS) was started.

Europe however was not quite the region of destination as it is now for a long time. The origins of contemporary international migration can be traced back to the end of the Second World War, when new, cheaper methods of transportation made long-distance migration more affordable and available for the masses. Further technological improvements, especially in the 1990s, made it significantly easier to keep in touch with family members left behind, which also contributes to the increase in long-distance, inter-continental migration.[5]

Europe became a region of destination accordingly in the 1950s, when West Germany and France started to recruit foreign workers to satisfy the labour demand of their rapid industrial expansion and the shift to new mass production methods. In the 1970s the economic developments in Italy, Spain, Portugal and Greece transformed these countries into labour importers too.[6]

After the era of migration recruitment, a sharp growth in refugee and irregular migration occurred in the 1980s.[7] From this decade, refugee migration also had more and more individuals who were not qualifying as refugees according to the 1951 Geneva Convention,[8] thus remaining asylum seekers.[9] Besides the transformation of the migration flows towards Europe, its scale started to grow as well, transforming most of the EU countries, including Cyprus, the Czech Republic, Hungary, Slovakia and Slovenia to destination countries by 2006.[10] Europe was reluctant to accept its newly assumed position as a migration destination area. This resulted in political tensions on how to address migration. While labour migration to the EU was considered needed not just because of the declining population, but for its economic benefits, refugee and irregular migration was rather unwelcome in the Community.[11] With the political tensions came different solutions, and the appearance of the expression *Fortress Europe* in the early 2000s.[12]

Restrictive policies in asylum systems were introduced since the 1973 oil price shock, although at a different rate in varying Member States,[13] ranging from the complete abandonment of the 1951 Geneva Convention, through special accelerated processes to assess asylum applications to rules on safe third countries.[14] The foundations of the EU's New Pact on Migration and Asylum of 2024 can be traced back to the 1990s, when with the Treaty of Maastricht the newly established EU called for a common migration procedure.[15]

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5 CASTLES et al. 2014: 5.

6 MASSEY et al. 1998: 108–109.

7 KING 2002: 96; BOSWELL 2006: 92; KESERŰ–GLIED 2014: 250.

8 "Owing to well founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it." UN 2010: 14.

9 KING 2002: 96.

10 BOSWELL 2006: 92–93.

11 BOSWELL 2006: 91.

12 KING 2002: 94.

13 KESERŰ–GLIED 2014: 246.

14 BOSWELL 2006: 99–100.

15 VECSEY 2019: 145–146.

The EU's migration policy changed tremendously since the 1990s, however traits of solutions implemented in previous decades re-emerged. The development of the EU's migration policy is tackled in the article to capture how the New Pact on Migration and Asylum came to existence in its current form. Migration policy evolved in consecutive waves, the first ended by the shock of the so called migration and refugee crisis of 2015–16, and the third starting with the term of the incoming European Commission in 2019. Thus, these milestones form the structure of the article.

Migration control for business as usual

One of the most important internal security *aquis* of the EU, which was created in 1990, was the Dublin Convention. The Convention was the first of its kind, contributing mainly to the asylum system with regulating border control, irregular migration and asylum.[16] The Convention entered into force in 1997, when the Treaty of Amsterdam was signed. It outlined the basis for the succeeding documents. In its Article 1 it listed the definitions, only seven of them starting with such as applicant for asylum, which reads as the following: "an alien who has made an application for asylum in respect of which a final decision has not yet been taken". Besides this, residence permit, different visa types were also defined. Article 2 states that the EU will take action in accordance with international law with no geographical restrictions. Article 3 of the regulation determines the principles on the asylum procedure. These include the most important ones, such as one Member State examines an application at a time, every Member State is eligible to examine applications, or cease any case if the applicant leaves the EU for three or more months. Articles 4 to 9 then discuss the hierarchy of which Member States are responsible to examine an asylum application.[17] The first Dublin Convention was 12 pages altogether. It clearly built up the mechanism for *business as usual,* and not for the dramatically increased figures of 2015. While it was protecting the Schengen Area at its external borders, the Dublin Convention was lacking burden sharing and equal distribution of costs.[18] The criteria for determining which Member State is responsible for examining an asylum application put additional pressure on countries along the EU's external borders. Nevertheless, the Convention was only revised in 2003.

At the same year when the Dublin Convention entered into force, EU Member States signed the Treaty of Amsterdam. The treaty set out a five year long timeframe to the EU to adopt multiple measures for a more coherent European migration control and prevention. The following measures were among the requirements: the prevention and combat against crime-related border crossing, safeguarding the rights of third country nationals, cooperation in the fields of jurisdiction, administration and policing.[19]

The institutionalisation of migration control and prevention continued with the Tampere Programme in 1999. The five year long programme intended to build coherence

16 Thielemann–Armstrong 2013: 148–149.
17 European Communities 1990: 3–7.
18 Thielemann–Armstrong 2013: 149–150.
19 European Union 1997: 28.

not just among the different national, but also between the internal and external policies.[20] The conclusions called for "a comprehensive approach to migration addressing political, human rights and development issues in countries and regions of origin and transit".[21] The programme's first priority was the establishment of the Common European Asylum System (CEAS), which would introduce restrictions for third-country nationals, strengthen external border controls and address irregular migration among others.[22] The Tampere Programme addressed both schools on EU external action towards migration. The first, repression is represented in the initiative to strengthen external border controls, while the second, prevention is achieved through addressing development in countries of origin.[23]

The development of the CEAS started accordingly after its introduction by the Tampere Programme of 1999. The EU incorporated the existing regulations as the Dublin Convention to the system. The CEAS aimed to harmonise national procedures and set the minimum standards for asylum.[24]

The Treaty of Nice made only little and limited progress, since it either did not change migration and asylum related articles, or the change was conditional to unanimous acceptance by the Member States to switch to qualified majority vote.[25] The Treaty of Nice, just as the Treaty of Amsterdam before it, set out a five-year long timeframe to formulate asylum mechanisms, and common minimum standards for asylum.[26] In this multiannual program on developing the common migration policy, security gained more focus. The unprecedented terrorist attacks on 11 September 2001 led to an increased attention to third countries which have chosen not to cooperate to combat illegal migration.[27]

In 2003 the Dublin Convention was revised and took the form of a Regulation. The second Dublin Regulation (Dublin II), however grew in length, did not come with significant changes.[28] The regulation kept the general order of criteria, complementing it with articles on unaccompanied minors, added paragraphs to the article on already residing family members, articles on visa and residence permit, including measures if fraud was committed, an article on application for asylum lodged in an international transit zone and an article on the multiple family members parallel applications. For these reasons the definitions section of the regulation got longer than in the original Dublin Regulation. It also introduced new terminology, for example, changing the earlier used *alien* to *third-country national*. Due to the wider scope of criteria that the regulation established, it needed to define such terms as *unaccompanied minor* and *family*. As a new idea, taking charge and taking back measures were introduced in the regulation. It obliged Member States to take charge or take back any applicant whose application for asylum according to criteria falls on them, or it was requested by another Member State. The regulation

20 European Council 1999.
21 BOSWELL 2006: 105.
22 MURPHY–ARCARAZO 2014: 5.
23 BOSWELL 2006: 104–105.
24 European Commission 2020a.
25 NIEMANN 2012: 222.
26 European Parliament 2017: 3.
27 TARDIS 2018: 10.
28 COSTELLO–MOUZOURAKIS 2017: 269.

further elaborated the information exchange and communication cooperation among Member States with respect to applicants for asylum and to general trends.[29] According to Dublin II, the Member State responsible for examining an application for asylum will be mostly the one where the applicant first lodged their application and entered the territory of the EU, save a few exemptions. The disproportional burdens of the Member States in external border areas remained one of the major structural problems of the CEAS.[30]

The development of the CEAS continued with the acceptance of the minimum standards for the qualification and status of third-country nationals and stateless persons as refugees or as persons who otherwise need international protection and the content of the protection granted.[31] The Frontex Agency, responsible for the management and coordination of operational cooperation at the EU's external borders was established in 2004,[32] which strengthened the initiatives under the repressive school of EU external action on migration.

In the meantime, the Tampere Programme came to an end. Replaced by the Hague Programme in 2005, the formulation of the CEAS continued in its second phase, with the aim to adopt the remaining instruments until 2010. This objective however remained only partially fulfilled, and thus the completion of the CEAS was delayed.[33]

In the meantime, the EU adopted the Treaty of Lisbon, which included significant changes on European migration and asylum policies. The treaty encapsulates external dimensions of migration control, as it tied EU policies to third countries. Moreover, the Treaty of Lisbon further emphasised the need for the CEAS.[34] The formulation of the common policy must comprise: a uniform status of asylum and subsidiary protection, a common system of temporary protection, common procedures to grant and withdraw of protection status, criteria and mechanism to determine the Member State responsible for examine asylum applications, standards of reception conditions and partnership and cooperation with third countries.[35]

While the creation of the CEAS was still in full swing, the Council of the European Union accepted the European Pact on Immigration and Asylum in 2008. The Pact had an influence on the CEAS as well, since it shifted the ambitious deadline of 2010 to 2012 for setting up the system.[36] The Pact also outlined five priority areas, which were to be translated to actions. These areas were the organisation of legal migration, control illegal immigration through return, making border controls more effective, the construction of a Europe of asylum, and creating partnerships with encouraging migration and development in countries of origin.[37] The priorities again were revealing about how the EU approached migration and asylum. The Pact showed a more conservative picture, in line with the political and public attitude, heralded by the tensions originating from the

29 European Council 2003: 2–8.
30 Costello–Mouzourakis 2017: 283.
31 European Council 2004.
32 Friedery–Molnár 2024: 124.
33 Collett 2008.
34 Triandafyllidou–Dimitriadi 2014: 151.
35 European Parliament 2024.
36 Angenendt–Parkes 2008: 77, 90–91.
37 Council of the European Union 2008: 4.

1990s. Migration control gained momentum, and elements of repression and prevention dominate the priorities, further strengthening the Fortress Europe approach towards migration.[38]

A new multiannual programme was signed in Stockholm for the period of 2010–2014. The creation of the CEAS was listed as a top priority of the programme. The document underlined the importance of the EU remaining an area of freedom and it is open to refugees. Moreover, the Programme deemed it important to create flexible admission systems for legal migrants, since the EU is in need of continuous flows of immigration.[39] In parallel with this, the Stockholm Programme also intended to strengthen border controls to prevent irregular migration.[40] Further objectives of the programme included the maximisation of the positive effects of migration on development, and in parallel the minimisation of its negative effects. Thus, migration prevention was again in the focus through cooperation with countries of origin and transit. To strengthen the idea of an area of freedom and justice, integration of third-country nationals considered important. The programme also identified the growing number of unaccompanied minors, illegal migration and the refugee status as key issues to address.[41] Despite the EU's rhetoric on being open to refugees, the Stockholm Programme did not define the conditions for asylum, and legal pathways to access protection to eligible individuals were never created.[42]

The CEAS, in contrary of the expectations, and the combined effort of the multiannual Programmes (Tampere, the Hague and Stockholm) and the European Pact on Immigration and Asylum was not adopted in 2012. The adoption of the CEAS, which finally took place in 2013 occurred during a time already foreshadowing future hardships. After the Arab Spring, a growing number of migrants from the south arrived to the EU, which induced the reform of Dublin II.[43] The revised Dublin Regulation (Dublin III) was adopted in 2013. Dublin III grew significantly both in length and content compared to the Dublin Convention.[44] The issues raised by the Stockholm Programme were addressed in the new regulation, however the main problem caused by the uneven distribution of responsibility (the Member State of first entry remained mostly eligible for examining asylum applications) persisted. Despite the looming crisis, the EU did not include provisions for the case of emergency, such as increased numbers of asylum applications.[45]

The crisis of the European migration policy

The European Commission led by Jean-Claude Juncker started its term on 1 November 2014. In reaction to the black clouds gathering over the skies of the EU, the Juncker

38 BOSWELL 2006: 104–105; COLLETT 2008; MORENO-LAX 2014: 154–155.
39 ARCARAZO 2011: 70.
40 MORENO-LAX 2014: 149.
41 European Council 2010: 27–33.
42 MORENO-LAX 2014: 149.
43 VECSEY: 2019: 149.
44 European Council 2013.
45 VECSEY 2019: 150.

Commission identified migration as one of the 10 priority areas to address.[46] This can be considered as a reaction to the fluctuating number of detected irregular migration to the EU, depicted in Figure 1, sharply increasing to 140,989 in 2011.[47]

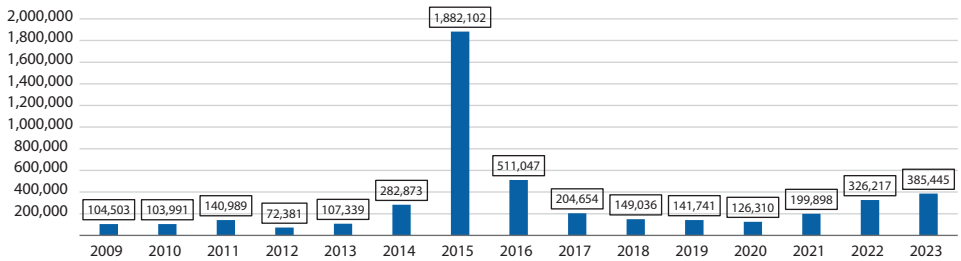

Figure 1: Detected irregular arrivals between 2009 and 2023

Source: compiled by the author

The Commission also pledged to continue the implementation of the CEAS and set itself a goal to formulate a new migration policy. In order to create a new policy, four areas of action were listed: the implementation of the common asylum policy, a new policy on legal migration, the release of a Communication on internal security strategy and taking operational measures to fight terrorism and counter radicalisation.[48] Accordingly, a 10-point plan was released in April 2015 to reach the objectives. The first related document, the European Agenda on Migration (EAM) was released in May 2015, signalling the consensus among Member States.[49]

The EAM firmly acknowledged that migration is a natural and complex phenomenon. The document also called for the abandonment of the previous practices of focusing on diverse types of migration flows. The EAM also confirmed its statements in the Stockholm Programme, to provide an area of freedom and justice to legal migrants and refugees.[50] Despite the positive narrative of the document, the actions listed in the EAM were more in line with the previous political agenda, promoting migration control and prevention, with the budget enhancement of Frontex operations, and strengthening of the border management component in existing EU Common Security and Defence Policy missions. This trend quickly became evident from the document as well. For example, the EAM claimed that the root causes of migration must be addressed, and to tackle irregular migration, Frontex must be reinforced and its legal basis amended.

Meanwhile migration to the EU peaked in 2015 with almost 885,000 irregular arrivals on the Eastern Mediterranean route and a consistent number of arrivals ranging between 153,000 and 185,000 since the second half of 2013 in the Central

46 Gotev 2014.
47 Frontex 2024.
48 Gotev 2014.
49 Debyser 2015: 8.
50 European Commission 2015a: 1–10.

Mediterranean route.[51] These two figures and the unequal share of Member States in the crisis have made it clear that the Dublin III Regulation is only sufficient to deal with average migration pressures. The administrative pressure on frontline Member States from then on was only handled with *ad hoc,* reactionary actions, which could not address the emerged issue adequately in the long term. To add to the problems, tensions grew among Member States, and consensus was, in some cases, unachievable. Such a case was the establishment of a temporary relocation mechanism in September 2015. The two beneficiary countries of these measures were Italy and Greece. The documents earmarked the relocation of 40,000 then 120,000 migrants in need of international protection from these countries. The first provision indicated that the Member States should execute the relocation in a voluntary manner. The second provision, however, was mandatory, which defined the number of migrants to be relocated per Member State for clarity and to enhance solidarity.[52] On establishing the temporary measures, Finland abstained from the vote, the Czech Republic, Hungary, Romania and Slovakia voted against the temporary provisions.[53]

Besides creating measures to address internal problems, the EU also created the Valletta Action Plan in November 2015. The main focus of the Action Plan was the southern dimension of migration, thus movement from Africa was addressed through it. The Action Plan mainly focused on the prevention of migration outside the EU's borders with addressing the root causes of migration and focusing on development.[54]

The number of irregular arrivals remained elevated in 2016: exceeding 180,000 people on both the Central Mediterranean and the Eastern routes.[55] The EU took care of the Eastern route with the help of Turkey. The EU–Turkey Statement of 18 March 2016 ensured the rapid return of irregularly arriving migrants to Turkey. In place of the returnees, Syrians were pledged to be resettled in the EU. Moreover, Turkey got a 3 billion EUR worth of support from the EU for its refugee system.[56]

The different action plans and agreements masked the real problem, the unpreparedness of the CEAS to receive masses of migrants at the EU's external borders. Thus, the Commission decided to revise the CEAS, only adopted in 2013, as a clear sign of the problems with it. The CEAS had multiple systemic and fundamental issues to deal with. First of all, its approach was protectionist, instead of the protection of those in need.[57] Secondly, however the EU claimed it to be a common system, the CEAS only defined the minimum standards for asylum, which can be overruled by higher standards in national policies. Thirdly, the pitfalls of the Dublin system created an environment which inherently encourages irregular migration.[58] Dublin III, after the two revisions still mainly considered the first country of entry responsible for the examination of asylum applications, creating immense and unsustainable burdens to the countries in question.

51 European Council 2024a.
52 European Council 2015a; European Council 2015b.
53 BBC 2015.
54 European Commission 2015b.
55 European Council 2024a.
56 European Council 2016.
57 LAVENEX 2018: 1201.
58 LAVENEX 2018: 1204; COSTELLO–MOUZOURAKIS 2017: 273–278.

While Greece and Italy would have had hundreds of thousands of applications to assess, twenty countries from the EU would have remained free riders of the system. This disproportionality created evasion strategies both from Member State and migrants. Member States opted for selective fingerprinting to the waving through migrants. From the other perspective, entering the EU unnoticed (by the authorities) became desirable, and irregularly crossing internal international borders to avoid detention.[59]

The European Commission intended to remedy the flaws of the CEAS through adopting new legislative elements. One of these was the much needed reform of the Dublin Regulation, the adoption of a new entry-exit system, the creation of the European Union Agency for Asylum and the reform of the Eurodac system.[60] In a second package of proposals the replacement of the Asylum Procedures Directive and the Qualification Directive with a Regulation and the reform of the Reception Conditions Directive was listed.[61]

From the 42 proposals submitted by the Juncker Commission, 24 were adopted and 7 were proceeding slowly or were blocked entirely until April 2019. The wanted and the reform of the CEAS was a little bit more than halfway through when the new European Commission took over in 2019.[62]

The formulation of the new pact on migration and asylum

In 2019, when the von der Leyen Commission took office, a fatigue regarding the migration topic was palpable. The migration pressure was significantly lower, only 120,000 people arrived to the EU through the three main Mediterranean routes.[63] This created a situation of out of sight, out of mind,[64] and the reform of the CEAS, however ongoing, has been dropped out from the priorities.[65] To give a new impetus to the reform of the CEAS, the New Pact on Migration and Asylum (New Pact) was launched in 2020, under the fifth priority of Promoting the European way of life. The new reform package included mainly the same elements as the 2016 one, and the Commission stated that they are continuing the process started by the Juncker Commission.[66] The main lines of the reform revolved around two topics, the strengthening of the EU's external borders and the modernisation of the common asylum system.[67]

The firstly mentioned key action, which is the "robust and fair management of external borders, including identity, health and security checks"[68] indicates that the protectionist approach towards migration control did not change within the EU. Migration, despite the sharply decreasing figures is still viewed as a security threat to the integrity

59 Costello–Mouzourakis 2017: 283–285.
60 European Commission 2016a; Bassot–Hiller 2018: 27.
61 European Commission 2016b.
62 Bassot–Hiller 2019: 26.
63 European Council 2024a.
64 Lavenex 2018: 3.
65 European Commission 2019.
66 European Commission 2020b: 1–2.
67 Bassot 2020: 7–8.
68 European Commission 2020b: 1–2.

and internal security of the EU. With reinforcing external border control, legal channels of migration will likely to narrow one again, and the *Fortress Europe* image is emphasised.

Besides the strengthening of the external borders, the proposal on the New Pact identified the following issues to be addressed via the reform. The simplification of the asylum procedure, recognising the positive effects of migration and steps to promote the latter. The New Pact went on to advocate that the root causes of migration must be addressed through effective cooperation with third countries. Lastly the New Pact aims to address cross border criminal activity related to migration, for example human trafficking and smuggling.[69]

Within this scope, the implementation roadmap of the new pact outlined 41 proposals towards the reform of the CEAS with a rather ambitious timeframe. The roadmap envisioned the launch of the New Pact at the end of 2021.[70] Of the 41 proposals, nine refer to legislative changes, five to legal instruments, three to recommendations and one to a guidance document. The five legal instruments were the proposal of a new screening regulation; an amended proposal revising the Asylum Procedures Regulation, known as Dublin Regulation; an amended proposal revising the Eurodac Regulation; a new asylum and migration management regulation and a new crisis and force majeure regulation. The three recommendations include a new migration preparedness and crisis blueprint, a new recommendation on resettlement and complementary pathways and a new recommendation on search and rescue operations by private vessels. This latter is also supported by a guidance to Member States that rescue on the sea cannot be criminalised. The new guidance introduced within the pact is on the Facilitators Directive.[71]

Within the Promoting the European way of life priority of the von der Leyen Commission, 27 proposals of the 41 had been submitted by December 2021. Of these proposals, 17 is proceeded normally, 4 slowly, 1 is blocked and 5 were adopted in December 2021 as visible on Figure 2.

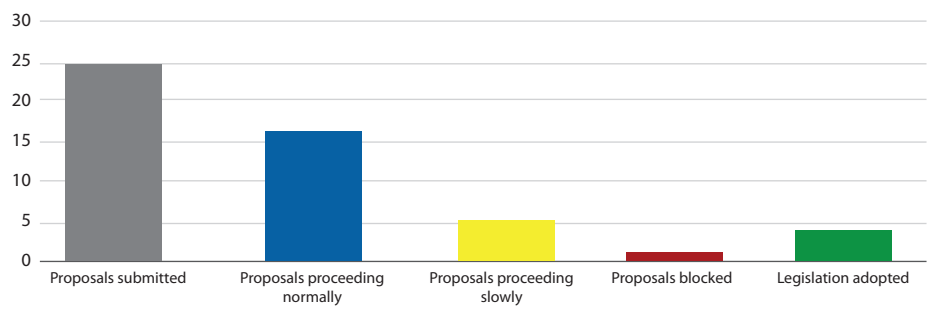

Figure 2: Legislative delivery on the New Pact on Migration and Asylum in December 2021
Source: compiled by the author

69 European Commission 2020b: 1–28.
70 European Commission 2020c.
71 CORNELISSE–CAMPESI 2021: 1.

Until the end of 2021, the landscape regarding the reform of the CEAS has not changed significantly and the ambitious timeframe set by the Commission was not feasible. The topic was forced into the background by multiple issues, some of which needed immediate response, for example, the Covid–19 pandemic. Attention to migratory issues also decreased due to the fact that the number of irregular arrivals had been reduced by 90% since 2015.[72] Despite the articulated importance of solidarity stressed through the process so far, the little advance was the by-product of unchanged and differing national approaches on migration. While multiple proposals were adopted through 2021, and continuously until December 2023, the reformed Dublin Regulation, the main pillar of the CEAS was only agreed on provisionally, together with eight other important documents, like the Eurodac and Qualification Regulation.[73]

Four proposals were adopted in the framework of the New Pact on Migration and Asylum. One of these is the EU Blue Card Directive for highly qualified third country nationals and their families. The directive highlights that it is not applicable for those who are seeking international protection,[74] thus the Blue Card directive does not contribute to the migration policy debate on irregular migration. Most probably the directive was approved by the Member States because of its detachedness from the above-mentioned subject.

The second proposal adopted in 2021 considered an agency, the EU Agency for Asylum (EUAA). It was not the establishment of a new agency, but the renaming of the existing European Asylum Support office (EASO). The EASO's core task was to help Member States in the implementation of the CEAS. The revision of the EASO became important when the 2015–16 migration and refugee crisis forced the agency to take practical steps on the ground and conduct entire asylum procedures up to the decision on the cases. The reform of the CEAS provided an opportunity where the discrepancies between the regulation and the practice could be rectified. The original proposal aimed for a mandate which allows an autonomous operation for the EUAA in the Member States, however this objective was not fulfilled on the 2021 adoption of the new regulation.[75] Although the EUAA can provide operational and technical assistance,[76] the original aim of the reform was not fulfilled, and the already assumed role of the agency still depends on the interpretation of its mandate.[77]

A new role was also created in the framework of the New Pact at the European Commission's Directorate General for Migration and Home Affairs to deal with return policy. The EU Return Coordinator harmonises EU return policy and support its coherent implementation and establishes a common EU system for returns.[78] The new role, again adds to the EU's *Fortress Europe* approach to migration, since those who reached the territory of the EU, although their status is irregular, are returned to their country of

72 European Council 2024b.
73 European Commission 2024a.
74 European Union 2021.
75 Ekstedt 2023: 6–7.
76 EUAA [s. a.].
77 Ekstedt 2023: 7.
78 European Commission 2024b.

origin. The harmonisation of return policies also adds to the migration repression aspect of EU external action on migration, with further limiting the legalisation of irregular stay in the EU.

The final approved proposal of the New Pact was the Voluntary Solidarity Mechanism. Based on the Declaration of Solidarity, which was signed by 21 European countries on 22 June 2022, the mechanism, after the failure of the 2015 mandatory mechanism became voluntary. The new mechanism, which was included in the Asylum and Migration Management Regulation as its Part IV, gave the opportunity to either offer relocation from the Mediterranean countries under migratory pressure or provide financial contributions to them.[79] Although the new mechanism offers a greater freedom in the nature of the offered solidarity action, it is still not appealing enough for all EU Member States for participation. Austria, Denmark, Estonia, Hungary, Latvia, Poland, Slovakia, Slovenia and Sweden were not among the signatories of the declaration. However, the voluntary nature of the mechanism allows Member State absence from the mechanism, its *á la cart* support options should have encouraged broader participation. The voluntary nature of it also allows the free-rider Member States to continue with their practices: they are not lying on EU external borders and tend to not participate in solidarity action and do not have elevated numbers of asylum seekers in their national systems.[80] Thus, the Voluntary Solidarity Mechanism can only be considered half of a success: it offers different options of support, but still not able to motivate all Member States to engage in meaningful solidarity action.

Nine proposals of the New Pact remained provisional, these were the Qualification Regulation, the Reception Conditions Directive, the Union Resettlement Framework Regulation, the Eurodac Regulation, the Screening Regulation, the Asylum Procedure Regulation, the Single Permit Directive, the Asylum and Migration Management Regulation and the Crisis Regulation.[81] For the purposes of the research, only those proposals are examined which contribute to the EU's response directly to refugee migration, asylum management and crisis situations. These were either the most debated elements of the European migration policy discourse or offer solution for future crises.

The Qualification Directive provides Member States with criteria which defines third-country nationals' eligibility for international protection. The reform of the directive was set to further harmonise common criteria, result in greater convergence of asylum decisions, ensure that international protection is granted during the eligibility of the individual, address secondary movements within the EU and harmonise rights and benefits for those who receive international protection.[82] The document accepted in 2024 builds specifically on the Geneva Convention criteria for international protection, just as the previous directive. In the meantime, it requires from the applicants a genuine effort to prove their case. This latter is the most significant change in the Directive. The Geneva Convention, and with that the minimum standards, remained to be the criteria for eligibility. Other, recommended criteria includes the valid visas, resident permits

79 French Presidency of the Council of the EU 2022; European Council 2024c.
80 COSTELLO–MOUZOURAKIS 2017: 264.
81 European Commission 2024a.
82 RADJENOVIC 2024: 4–5.

previously awarded for the individuals. This however is deceiving, since firstly it is a recommendation, secondly, those in need might not be able to afford a visa to the EU.[83] In all, the new Qualifications Directive did not introduce major changes, and it added subjective elements (the assessment of genuine effort) to the equation, partly delegating also the responsibility of an asylum case to the applicants themselves.

While the articulated objective of the Commission was the reform of the Dublin system, its most controversial elements remained relatively unchanged. The Dublin Regulation was renamed to Asylum and Migration Management Regulation during the reform. With the new name, the Dublin Regulation got a new set of chapters too. After an elaborated definitions section, the regulation discusses the elements of EU comprehensive approach, then establishes the annual migration management cycle. The main element of the regulation, determining the Member State responsible for examining the asylum application is detailed in Part III. The criteria defining the Member State responsible for the examination of the asylum applications remained the same, the country of first entry. Previous and valid visas, diplomas and qualifications as well as residence permits can also be taken in account when determining the responsible Member State.[84] These criteria can be perceived as rather controversial, because of visa fees, studying abroad, and generally travelling legally to Europe can be unaffordable for those the most in need.[85]

The regulation on crisis and *force majeure* carries the promise of not repeating the events during the 2015–16 migration and refugee crisis. The Member State in crisis is eligible to invoke EU solidarity action, which is approved by the European Commission for the duration of three months, which can be repeated one time. The solidarity measures include relocation, financial contribution, or any alternative solidarity measures.[86] The crisis regulation provides a framework for the EU to handle mass migration situations. The regulation is yet to be tried out in practice for the final assessment of its effectiveness, however it can be stated, that the text is signalling an increased level of solidarity the EU pursues. The voluntary nature of the solidarity action can however hinder EU efforts, since it cannot be enforced, leaving Member State response to the goodwill of the respective countries.

The earlier raised concerns about the clearly defined criteria for asylum are still not addressed in the documents. The objective to further strengthen the EU's external borders together with the majorly unchanged Dublin Regulation is a betraying sign that the EU still wants to control migration through migration repression, and despite the EU payed lip service to establish solidarity mechanisms, the burden sharing of the Member States is still unequal, still allowing free-riders in the CEAS. The CEAS still answers to the internal security of the EU. The New Pact did not bring meaningful changes to the European migration policy as regards the establishment of legal pathways towards the EU. During this reform period, from 2020 to 2024, European migration policy remained in the realm of repression and prevention, seeking more and more for the externalisation of migration control.

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83 Costello–Mouzourakis 2017: 208–281.
84 European Council 2024d.
85 Costello–Mouzourakis 2017: 208–281.
86 European Council 2024e.

Conclusions

Europe became a migration destination region in the 1950s, willingly, and then a change in the migration flows introduced refugee migration into the equation. Europe became more and more a region of destination, but was reluctant to accept mixed flows of migration. The European Communities accepted their need for labour immigration, while the increasing refugee migration caused political tensions within. Thus, Europe opted for the overall importance of internal security and stability, while migration control was considered as migration prevention or restriction. Migration prevention through the externalisation of migration control, restriction through the protection of external borders. The first element of a common European system, the Dublin Convention of 1990 added more flaws to the system. The document created an environment of unequal burden sharing among Member States, leaving responsibility (to examine asylum applications) with the country of first entry. In the meantime, solidarity was only talked of.

The idea of creating a common system, the CEAS came forward in 1999. The creation of the common system started duly, but the too ambitious timeframe could not be followed, and the CEAS was only adopted in 2012. At this time, a drastic increase in the number of migrant's inflow to the EU was already predictable, yet the CEAS or Dublin III were not prepared for emergency.

2015–2016 marked the years with the highest figures of migration, and the EU could not react to the events with sustainable answers. *Ad hoc* actions both in the realm of solidarity, like the temporary relocation mechanism and migration prevention, like the Valletta Action Plan appeared. Rifts between Member States also prevented the EU from going forward, and deepen its integration in the field of migration permanently. Protectionism prevailed over protection (of vulnerable individuals) again. The existing CEAS and mainly the Dublin Regulation was not fit for situations of mass migration, like the so-called migration and refugee crisis. Besides the unevenly distributed burdens, criteria for asylum were never created. The collapse of the CEAS resulted in Member State solutions in response to mass migration.

To address the emerged issues, the reform process of the CEAS started in 2016, but it slowly lost from its impetus together with the declining figures of migration towards the EU. The Juncker Commission could not complete the reform of the CEAS and the Dublin Regulation. Thus, the process was inherited by the von der Leyen Commission, which relaunched it with keeping the elements of the reform started in 2016. The Commission introduced the plan to formulate a New Pact on Migration and Asylum in 2020 in parallel with the reform of the CEAS. Since the von der Leyen Commission took over the main elements of the 2016 reform, the above mentioned approach towards migration control through repression and prevention remained prevalent. However new mechanisms were established, solidarity became only voluntary, and the expected reform of the Dublin Regulation remained minimal. The Asylum and Migration Management Regulation (Dublin IV) did not introduce meaningful changes to the criteria for determining the Member State responsible. In the meantime, criteria for the eligibility for asylum are still not established clearly, narrowing the options for individuals in need to enter the EU's territory legally. Irregular entry to the EU is very risky hence the so-called migration and

refugee crisis, since Member States can penalise such entry based on national law. These developments altogether strengthen the *Fortress Europe* image.

The Asylum and Migration Management Regulation still needs meaningful reform which is not possible without Member State willingness on better burden sharing. In the meantime, the clear articulation of criteria of eligibility for asylum is necessary to open legal channels of entry for those in the most vulnerable situations. A better regulated legal pathway would result in a decrease of irregular migration as well as a reduction of related cross border crime, and would make decision-making easier too.

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Tibor Tóth[1]

Active Ageing and Digital Transition: Perspectives of Engagement in Silver Economy

Translating the 'green and digital transition', which is a key element of the EU's strategic objectives, into practice cannot fail to consider and adapt to the complex set of impacts of demographic change. Building the conditions for 'longevity society' also implies a paradigm shift towards active ageing, which is closely linked to the digital switchover and the development of the 'silver economy'. Based on international and national statistical data, research and expert evidence, the paper argues that the successful coordination of these three pillars requires an integrated approach to public policy and the tailor-made introduction of diverse forms of competence development.

Keywords: active ageing, silver economy, digital transition, attitudes, skills

Introduction

Demography, and particularly the ageing of the population, is a major challenge for all European countries. The phenomenon of an ageing society is a complex problem, based on the one hand on the persistently low birth rate, and on the other on the increase in the number of older people, the length of life expectancy and the old-age dependency ratio. The European Commission forecasts that the population of the European Union (EU) will peak around 2026 due to ageing and declining birth rates and will then gradually decline in the decades thereafter. As a long-term consequence, the working-age population of the EU will decline (by 57.4 million till 2100), while the dependency ratio of older dependants will start to rise sharply (from 33% to 60% by 2100).[2] This trend is also supported by medium-term projections that the proportion of older people in the EU will reach 30% of the total population by 2050 and the proportion of older dependants will rise from 4:1 to 2:1 by 2060.[3]

In this context, the translation into practice of the 'green and digital transition', which is a key element of the EU's strategic objectives, cannot fail to consider and adapt to the complex set of impacts of demographic change.

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[1] Honorary University Professor, Slachta Margit National Institute for Social Policy; Director General, Ludovika University of Public Service.

[2] European Commission 2023a: 2.

[3] Tkalec 2018: 1.

Demographic changes have a direct impact on the EU's human capital and competitiveness, as ageing and declining working-age populations are expected to exacerbate labour shortages and increase pressure on public budgets, and contribute to further widening territorial disparities, which are already a major problem.[4] This will also mean that more and more older people will be dependent on the financial and social care of a shrinking working-age population. However, despite the unfavourable demographic, social and economic data and forecasts, the process can still be halted, and the recognition and mobilisation of the assets of an ageing society can play a key role in this process. In this context, ageing is not a burden but a source, or even a driver, of sustainable economic growth, based on the experience, added value and work skills that generations of older people have acquired over the decades. Some authors argue that technological innovation is the most appropriate tool to successfully address major societal challenges (demographic, ageing).[5] However, the spread of smart technologies not only creates opportunities, but also requires the development of the knowledge, skills and inclusive attitudes needed to use new tools.[6]

With statistics showing that people across Europe are living longer and healthier lives, it is vital for the EU to build the conditions for 'longevity society', which both values longer old age and empowers older citizens to take control of their own lives.[7] This is in fact a paradigm shift from 'eldercare' to 'active ageing'. The former lasted from the 1940s to the 1980s, when states sought to care for older people by developing pension systems. However, from the late 1980s onwards, the 'reintegration' of older people into socio-economic life began to take place, creating the conditions for 'active ageing'.[8]

The terminology is not actually new, it has been used by various international organisations for decades. The OECD has focused on productive living, the WHO on improving health and quality of life, and the EU on employment opportunities based on lifelong learning.[9] In recent years, the emerging discourses have taken a much broader and more complex approach to the understanding and practice of active ageing, framed by the emerging silver economy. In this sense, older people are both on the demand and supply side of the market, with quality of life, social well-being and economic innovation being the common set.

The structure of this paper is based on three research questions in the context of the EU and Hungary. Firstly, we examine the consumer and labour market opportunities for older people in the context of active ageing and the 'silver economy'. Linked to this, we will look at how the digital switchover opens tailored or personalised opportunities for active ageing people in the context of the 'silver economy'. Finally, we look at perspectives and strategies for the framework conditions for active ageing.

Our hypothesis is that successful coordination of active ageing, the silver economy and the digital switchover requires an integrated approach to public policy and the tailor-made introduction of diverse forms of competence development.

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4 European Commission 2023a: 1.
5 LIPP–PEINE 2022.
6 European Commission 2023a: 4.
7 European Commission 2023a: 1.
8 FORMOSA 2017; TKALEC 2018: 1.
9 OECD 1998; WHO 2002; Commission of the European Communities 2002.

In addition to the relevant literature published on the topic, the analysis is based primarily on international and domestic statistical data, expert materials published by the EU and the Government of Hungary, as well as relevant literature, complemented by the inclusion of the results of the research conducted in spring 2020 at the initiative of the Ludovika University of Public Service.

Active ageing on the horizon: moving in the direction of silver economy

Demographic trends show that the sustainable functioning, integration and reproduction of modern societies cannot be imagined without the active participation and value-producing activities of an ever-increasing ageing population. Sustainability of quality of life presupposes active ageing, so that older people are able both to maintain their health and to renew their capacity to take on new responsibilities and to work.[10] The active ageing approach focuses on how older people can contribute to creating and maintaining well-being in society.[11] The labour market has an increasing need for an ageing workforce, for whom the period after the cessation of economic activity offers – if their physical and mental condition allows – new opportunities for voluntary work, without compensation, or even new income-earning opportunities in addition to a publicly funded pension, contributing to a meaningful life. It should not be overlooked that the ageing population is increasingly becoming a consumer in a growing number of market segments, creating a demand for a diversified consumer base in traditional and creative industries and services.

The data shows that the population of the European Union is peaking in these years after 50 years of growth, which means that in 2021 more than a fifth (20.8%) of the population will be over 65 (i.e. the retirement age in Hungary), while the proportion of young people will decline.[12] Official statistics show that life expectancy has increased by more than two years per decade on average since the 1960s, so estimates that 30% of Europeans will be aged 65 or over by 2070 (up from 20% in 2020) appear plausible.[13] The proportion of people aged 80 or over is projected to more than double to 13% between 2019 and 2070. In contrast, the working-age population (20–64 years) is projected to decline (2019 figure: 59%, projected for 2070: 51%). During this time, the number of children and young people (0–19 years) is projected to fall by 12.6 million.[14] This shows that the balance in the EU's demographic structure is beginning to shift towards an ageing and older population structure. The trend is already well underway, with the most obvious consequence being that while the proportion of working-age people is falling, the proportion of people living on pensions is rising. This places a considerable burden on society, as it is necessary to

[10] In the present study, we use the WHO age classification, according to which people aged 60–74 are the aging, people aged 75–89 are the elderly, and people aged 90 and over are the very elderly.

[11] Tóth 2024: 114.

[12] European Commission 2023b.

[13] Kacprowska 2023: 68.

[14] European Commission 2020: 10.

ensure that the ageing population can pay pensions – for which they have already paid their contributions during their active years in accordance with the rules in force – and to cover the costs of decent and necessary health and social care.[15]

The EU's ageing policy dates back to the 1957 Treaty establishing the EU. The Treaty treated social rights as essentially an economic dimension of cooperation between Member States, but the EU began to address the issue of older people in more depth in the 1990s, in the context of the creation of a 'Social Europe'.[16] An important precursor is the 30-article Community Charter on the Fundamental Social Rights for Workers, which, among other things, declared the protection of older people, including workers' pension rights. An important milestone was the 1997 Treaty of Amsterdam, whose separate chapter on 'Employment Policy' included a ban on social exclusion, encompassing age discrimination, too. Ageing policy in this period was part of employment policy and part of the closely related 'social protection system', which covered the assessment and management of risks related to ageing, illness, unemployment and poverty, which were covered exclusively by the Member States' own budgets. This approach, whose main thematic elements were the social dimension, the social cohesion and the situation of older workers on the labour market, has undergone a major paradigm shift since the early 2010s. The new paradigm, which had previously regarded older people as a passive social group in need of care, focused on the potential for maintaining activity and on a resource-based approach to the role of older people in society.

Active ageing policies are based on the premise that social and demographic trends are leading to the emergence of new needs, wants, demand and supply factors at both social and economic levels. The health of most ageing people is constantly improving as a result of healthy lifestyles and medical advances, opening up new perspectives, opportunities and challenges.[17] These changes have affected both employment and social security policies, but have also led to changes in the definition of labour market needs and job-related competences. At the same time, pilot programmes and awareness-raising campaigns were launched to break down prejudices and stereotypes ('ageism') about older generations. These efforts have contributed significantly to raising the average employment rate of workers aged 55-64 from 45% in 2011 to 60.5% in 2021.[18]

The concept of active ageing and its translation into practice is the 'silver economy'. Although the terminology does not have a universally accepted definition, it has been part of the expert discourse for decades. Initially, it was understood as a way of improving the quality of life of older people and stimulating innovation.[19] Ageing was seen as a societal challenge with considerable economic potential, in so far as the purchasing power of older people is reflected in consumption. In this way, the narrative of ageing as a health challenge and a fiscal burden can be replaced by a narrative of innovation, growth and opportunities for new jobs.[20] A similar, economy-oriented approach to the 'silver economy' is advocated by the European Commission as "the economic opportunities

15 RAUH–TALYIGÁS 2021: 74.
16 RAUH–TALYIGÁS 2021: 76.
17 European Commission 2021.
18 European Commission 2023b: 11.
19 EATOCK 2015.
20 LIPP–PEINE 2022: 3–4.

arising from public and consumer spending on ageing and the specific needs of the over-50 population".[21] The OECD defines the silver economy as "an environment in which people aged 60 and over interact and thrive in the workplace, engage in innovative entrepreneurship, contribute to the market as consumers and lead healthy, active and productive lives". [22]

According to the consensus of major international organisations and the relevant literature, the main drivers of the silver economy are innovation, the emergence of new consumer markets and the creation of sustainable public spending. The former is best illustrated by the figure of $7 trillion per year in 2015 for the silver economy in the EU, which contributed to sustaining more than 78 million jobs. Within this, the growing ICT developments (healthcare devices, smart homes, robots) have triggered significant investment stimulus, especially in the labour-intensive service sector. This has made the 'silver economy' the third largest economic sector in the EU.[23] In terms of public spending, it accounted for 25% of GDP in the EU in 2015, or around 50% of public expenditure, and is forecast to grow by more than 4% of GDP by 2060. Consumption is projected to grow by a further 5% per year in the future, with an estimated GDP share of EUR 6.4 trillion by 2025, contributing to 88 million jobs.[24]

All in all, the ageing and active population forms consumer and worker groups. It is a major purchaser of health, recreational and cultural services, but is also an important player in the markets for healthy food, health products and beauty products and services, and a regular customer of public administrations.[25] The silver economy is therefore not only a means of meeting demand, but also a means of developing an active and even creative economy. In this context, it is clear that active ageing is a driver of economic growth, helping to maintain Europe's competitiveness and to supplement the steadily declining working-age population. However, the level, quality and added value of consumption and labour market participation of older people vary considerably not only between countries but also between regions. This is not unrelated to the economic, legal, social, demographic, geographical, educational and infrastructural factors that generate and determine regional differences in development.[26] At the same time, it should be borne in mind that the ageing population is not only made up of active or potentially active social strata in good physical and mental health, but also includes vulnerable (disabled) and dependent groups. Meeting the needs of disadvantaged older people with disabilities is an integral part of building the conditions for a well-functioning silver economy. This includes accessibility in the workplace and other segments, and the gradual decline in older people's sight, hearing, health, physical and cognitive abilities.[27] The importance of this issue is underlined by the fact that the Commission's Green Paper on Ageing also addresses the issue, highlighting three factors: mobility, connectivity and accessibility. The Green Paper also points out that women are in the majority among the elderly and

21 European Commission 2015; Tkalec 2018: 3.
22 Tkalec 2018: 3.
23 European Commission 2015: 16.
24 European Commission 2015; Tkalec 2018; Lipp–Peine 2022.
25 Csoba–Ladancsik 2020: 56.
26 Kaiser 2009; European Commission 2023b: 12.
27 European Commission 2015.

that their specific needs must be considered. This is linked to the provision of urban infrastructure and services, their organisation in a way that takes account of older people, the development of smart homes, and the creation of technical and human conditions for 'remote (digital) social care and support'. However, the use of digital solutions also poses challenges for older people, especially for those (rural) older people who do not have basic digital skills or access to the internet.[28]

This also shows that active ageing and the development of a silver economy cannot be achieved through 'one size fits all' solutions, but rather through tailor-made solutions and public policies that are adapted to local and regional needs and conditions, consumer and employee segments.

The digital transformation as a 'window of opportunity' for the ageing population

The EU's digitalisation strategy was based on the March 2021 Communication 'Digital Agenda 2030: A European way to deliver the Digital Decade', in which the Commission set out its vision for the period up to 2030 to empower citizens and businesses through digital transformation (the Digital Decade). The EU's path to the digital transformation of the economy and society should include digital sovereignty open to the external environment, respect for fundamental rights, the rule of law and democracy, inclusiveness, accessibility, equality, sustainability, resilience, security, improving quality of life, availability of services and respect for citizens' rights and aspirations. This was followed on 8 January 2023 by the entry into force of the Decision of the Parliament and of the Council establishing the Digital Decade 2030 policy programme, which aims to create a people-centred and sustainable digital future that delivers greater prosperity for citizens and businesses in the European Union.[29] The following general objectives are key for active ageing and the 'silver economy':

- a digital environment for all, everywhere in the EU, with universal access to digital technologies and data
- bridging the digital divide
- acquire and use digital skills (80% of 16–74 year olds should have at least basic digital skills)
- the possibility for everyone to participate online, access public services and health services (100% online access to key public services and 100% of EU citizens to have access to electronic health records and a secure electronic identification (eID) recognised in all EU countries)

In this context, the Declaration on Digital Rights and Principles states that "everyone has the right to education, training and lifelong learning and should have the opportunity to acquire basic and advanced digital skills". However, 44% of Europeans, especially

[28] European Commission 2021.
[29] The European Parliament and the Council of the European Union 2022.

among older people, currently lack basic digital skills, which hinders their use of digital technologies for everyday tasks and access to services offered online.[30] Developing the digital skills of the population is therefore one of the EU's biggest challenges, which cuts across all objectives and targets.

Today, knowledge and lifelong learning are of paramount importance, adapted to age-specific needs.[31] While young people are being 'born into' the digital world, older people are also increasingly interested in acquiring and applying digital skills. As the EU Green Paper states: "Continued learning can also help to delay the onset of dementia and prevent cognitive decline related to old age. It is also a way for older people to play an active role in society."[32]

The digital switchover is now part of the present, but it also means that to take advantage of the technology and techniques available, you need to have deeper and more complex digital skills, a significant part of which is about who uses the internet, how much and for what. Eurostat has been measuring internet skills in the 16–74 age group since 2015. The survey measures four domains (information, communication, problem solving, software skills), distinguishing different groups depending on the variety and complexity of activities: no digital competences, low competent, basic competent, above basic competent. The latest data show that the digital divide is still wide between different age groups, in other words, the existence of digital competences is strongly influenced by socio-demographic factors. Only 28% of people aged 65–74 have basic digital skills, compared with 70% for both 16–24 and 25–34 year olds, and this is further exacerbated by macro-level and regional differences between Member States.[33] Current trends suggest that, without much wider target group involvement in education and training at EU and Member State level, only 59% of the population will have at least basic digital skills by 2030, compared with 56% today.[34]

However, to achieve the objectives, it must be considered that the ageing and elderly population is by no means a homogeneous group. Above all, they differ in their internal age composition, so that there can be differences of up to decades between them, which further divides old age into 'younger' older people (under 75) and 'older' older people (over 75). However, it is even more important for the silver economy if a more in-depth understanding of the older age group, which is considered to be essentially heterogeneous, is based on the skills acquired, education, social role, financial situation, cultural attitudes, and physical and mental health status. These attributes together express the characteristics that influence the needs, demands and consumption patterns of older people. This is reflected in the continuation, modification or abandonment of previous needs and, increasingly, in the setting of new goals and forms of activity.

This makes it a priority to integrate basic digital skills and competences into the toolbox of active ageing and, through this, the 'silver economy'. In the following, we have identified the main segments of the 'silver economy', without claiming to be exhaustive,

30 Eurostat 2023a.
31 Csath et al. 2018a.
32 European Commission 2021: 5.
33 Eurostat 2023b.
34 Eurostat 2023a.

and on this basis, we provide concrete examples of those forms of activity, smart solutions and customer-centric public service delivery dimensions that represent added value on both the demand and supply side in the context of active ageing.

Table 1: Main segments of the silver economy

Media	Fashion industry	Health services	Home benefits
Properties Smart homes	Education, adult education	Tourism	Home for the elderly, individual care
Perseverance Health services	Public services	Beauty industry	Transport
Culture, recreation	Information and communications (ICT) technology	Home delivery	Robotics
Architecture	Design	Public transport	Local economy
Digitalisation			

Source: compiled by the author based on ZSARNÓCZKY *2016*

Internet use is a key indicator of digital competences, showing how an individual or social group intends to achieve their chosen goals – which are also linked to the main segments of the 'silver economy' – through online activities. General everyday goals include getting information (reading online news portals), communication (sending messages, using social networking sites) and public transport. Learning, working, tourism, office, banking and health care, and online shopping are more specific goals and concern a narrower group of older people.

The above objectives and activities are carried out by users using digital tools and smart applications. In the case of transport, for example, older people may also benefit from online map search, route planners, electronic ticketing for car services, or digital parking ticketing. Silver tourism is now a distinct sub-sector, with popular consumer applications such as online accommodation search and booking, local apps for destination cities, and discount city maps, region maps and accommodation price comparison websites. Where older people are employed in the tourism sector, however, the focus is on various forms and tools of online communication.

Regarding the role of digital transformation in active ageing and the development of the 'silver economy', both international and Hungarian research emphasises the importance of acquiring the necessary knowledge and skills.[35] However, in addition to the transfer of basic knowledge, particular attention should be paid to data security, the dangers of online fraud and the appropriate and optimal use of certain applications and internet sources. From the perspective of older workers' employment, it is also important to prepare both the workplace and staff for intergenerational cooperation and mutual needs.

The older population in general has a positive attitude towards the use of ICT technologies and recognises their potential benefits. Examples of such benefits include social

[35] VAJDA 2017; CSATH et al. 2018b; KRISTÓF–GYŐRI 2021; BUTT et al. 2023.

isolation, overcoming loneliness, improving cognitive skills, and gaining knowledge and information.[36] However, in practice, without the right supportive environment and positive messages, these feelings can quickly change under the influence of initial experiences of failure and the still present ageism, leading to frustration, rejection and isolation. Consequently, the success of digitalisation in the world of active ageing and the 'silver economy' is largely determined by perceptions and attitudes towards new technologies, in addition to existing knowledge.

Conditions and prospects for active ageing in Hungary: number of healthy years, employment, strategies and attitudes

In Hungary, the share of the population aged 65 and over increased from 13% in 1990 to 19% in 2017 and is projected to reach 29% by 2070. As in other European countries, the internal age composition of the elderly has changed significantly over the last few decades, as reflected by the fact that the number of people aged 80 and over in Hungary was 260,000 in 1990, 412,000 in 2016 and 439,000 in 2020.[37]

The number of years spent in good health considers not only life expectancy but also quality of life, making it one of the most important indicators of active ageing in Hungary. Since 2005, there has been a significant increase in the number of years lived in good health for both women and men, from 54.3 to over 60 years for women and from 52.2 to almost 60 years for men. Since 2012, however, the increase seems to have come to a halt (with fluctuations from year to year). The EU average in 2015 was 63.3 years for women and 62.6 years for men (an increase of 1.5 years for women and 1.2 years for men compared to 2014). After a gradual catch-up, the Hungarian figure is still 3 years below the EU average. At older ages, the situation worsens: Hungary lags by 3.5 years in terms of the number of additional healthy life years expected at age 65. In terms of healthy life years, the situation is worse than for life expectancy at birth, which only considers mortality (not quality of life): in 2015, the value of 79 years for women was 4.3 years below the EU average, and 72.3 years for men 5.6 years below. The level of health inequality in the country is considered high. Regional values show a correlation with economic development. In the most developed region of Central Hungary, the number of years spent in good health by women and men is in line with the EU average: In Western and Central Transdanubia the gap is relatively small, while in the rest of the country the value is 4–7 years lower.[38]

On the employment side of active ageing, on average in the EU, an increasing share of people aged 65–74 is in work. Typically, male employment rates in older age are higher, ranging from 27% in Estonia, 17% in Latvia, Lithuania, Portugal, Sweden and to around

[36] Butt et al. 2023: 6.
[37] Rauh et al. 2021: 17.
[38] Nemzeti Közszolgálati Egyetem 2018: 50.

6% or less in Ireland (including, for example, Austria, Slovakia, Greece, France, Belgium). Rates are lower for women, except in the Baltic States, where they reach 9–12%).[39]

By contrast, according to the latest edition of the KSH's[40] age-structured economic activity table, almost 121 thousand of the nearly two million old-age pensioners aged 65–74 (age-eligible pensioners, whose number is 150 thousand less than the number of women receiving a reduced pension, i.e. 1.85 million) are working.[41] On the one hand, this means that only 6.5% of pensioners are working in addition to their pension, and on the other hand, according to the latest KSH employment flash estimate, pensioner workers account for only 2.5% of the 4.75 million employed.[42]

The National Strategy on Ageing, adopted in 2009, set out the following objectives to be achieved by 2034, based on the principles of active ageing: to bring life expectancy at birth closer to the EU average, to increase the number of years spent in good health, to increase the number of people remaining active, to ensure income security in old age, to strengthen social inclusion, to improve the quality of services (health, social, educational, cultural, etc.), considering the needs and interests of the ageing and older people, supporting lifelong learning for older people, ensuring accessibility of digital learning materials. The document identified the task of promoting the 'management' of the ageing process from an early age and a change in social attitudes, both economic and social, to the perception and experience of ageing.

The National Digitalisation Strategy (NDS) provides the framework for the operational implementation of active ageing in the context of the digital switchover and the silver economy.[43]

Recognising the need for digital transformation, the NDS vision places modern, high-speed broadband infrastructure, the digital economy, digital skills development and digital public services at the heart of Hungary's competitiveness and modernisation efforts, with the aim of moving Hungary from 22nd place in the European top ten in terms of digital economic and social development by 2030. Thanks to this progress, digitalisation can also be a breakthrough for the Hungarian economy and society at international level. The NDS is built on the following pillars: digital infrastructure, digital competence, digital economy, digital state. The NDS is in line with the Digital Agenda 2030 (Roadmap to the Digital Decade), the EU's policy agenda.

The Digital Competence Pillar aims to increase the proportion of digitally literate workers and almost halve the digitally excluded by continuously improving the digital competence and user awareness of the population and the digital skills of workers. A key measure for active ageing is the 'Inclusion of Senior Citizens in the Digital Society, Age Management Programme'. Its main elements are the development and implementation of a digital competence development programme tailored to the life situation and

39 Eurostat 2024.

40 KSH – Hungarian Central Statistical Office.

41 To interpret the statistical data, it is also important to be aware of who is employed according to the methodology of the HCSO. According to this definition, a person is employed if he/she has worked at least 1 hour of gainful work in the week preceding the week of the survey (the reference week) or has had a job, but has not worked in it temporarily (e.g. due to sickness, or holidays).

42 KSH 2024a, 2024b.

43 Magyarország Kormánya 2022.

interests of older people; the provision of mentoring, tutoring and consultancy support; the organisation of awareness-raising and sensitisation programmes; and the creation of a nationwide remote monitoring system for citizens in need of social assistance (elderly or chronically ill people) using smart devices. This will open new opportunities on both the supply and demand sides of the silver economy by encouraging the development of smart devices and applications, training programmes tailored to the needs of specific age groups, and the acquisition of skills and competences for the future labour market changes for older people as potential workers.[44]

However, as already mentioned, the ageing and older age groups are in many ways a heterogeneous group, which can be further subdivided into specific subgroups. In this context, among the components that make up digital competences, those factors that, beyond prior knowledge, fundamentally determine the attitudes of individuals and groups towards the adoption and use of new technologies and digital innovations are unavoidable.

In order to better understand and explain the background, as well as the opportunities and bottlenecks of involving senior citizens in the digital society in Hungary, this paper relies on the main findings of the so-called sociotechnical perspective and one of its main theories, as well as empirical data stemming from a nation-wide, representative survey.

The Diffusion of Innovation Theory (DOI) developed by Everett Rogers is an often-used analytical concept which describes innovation as a broad, multidimensional process that results in a given product or technology becoming widely accepted within society. An important aspect of diffusion of innovation is that the spread of innovation over time can in most cases be described by the so-called S-shaped curve: the number of groups using and adopting a product or technology is initially low, and then, after a point of gradual increase, the number of users starts to decline again. Each stage of the S-shaped curve allows the definition of well-defined groups, including variables such age, social status, education, and attitude towards risk. Such characteristics can determine a potential adopter's perception of the value of an innovation and the feasibility of its adoption. According to Rogers, individuals can be classified into five categories on the basis of when they are likely to adopt new innovations. These categories consist of individuals with a similar degree of innovativeness. Innovators are the first, most innovative and venturesome adopters who import innovations into wider systems. Early adopters are the individuals that follow innovators and often serve as opinion leaders and role models for the early majority who adopt the innovation after them. The late majority adopts the innovation just before the final group which consists of laggards with lengthy innovation-decision processes. In this categorisation, the innovativeness of individuals is measured by behavioural profiles such as personality variables and communication behaviour.[45]

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44 However, it should be noted that the acquisition of digital skills provides older people with a much wider range of quality of life and productivity (e.g. meaningful leisure, family and other social contacts, mobility), not limited to income-generating activities.

45 Rogers 2010: 22.

Following the logic and categories of SCOT and DOI, we relied on the results of the nationwide, address-list survey of the Hungarian adult population conducted on behalf of the Ludovika University of Public Service in the Spring of 2020 with the participation of 2,500 people, representative of the population aged 18 and over, resident in Hungary, on gender, place of residence and education.[46] Half of the sample (1,250 persons) were interviewed in a separate thematic block, which aimed to identify the factors that make someone open to technological innovation. The factors mentioned were: the time of onset of digital device and smart solution use; the extent of smart device and smart solution use; willingness to use current and upcoming smart solutions; awareness of digital device choices; frequency and ways of using the internet; attitudes towards technological innovation (technophile vs. technophobe).[47]

Using the survey data and following Rogers's methodology, we created a separate typology for each device based on the summaries of objective and subjective questions. Respondents received values between 1 and 5. A value of 1 meant that the respondent was not using the given device, and a high value of 5 meant that the respondent started using it the earliest. The resulting high measurement level variable was divided into 5 categories according to Rogers' categories: 20% laggards, 27% late majority, 29% early majority, 21% early adopters, 2% innovators. Due to the low number of items, the category of early adopters and innovators was merged for the sake of analysis, and the resulting variable could be easily interpreted with demographic variables. We also analysed the spread of technological innovations in connection with gender, age and education, but in accordance with our topic, we only describe the relationship between the diffusion of innovations and age. As a result, the following groups were created:

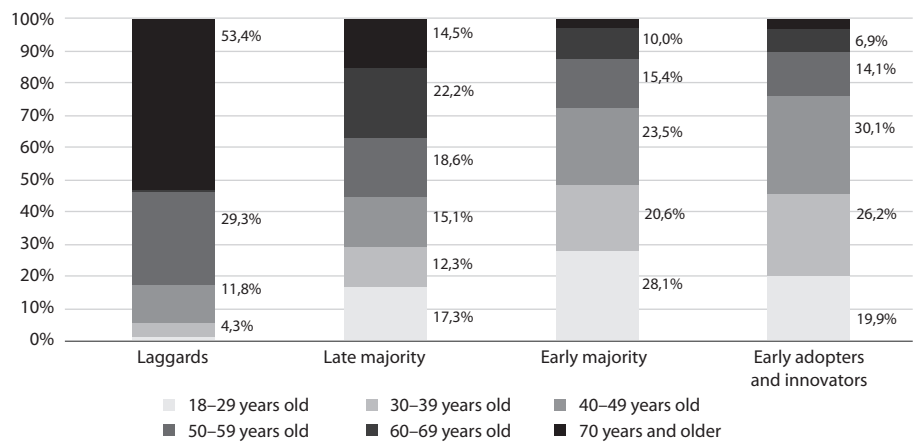

Figure 1: Relationship between the diffusion of technological innovations and age (N = 2,382)
Source: compiled by the author based on the results of the 2020 survey

[46] The title of the survey was: The image and perception of public administration among the population 2020.

[47] For the detailed description of the research methodology and results, see KAISER–GADÁR 2023.

The above shows that three quarters of people aged 60 and over are in the group of laggards, while only one in ten people aged 60 and over are in the early majority. This is critical from the point of view of both digitalisation and silver economy because currently the older Hungarian citizens are, the less able they are to use digital devices and smart solutions. The results of the survey suggest that the older age is associated with lower intention to use digital technology. Although the relationship between age and digital technology is complex, this is a clear indication that comprehensive, measurement-based situation analyses and measures and projects tailored to the needs, attitudes and abilities of the target groups are needed to put strategies into practice.

Conclusions

The increase in the proportion of older people in the population, the social phenomenon of demographic ageing, is a major factor in the more developed regions of the world, in the European Union and in Hungary. The change appears to be increasingly dynamic, based on population projections, and this trend is set to continue in the distant future. The complexity and diversity of the characteristics of an ageing society and the widespread recognition of the social utility of older people – in contrast to social stereotypes about older people – are increasingly expressing socio-economic demands for the individual and social use of the experience and labour of older people and older people.

Digital skills and competences are essential in this process. Without these, individuals are unable to meet labour market challenges, easily access information relevant to their daily lives, purchase consumer goods cost-effectively, among other things, and the social mobility opportunities for those who are excluded from the online world are reduced.

The answers to the research questions of this study confirmed the hypothesis that successful coordination of active ageing, the silver economy and the digital switchover requires an integrated approach to public policy and the tailor-made introduction of diverse forms of competence development. A key challenge in this process is to integrate basic digital skills and competences into the toolbox of active ageing and, through this, the 'silver economy'.

Developing digital skills and reducing the digital divide and encouraging regular internet users to become ICT-aware is one of the key challenges for the digital ecosystem – whether in terms of competitiveness, employment policy or equal opportunities. The available empirical research and even everyday experience confirms the key role of assessing needs, prior knowledge and perceptions and attitudes towards technological innovations, especially smart devices, among older people, which also orient the direction and content of developments and programmes. However, further empirical researches are needed to explore these relationships and correlations in more detail to fully understand the impact of age on technology acceptance and to identify potential mediating factors. In doing so, there is a need to empirically examine the opportunities and limitations of the acceptance and use of digital devices by older people. Another way to consider these issues is to investigate the impact of the urban and rural environment on the emerging silver economy, in accordance with the required supportive

environment that suits the personal needs of the elderly. Equally important, however, is the need to overcome negative stereotypes (ageism) among the active population and to broaden attitudes of mutual respect and acceptance between generations.

This paper argues that the 'silver economy' has both benefits and risks. Among the benefits is that in this narrative, ageing has taken on a new meaning, generating a process of socio-political transformation through activism. On the other hand, it is often criticised for being too optimistic about tackling the challenges of ageing, or for over-emphasising innovation through technological solutions, which may reduce the focus on other, more cost-effective solutions. Since new products and services are mostly created in developed regions where the consumer market is made up of the affluent, many tend to think of the 'silver economy' as a set of products and services for affluent older people. Finally, it cannot be ruled out that familiar lifestyles and activities, such as visiting retail shops and banks, are a more pleasant experience for older people than learning about and using new technologies.

Overall, we consider the NDS findings that only through systematic intervention, locally implemented but nationally coordinated integrated programmes and human network, based on the real needs of the target groups and considering their specific life situation, can the digital world and through it the prospects of active ageing and the silver economy be made attractive, and that this can be achieved if the necessary conditions are created.

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Piroska Szalai[1]

Is There a Central European Fertility Paradox?

Fertility, Women's Labour Market Participation and Household Income and Living Conditions in the European Union

Even today, some people believe that fewer children are being born because women have gone out to work, and that fertility would improve if women were allowed to stay at home. The experience of the last 60–70 years in Hungary and Central Europe is quite the opposite. Starting from this paradox, in the present research I sought to find out how fertility in the European Union and in the Member States is related to women's participation in the labour market and to the financial situation of families.

The study shows that over the period 2009–2022, female employment rates are correlated with fertility in all Member States, with 19 countries showing a strong correlation, nine with a positive correlation and ten with a negative correlation. In the Eastern Bloc countries, Germany, Portugal, Greece and Austria, the fertility rate and female employment are positively correlated, while in the other countries the correlation is inverted.

Since the correlation only shows the strength and direction of the relationship, to find out which of the factors in the relationship cause the change in fertility, I performed a Granger causality analysis. The excess of the relative income poverty rate of those living in households with children over those without children was found to be causally related to fertility in most places, in 9 countries and in the European Union as a whole. In seven countries (Bulgaria, the Czech Republic, Hungary, Latvia, Portugal, Romania and Slovenia), low levels of excess child poverty are associated with higher fertility, and the opposite is true in Ireland and Italy. This was the only causal connection when looking at the 27 EU countries as a unit.

[1] Labour Market Expert, Researcher at the Economy and Competitiveness Research Institute, Faculty of Political Science and International Studies, Ludovika University of Public Service; Former Ministerial Commissioner for the Improvement of the Labour Market Situation of Women, initiator of the GYED extra programme, e-mail: szalai.piroska@uni-nke.hu

Finally, I conducted a hierarchical cluster analysis using the Ward method with the factors most causally related to fertility. The Member States were classified into 3 clusters and 7 sub-clusters. One cluster includes the Czech Republic, Romania, Hungary, Cyprus, Portugal, Bulgaria, Greece, Latvia, Poland, Germany, Croatia, Slovenia and Slovakia, where fertility is negatively correlated with female unemployment and the risk of income poverty, i.e. more children are born when female unemployment is low and childbearing is not associated with the risk of income poverty. These countries have experienced significant fertility growth over the last decade, and all other countries have the lowest fertility in the last decade and a half in 2022. The furthest away from them are Ireland, Malta, the Netherlands, Austria, Luxembourg, Italy, Estonia, Spain, Lithuania, where high female unemployment and high relative income surplus poverty lead to higher rates of childbearing.

The study has shown that the relationship between fertility and economic and social factors varies considerably across the European Union. The countries of the former communist bloc (except Estonia and Lithuania) and Germany (part of which is part of the former communist territories), Greece, Portugal, Cyprus, with female employment at its current peak and low unemployment, are not experiencing their worst fertility period and most have seen a marked improvement in childbearing in recent years. In the rest of the EU, fertility is at historic lows.

Keywords: women, employment, living conditions, poverty, fertility, AROPE, LFS

"No investment is more profitable to any society than to give milk to babies."
Sir Winston Churchill

"Having children is like investing in a risky project. Postponing a birth is like postponing an investment opportunity that will never come back."
De La Croix – Pommeret 2018

Introduction

How economic and social factors affect fertility has been studied in the past. However, less is said about how these factors interact and affect fertility in very different ways in different groups of countries. Even in the European Union, we see contrasting patterns between groups of countries.

Most researchers have found that fertility declines when female labour force participation is high, i.e. there is a negative correlation between the two factors. The findings in Hungary and neighbouring countries contradict this. In this region, since the change of regime in 1990, fertility growth has been associated with an increase in female employment and its decline with a decline in employment, i.e. there is a positive correlation between fertility and female labour market participation.[2] In my previous

[2] SZALAI 2014, 2015, 2023a, 2023b.

presentations, I called this experience the Central European Paradox. In this paper, I examine in detail whether only the former communist countries really differ from the other countries, and which country clusters can be identified.

Given the contradictions between my experience and the literature, I sought to answer the following questions:

1. Which of the indicators related to women's labour market participation and family living conditions, household income and financial situation in the European Union and the Member States are most strongly related to fertility?
2. For which we can also show a causal connection, i.e. which changes in factors cause changes in fertility?
3. How Member States can be grouped into clusters?

Using Eurostat's public datasets from 2009–2022, I carried out a multidimensional analysis for the 27 Member States and the European Union as a whole (the latter treated as a geographical unit, not averaged across Member States). In addition to fertility rates, I examined 10 indicators, which I will detail in the third chapter.

The study was carried out in the following three steps:

- correlation analysis
- Granger causality analysis
- hierarchical cluster analysis using Ward's method

The results of the study are detailed in the fifth chapter.

The present research can also contribute to explaining the medium-term trend in fertility, and can also serve as a basis for precisely targeted interventions and government measures to increase fertility, as economic development and improved living conditions are key to maintaining and initiating positive demographic trends in all EU Member States. Moreover, it is worthwhile for economists and policy makers to monitor fertility changes in the same way as other macroeconomic indicators, as fertility is considered a "leading economic indicator".[3] Even news events can trigger changes in birth rates, as fertility reacts before there is an actual change, deterioration or improvement in income and employment.

One of the seven priorities of the Hungarian Presidency of the Council of the European Union in the second half of 2024 is to address demographic challenges. In its programme, the Hungarian presidency stated that demographic issues need to be put at the centre of attention, as they are of growing importance for the Union's competitiveness, the sustainability of social care systems, the efficient management of labour shortages from internal resources and the sustainability of public finances. The Hungarian presidency aims to draw attention to the challenges involved, while fully respecting the competences of the member states.

The aim of this study was to help formulate effective programmes under this priority.

[3] Buckles et al. 2018.

Literature summary

A number of studies have examined the interrelationship between fertility and women's labour market participation.[4]

Many have focused primarily on unemployment when examining the labour market. Bettio and Villa (1998) found a negative relationship between fertility and unemployment in Italy, as women forego childbearing to remain in the labour market.[5] A similar finding was made by Adsera (2011) looking at data from 13 European countries (Eastern Bloc countries were not included) in the 1980s and 1990s.[6] He finds that high and persistent unemployment is associated with a delay in childbearing and hence lower fertility. Having a second child is more likely if part-time work opportunities are available, but women on temporary and fixed-term contracts are less likely to have a second child. Huttunen and Kellokumpu (2017), looking at couples where one of the partners lost a job, find that female job loss (especially for the highly educated) reduces fertility, while male job loss has no effect on fertility despite the fact that in their case family income has decreased more.[7] He says this indicates that it is not the loss of income that affects fertility. Khattak (2019) also found that fertility rates are negatively related to unemployment. According to him, a high unemployment rate increases employment insecurity, and hence, fertility rates decline.[8]

Ellis (1993) found that women with higher education have lower incomes because of childbearing, so that an increase in women's education and employment reduces fertility.[9]

Hondroyiannis (2010) studied 27 countries in the European Union over the period 1960–2005 and found that high female labour force participation and high real wages reduce fertility. He argues that responsible parents decide to have children if they can support them not only in the present but also in the future. Thus, he argues that fertility is influenced by the present income situation and expectations of future family income.[10]

The relationship between insecurity and fertility has been analysed in a number of papers, with Hanappi et al. (2017) and Wilde et al. (2020) also finding that higher insecurity is associated with lower fertility.[11] Chabe-Ferret and Gobbi (2018) by examining twentieth century data (the Great Depression and the post-World War II baby boom), show that economic uncertainty has a large and strong negative impact on total fertility.[12] Buh (2023) provides a broad overview of the different interpretations of employment insecurity and its relationship with fertility.[13]

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4 E.g. CAIN–DOOLEY 1976; FLEISHER–RHODES 1976; MOFFITT 1984; HOTZ–MILLER 1988; MAHDAVI 1990; CIGNO 1991; KALWIJ 2000; PAPAPETROU 2004; HERBST–BARNOW 2008.

5 BETTIO–VILLA 1998.

6 ADSERA 2011.

7 HUTTUNEN–KELLOKUMPU 2017.

8 KHATTAK 2019.

9 ELLIS 1993.

10 HONDROYIANNIS 2010.

11 HANAPPI et al. 2017; WILDE et al. 2020.

12 CHABE-FERRET – GOBBI 2018.

13 BUH 2023.

De La Croix and Pommeret (2018) found that it is difficult to establish a clear negative relationship between income insecurity and fertility.[14] On the one hand, the decision to have children can cause multiple types of labour market insecurity, and on the other hand, the causal relationship can be bidirectional, i.e. having children can cause labour market insecurity and exogenous changes in labour market insecurity can delay having children.

Economists from Becker (1960) onwards have tended to explain the long-run relationship in terms of the link between human capital and fertility.[15] Children spend longer in school, the cost of educating them rises as the level of education rises, they become involved in family income production later, and this helps to explain the long-run negative correlation between income and fertility.

Income uncertainty offers a possible explanation for the short-term cyclical pattern of fertility. The level and cyclical variation of incomes do not clearly affect fertility. However, income uncertainty clearly increases precautionary saving by reducing current consumption. Households that perceive an increase in uncertainty about the future of the economy experience a decline in their "consumer confidence" and postpone fertility until a recession or economic recovery. The theory related to precautionary motives is extended to the fertility choice by Ranjan (1999) and Sommer (2016).[16]

Buckles et al. (2018) find that fertility declines several quarters before the onset of a recession, suggesting that fertility may be a leading procyclical variable.[17] They also find that the decline is not driven by abortions or fetal deaths, which may be sensitive to the psychological and physical stress from uncertainty, but rather by a decline in conceptions. The fear of consumption losses associated with possible recurrences creates uncertainty and reduces the desire to have children. Similarly, optimism about economic growth can reduce uncertainty and increase fertility.

One explanation for this surprising relationship is that households perceive economic uncertainty from the news, the stock market and other sources. Worries about future wages cause them to lose "consumer confidence", reduce current consumption and engage in "precautionary savings". This logic also extends to fertility, as precautionary savings can be built up by reducing consumption and postponing childbearing.[18] The precautionary effect is potentially relevant in explaining fertility differences across countries and variation in fertility across countries over time.

Gozgor et al. (2021)[19] investigated economic uncertainty using a new measure, the World Uncertainty Index (WUI),[20] created by the IMF and linked to income and wage uncertainty, for 126 countries between 1996 and 2017. He also found that economic uncertainty reduces fertility rates.

In addition to the large sample, he also examined how uncertainty affects short-term changes in fertility in a smaller sample of OECD countries at similar levels of

14 De La Croix – Pommeret 2018.
15 Becker 1960.
16 Ranjan 1999; Sommer 2016.
17 Buckles et al. 2018.
18 Ranjan 1999; Sommer 2016.
19 Gozgor et al. 2021.
20 Ahir et al. 2018.

development. Here, the differences are less due to differences between countries and more a reflection of short-term changes in fertility in some countries over the business cycle. He suggests that changes in uncertainty may be a factor that explains why fertility is pro-cyclical.

He argues that the challenge for fertility theory is to explain simultaneously why income and fertility are negatively correlated in the long run (fertility eventually declines during economic development), while they are positively correlated in the medium or short run. Explanations for long- or short-term differences are more convincing if they are consistent with each other.

Test method and data

The data are collected for all 27 Member States and for the European Union as a whole (the latter treated as a single geographical unit, i.e. not averaged across Member States).

The data source is Eurostat's aggregated data tables for the next mandatory surveys:

- Labour Force Survey (LFS)
- EU Statistics on Income and Living Conditions (EU-SILC)
- Structure of Earnings Survey (SES)

After examining a number of indicators, and taking into account the equation of Hondroyiannis (2009), I included in the multidimensional analysis, in addition to fertility, ten public Eurostat data series. Two of these are labour markets (B and C), four are living conditions (D, E, F and G), real GDP growth per capita (H), the gender pay gap (I), the difference in relative income poverty rates between the sexes for those aged 18–64 and between those with and without children (J and K).

A. fertility
B. female employment rate in the 20–64 age group (number of persons employed / total population in the age group)
C. female unemployment rate in the age group 20–64 (number of unemployed / active population, i.e. number of unemployed and employed)
D. AROPE2020 for people living in households with children: (Persons at risk of poverty or social exclusion by income quantile and household composition – EU 2020 strategy)
E. AROPE2020 Difference between households with and without children
F. AROPE2030 for people living in households with children: (Persons at risk of poverty or social exclusion by income quantile and household composition – EU 2030 strategy)
G. AROPE2030 Difference between households with and without children
H. Real GDP growth rate per capita: (Real GDP growth rate – volume)
I. Gender pay gap in unadjusted form by NACE Rev. 2 activity – structure of earnings survey methodology
J. relative income poverty rate by gender for 18–64 year olds (At-risk-of-poverty rate by poverty threshold, age and sex – EU-SILC and ECHP surveys)

K. Relative income poverty rate difference between households with and without children (At-risk-of-poverty rate by poverty threshold and household type – EU-SILC and ECHP surveys)

Salaries and wages are paid to the employed, while the total population has an income. Income includes all income received by the household, from work as well as from fees, benefits and even capital income. Per capita income is calculated by dividing the total income of the whole household by the number of household members, including dependent children and the elderly.

AROPE indicator

As measured by the AROPE (At Risk of Poverty or Social Exclusion) indicator, those at risk of poverty or social exclusion are those who are affected by at least one of the following three dimensions:

- Relative income poverty, i.e. living in a household with a net income below 60% of the median income (i.e. the poverty line)
- Very low work intensity, i.e. living in a household where household members aged 18–64 (18–59 by 2020) spent less than 20% of their potential working time at work
- People living in severe material and social deprivation, i.e. people who are materially deprived in at least 7 of the following 13 items:
  1. Capacity to face unexpected expenses
  2. Capacity to afford paying for one week annual holiday away from home
  3. Capacity to being confronted with payment arrears (on mortgage or rental payments, utility bills, hire purchase instalments or other loan payments)
  4. Capacity to afford a meal with meat, chicken, fish or vegetarian equivalent every second day
  5. Ability to keep home adequately warm
  6. Have access to a car/van for personal use
  7. Replacing worn-out furniture
  8. Having internet connection
  9. Replacing worn-out clothes by some new ones
  10. Having two pairs of properly fitting shoes (including a pair of all-weather shoes)
  11. Spending a small amount of money each week on him/herself
  12. Having regular leisure activities
  13. Getting together with friends/family for a drink/meal at least once a month

(The measurement of deprivation changed in 2020, when items 7–13 were introduced, previously the lack of a telephone, washing machine and colour television was measured, then 4 out of 9 items were considered severely deprived.)

The time series of the pre-change indicator, AROPE2020, was available for 2009–2020, and the post-change indicator, AROPE2030, for 2015–2022.

The study was carried out in three stages:

1. First, I conducted a correlation analysis for each country, where I examined the relationship of the data of all 10 indicators with the fertility rate. When examining

the 1997–2022 interval, it was observed that if I narrowed the time interval to look at the period 2009–2022, i.e. the period following the financial crisis that erupted in mid-October 2008, the correlation strengthened in several places. This also shows that there has been a major societal change, with many countries experiencing an "inflection point"[21] in terms of childbearing. The results of this study are more useful for the present period if we conduct it in detail for the shorter interval. I have therefore narrowed the study to this 14-year period.

2. In a second step, I performed a Granger causality test, since correlation only shows the strength and direction of the connection, but does not reveal whether there is causality between the factors or only cointegration. In this step, I have also examined the causality between the fertility rate and the data of the other 10 indicators by country.
3. In a third step, I conducted a hierarchical cluster analysis using Ward's method to determine which countries show a similar pattern in terms of the factors affecting fertility. I included in the analysis the 3 indicators that showed the most causality for countries in the Granger test. For each factor, I conducted the analysis using correlation coefficients.

The European picture

For reasons of length, I can only give a brief historical summary in this paper, further details can be found in my articles published in *European Conservative*[22] and *Polgári Szemle*.[23]

Trends in total fertility and employment rates

After the Second World War, the economies of Western European countries reached their pre-war levels in a few years with the Marshall Plan, and by 1951 Western Europe was producing 135% of what it had produced in 1938, the countries were on the way to creating welfare states, which is why they had a baby boom that lasted until the early 1960s. In the communist countries of Eastern Europe in the 1950s and 1960s, families everywhere lived in the deepest poverty. Nationalisations took away the small shops of traders, the workshops of industrialists, the land and livestock of farmers. At this time, we can only detect an increase in fertility where various coercive measures were introduced. In these countries, women were also obliged to work full time as employees. In addition to the legal constraints, families also needed to have two earners in order to support themselves financially, which is why the two-earner family model has been the most widespread in the region for seventy years.

21 According to Andrew Grove (1998), a so-called strategic inflection point is an environmental change that causes a major, dramatic change in the whole process under consideration, thereby challenging certain basic axioms, or what are thought to be firm foundations.

22 SZALAI 2023a.

23 SZALAI 2023b.

In 1960, the total fertility rates of the current 27 Member States of the European Union varied widely, according to Eurostat data. They were lowest in the Eastern communist bloc (e.g. Estonia 1.98, Hungary 2.02, the Czech Republic 2.09) and highest in Western Europe (Ireland 3.78, Portugal 3.16, the Netherlands 3.12).

By the mid-1960s, the employment rate for women aged 15–64 was between 65% and 70% in the communist bloc countries, while in southern Europe it was less than 30%, with only a third of women working in the Benelux countries, almost half in Austria and only two northern countries, Finland and Denmark, exceeding 50%.

Since the second half of the 1960s, many of the Eastern Bloc countries have introduced family support measures to improve low fertility. In Hungary, for example, from 1967, mothers were given leave until the child was 3 years old, and the state provided benefits for this period. In the early 1970s, housing companies have built masses of prefabricated flats in housing estates, which families with children received huge subsidies to buy, leading to a significant increase in fertility.

By the 1980s, women's participation in the labour market, family support systems, living conditions of families and thus the factors and attitudes influencing decisions to have children had become completely different in the eastern and western countries of Europe. The regime changes around 1990 have come at a heavy price for the people of the Eastern Bloc countries, for example in Hungary nearly 30% of jobs, according to some estimates 1.5 million jobs, were lost and the number of unemployed rose to 520,000 by 1993. Even those who were able to stay in employment became poorer, as double-digit inflation over a decade from 1988 to 1998 reduced the real value of average earnings by a quarter by 1996, back to 1966 levels. Economic insecurity became almost unbearable for families. The trends were similar in the other transition countries in the region.

As a result, fertility rates in these countries have plummeted to below 1.3 within a decade. The lowest fertility rate in EU history until 2021 was 1.09 in Bulgaria in 1997. It was previously unimaginably low in other countries in the region, 1.13 in the Czech Republic in 1999, 1.19 in Slovakia in 2002, 1.2 in Slovenia in 2003, 1.22 in Latvia in 2001, Lithuania and Poland in 2003, 1.27 in Romania in 2002 and 1.28 in Hungary in 1999.

In countries outside the Eastern bloc, women entered the labour market steadily during this period, and employment rates in these countries increased. By the turn of the millennium, countries outside the South had overtaken most of the Eastern Bloc countries. In most Western European countries, women entered the labour market by taking up part-time jobs.

Living conditions and employment, including for women, improved in the countries that changed their regime after the millennium and further improved after joining the EU, while fertility increased. The boom lasted until the 2008 financial crisis. The only exception was Hungary, where the improvement that started in 1998 was very short-lived. After 2002, Hungary suffered government failures on a scale that prevented economic improvement, and women's employment failed to increase substantially. By 2010, only the three southern countries, Italy, Greece and Malta had lower female employment rates than Hungary, and the fertility rate reached a century low of 1.23 in 2011.

In Western Europe, with the exception of France and Ireland, fertility rates plummeted to around 1.5 by the mid-1970s and remain stagnant at around that level today. In France, child benefits are larger than in the rest of the region, contributing to a much

higher fertility rate. In the meanwhile, Ireland had a much higher fertility rate, which fell later to 1.54 in 2022. In the Benelux countries, there was a slight increase from the early 1990s, which lasted until the recession of 2010, before falling in the last decade.

In Southern Europe, the fall started later than in Western Europe, but by the early 1990s the continental countries in this region had all fallen below 1.5, followed by the two island countries of Cyprus and Malta after the turn of the millennium.

Among the Northern European countries, the pattern of the former Soviet states is very similar to that described for the Central European countries, while the other three countries are more similar to the Benelux countries.

The boom in the transitioning countries between 2010 and 2021 also led to a significant improvement in female employment rates. Most of them have reached the level of 30 years earlier, which has been accompanied by a significant increase in fertility rates. While 20 years ago the countries of Central Europe had the lowest fertility rates in the European Union, the region has seen the greatest improvement in recent years, with six countries reaching their highest post-change rates in 2021. The Czech Republic has the second highest fertility rate in Europe with 1.83, followed by Romania with 1.81, but with 1.64 in Slovenia, 1.63 in Slovakia and 1.61 in Hungary.

In this millennium, the rise in female employment rates has been accompanied by a fall in fertility rates in countries other than the Central European countries. Malta has seen the largest increase in female employment over the past decade, and in parallel, in 2020 and 2022, Malta had the lowest fertility rate in the European Union, the latter year being lower than the 1997 Bulgarian minimum of 1.08.

The risk of poverty and social exclusion

The European Union has already set a target in its 2020 strategy to reduce the AROPE indicator, the proportion of people at risk of poverty or social exclusion. The reduction was one of the most significant in Hungary.

Since 2018, the proportion of women living at risk of poverty or social exclusion in Hungary has also been much lower than the EU average. The latest figure is 20.6%, the 13th lowest rate.

Of the 3 sub-areas of the AROPE complex indicator, the proportion of women living in relative income poverty, i.e. women living in households where per capita income (i.e. earnings and other social and other income received by the household) is below the poverty line (60% of median income), is only 14.1% of the total female population, which puts us in 8th place among EU Member States.

It is also a fact that in 2010, the proportion of people at risk of poverty or social exclusion was 8 percentage points higher for those living in households with children than for those without. A decade ago, we had the biggest financial disadvantage in the EU for raising children.

Results of the study

Correlations

As generally accepted in social science correlation studies, the correlation is considered to be high for $|r| > 0.5$ (very high for $|r| > 0.7$), medium for $0.3 < |r| \leq 0.5$, low for $0.1 < |r| \leq 0.3$, and no relationship between the indicators under study for $0 \leq |r| \leq 0.1$. The results are shown in Table 1 below (the numbers indicate the number of Member States for which a given type of relationship was found for a given indicator).

Table 1: Correlation test results

	EU27	positive					negative			
	r	very strong	strong	medium	small	none	small	medium	strong	very strong
B – female employment rate 20–64	–0.54	6	3	3	2	0	1	2	0	10
C – female unemployment 20–64	0.39	4	2	2	3	3	1	2	2	8
D – AROPE2020 with children	0.16	2	0	2	4	5	0	3	4	7
E – AROPE2020 with children – childless	0.24	3	2	3	1	3	0	2	6	7
F – AROPE2030 with children	0.46	4	4	1	1	3	4	1	5	4
G – AROPE2030 with children – childless	0.29	3	3	3	2	5	1	5	2	3
H – real GDP per capita growth	0.12	0	1	4	4	12	6	0	0	0
I – gender pay gap	0.53	7	4	3	1	2	2	3	3	2
J – difference in relative income poverty rate between genders (18–64)	0.28	0	0	5	2	6	4	7	2	1
K – difference in relative income poverty rate between child-headed and childless households	0.49	3	1	4	1	4	2	4	3	5

Source: compiled by the author

The EU27 is not an average of the indicators of the Member States, but an indicator calculated for the whole Union as a geographical unit. It can be seen that, looking at the 14-year period 2009–2022, and considering the EU as a single entity, two indicators have a high connection with fertility and three others a medium connection, with negative connections for female employment rates and positive connections for the others.

When looking at Member States separately, the most significant link between fertility and female employment is clearly the highest in 19 countries. Among them, 16 have a very high association. In Hungary, Slovakia, the Czech Republic, Germany, Romania, Portugal and Bulgaria, Latvia and Greece there is a very high positive connection, i.e. it is clear that higher fertility is associated with high female employment, i.e. women need to feel secure in their jobs, as families can only survive if both parents work. By contrast, in France, Belgium, Malta, Italy, Luxembourg, the Netherlands, Ireland, Finland, Spain and Sweden we find a very large negative connection (no Member State with a large connection), i.e. in these countries, increasing female employment is associated with a significant decrease in fertility

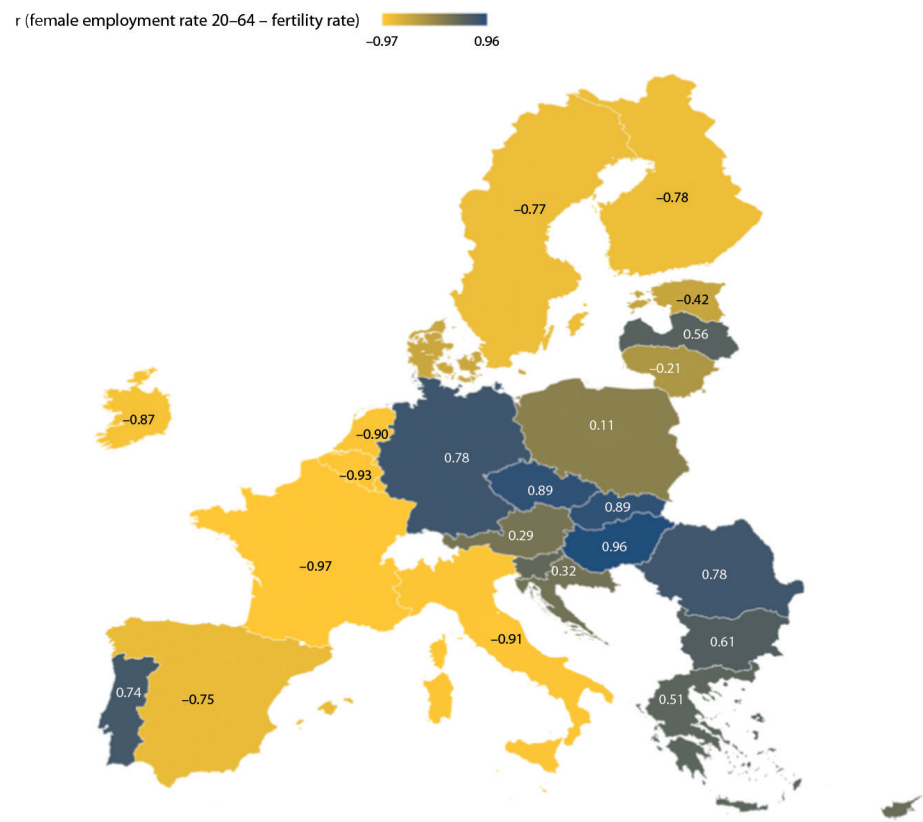

Figure 1: Correlation between the employment rate of women aged 20–64 and the fertility rate in the European Union Member States, 2009–2022

Source: compiled by the author based on Eurostat 2023

The female unemployment rate is also strongly correlated, but not fully inverse to the employment rate, in more than half of the countries, in 16 places. This is because if someone is not employed, they may not be unemployed, they may even be inactive, and this group is not included in the unemployment rate.

While the AROPE indicator for childlessness according to the methodology used in the EU2020 strategy gave only a high or very high relationship for 13 countries, the difference between with children and childless for the same indicator showed at least a high relationship for 18 countries and a medium relationship for 5 others. Portugal, Finland, France, Cyprus, Poland, Hungary and the Czech Republic have a very high negative connection, while Belgium, Romania, Sweden, Latvia, Greece and Bulgaria have a high negative connection. In these countries, higher fertility is correlated with lower surplus poverty among those with children relative to those without. However, the Netherlands, Ireland and Malta show a very large positive relationship, and Luxembourg and Austria a large positive connection, i.e. where and when the surplus poverty of those with children is larger.

The AROPE indicator for child poverty according to the methodology used in the EU2030 strategy shows a high or very high correlation with fertility in 17 Member States and a medium correlation in two others, while the indicator for child poverty calculated using this methodology is highly or very highly correlated in only 11 Member States. Although this is more than half of the countries, there are also indicators with a stronger connection in this area.

The connection between real GDP per capita growth and fertility is large for only one country (Estonia), so when examining fertility, the evolution of real GDP is not emphasised for Member States.

The difference in relative income poverty rates between the sexes and the connection with fertility also shows a strong connection in only a small group of countries, so it is not particularly relevant for our analysis.

However, the gender pay gap shows a high or very high connection with fertility in 16 of the Member States and a medium connection in six others. The Czech Republic and Romania show a very high negative connection and Slovakia, Portugal and Germany a high negative connection, i.e. higher fertility rates are associated with lower gender pay gaps. Luxembourg, Finland, Belgium, the Netherlands, Sweden, Spain and Greece show a very large positive connection, while Italy and Latvia, Ireland and Denmark show a large positive connection. In these countries, higher fertility rates are associated with higher gender pay gaps.

The difference between the relative income poverty rate for households with and without children, which is one of the components of AROPE, shows a very high or high connection in 12 Member States and a medium connection in eight others. Portugal, Hungary, Romania, the Czech Republic and Cyprus show a very high negative connection with fertility, while Bulgaria, Greece and Latvia show a high negative connection. Here, low-income disadvantage of having children is associated with high fertility. While Malta, Ireland and the Netherlands show a very high positive connection and Lithuania a high positive connection in this area. In these countries, high income disadvantage is associated with high fertility.

Granger causality analysis

Correlation can only show the direction and strength of the connection, it does not show causality. In order to draw conclusions about which indicator might be causing the increase in fertility, a Granger causality test was performed. The Granger causality test is used to determine whether the past evolution of one variable carries information about the future value of another variable, i.e. whether it helps to predict it.

As in the correlation analysis, I have also looked at the 27 Member States and the 27 countries of the European Union as a whole separately, i.e. I have looked to see whether there is a causal connection between fertility and any of the 10 indicators presented earlier, whether any of them can cause a change in fertility rates.

Table 2: Granger causality test and correlation test results

2009–2022		0–0.001	0.001–0.01	0.01–0.05							
Summa:	45	2	8	6	8	3	1	0	4	3	10
strong	4	0	0	1	1	0	0	0	0	1	1
medium	5	0	2	1	2	0	0	0	0	0	0
small	36	2	6	4	5	3	1	0	4	2	9
		B	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**
Austria	Corr	0.29	0.41	0.19	0.57	0.06	0.10	0.10	−0.27	−0.05	0.39
Austria	Gr				0.0183						
Belgium	Corr	−0.93	0.84	−0.06	−0.68	0.82	0.45	−0.01	0.94	−0.40	−0.06
Belgium	Gr					0.01177					
Bulgaria	Corr	0.61	−0.71	−0.34	−0.55	−0.61	−0.39	0.35	−0.48	−0.41	−0.61
Bulgaria	Gr	0.02368	0.02228								0.04364
Croatia	Corr	0.32	−0.43	0.31	0.30	−0.84	−0.80	0.38	−0.23	−0.25	−0.36
Croatia	Gr		0.02101								
Cyprus	Corr	0.39	−0.68	−0.63	−0.78	−0.45	0.40	0.06	0.46	−0.80	−0.72
Cyprus	Gr										
Czechia	Corr	0.89	−0.91	−0.91	−0.74	−0.79	−0.48	0.09	−0.81	−0.31	−0.76
Czechia	Gr			0.006987	0.02387						0.041
Denmark	Corr	−0.07	−0.19	0.07	−0.50	0.10	−0.45	0.46	0.49	−0.07	−0.18
Denmark	Gr		0.02549								
Estonia	Corr	−0.42	0.42	−0.09	0.08	0.11	0.43	0.55	0.01	−0.24	0.36
Estonia	Gr										
EU27	Corr	−0.54	0.39	0.16	0.24	0.46	0.29	0.12	0.53	0.28	0.49
EU27	Gr										0.03259
Finland	Corr	−0.78	0.27	0.20	−0.84	−0.13	−0.71	−0.28	0.95	0.24	−0.37
Finland	Gr										
France	Corr	−0.97	0.80	0.04	−0.79	−0.69	−0.08	0.02	0.20	0.36	−0.30
France	Gr		0.001089						0.0112		
Germany	Corr	0.78	−0.84	−0.40	−0.43	−0.29	−0.29	−0.09	−0.61	0.35	−0.20
Germany	Gr		0.004489	0.02986							
Greece	Corr	0.51	−0.74	−0.77	−0.56	0.01	0.29	−0.08	0.73	−0.07	−0.55
Greece	Gr										
Hungary	Corr	0.96	−0.97	−0.79	−0.76	−0.78	−0.69	0.27	−0.38	−0.27	−0.83
Hungary	Gr			0.0145							0.03225
Ireland	Corr	−0.87	0.86	0.86	0.81	0.70	0.71	−0.29	0.63	0.45	0.85
Ireland	Gr	0.04823	0.02467	6.994e−05	0.0001094						0.03247
Italy	Corr	−0.91	−0.07	0.17	0.44	0.90	0.57	−0.22	0.67	−0.58	0.40

2009–2022		0–0.001	0.001–0.01	0.01–0.05							
Summa:	45	2	8	6	8	3	1	0	4	3	10
strong	4	0	0	1	1	0	0	0	0	1	1
medium	5	0	2	1	2	0	0	0	0	0	0
small	36	2	6	4	5	3	1	0	4	2	9
		B	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**
Italy	Gr		0.04721	0.04063	0.04272				0.04047	0.01171	0.02199
Latvia	Corr	0.56	−0.65	−0.75	−0.60	0.74	0.57	−0.11	0.64	−0.40	−0.55
Latvia	Gr				0.02523	0.02979			0.02455		0.03322
Lithuania	Corr	−0.21	0.04	−0.06	−0.02	0.86	0.77	0.32	0.49	0.47	0.62
Lithuania	Gr								0.004321		
Luxembourg	Corr	−0.91	0.26	−0.42	0.57	−0.59	−0.46	−0.03	0.96	0.08	0.47
Luxembourg	Gr										
Malta	Corr	−0.91	0.85	0.70	0.72	0.68	0.77	0.06	−0.44	−0.33	0.88
Malta	Gr										
Netherlands	Corr	−0.90	0.60	0.45	0.94	0.68	0.64	−0.11	0.93	−0.30	0.84
Netherlands	Gr				0.01137						
Poland	Corr	0.11	−0.38	−0.67	−0.77	−0.16	−0.40	0.10	−0.06	0.07	−0.49
Poland	Gr				0.003418						
Portugal	Corr	0.74	−0.87	−0.90	−0.92	−0.86	−0.58	0.23	−0.62	−0.03	−0.90
Portugal	Gr										0.03485
Romania	Corr	0.78	−0.92	−0.86	−0.68	−0.69	−0.78	0.23	−0.73	−0.46	−0.80
Romania	Gr			0.03127	0.001706	0.04413				0.0002811	0.0003783
Slovakia	Corr	0.89	−0.93	−0.81	0.34	−0.64	−0.39	−0.14	−0.66	−0.53	−0.06
Slovakia	Gr									0.03227	
Slovenia	Corr	0.47	−0.29	−0.55	0.08	−0.08	0.25	0.42	0.31	−0.22	−0.17
Slovenia	Gr		0.03552				0.0103				0.01959
Spain	Corr	−0.75	0.54	0.17	0.29	0.63	0.10	0.09	0.84	0.31	0.12
Spain	Gr										
Sweden	Corr	−0.77	0.06	−0.59	−0.66	−0.29	0.00	−0.07	0.92	0.20	0.05
Sweden	Gr										

Source: compiled by the author

If the significance value for the test is $p < 0.1\%$, then a strong causal connection is detected, between 0.1% and 1% a medium causal connection is detected, and between 1% and 5% a small causal connection is detected.

Looking at the EU27 countries as a geographical unit, I was able to detect 1 low-strength causal connection: the difference between fertility rates and the relative income poverty rate for households with and without children. As mentioned earlier, I found a medium positive correlation for this indicator. So, looking at the Union as a whole, an increase in income deprivation for those with children increases fertility and a decrease in deprivation decreases fertility, although the correlation is only medium. This cannot be explained by anything other than the fact that, across the EU as a whole, more children are born in lower income households.

From 2009 onwards, this indicator has a detectable causal connection with fertility in nine Member States, with a positive correlation in two cases and a negative correlation in seven cases. Among the indicators, it has a causal connection in most countries. A small causal connection is found with a very high positive correlation with Ireland and a medium positive correlation with Italy. In these countries, it is true that fertility is boosted by increasing income disadvantage with children, i.e. those in better income

positions are less likely to have children. Furthermore, there is a strong causal connection with a very high negative correlation in Romania, a small causal connection with a very high negative correlation in Portugal, Hungary and the Czech Republic, a high negative correlation in Latvia and Bulgaria, and a small negative correlation in Slovenia. In these seven countries, fertility increases when the income disadvantage of having children decreases, i.e. there is no higher relative income poverty risk for those who have children.

The second most causal connection with fertility was the difference between child and childless households in the AROPE indicator according to the methodology used in the EU2020 strategy and the female unemployment rate, both for eight countries. For AROPE, a strong causal connection with a very high positive correlation was found in Ireland, a small causal connection with a very high positive correlation in the Netherlands, a high positive correlation in Austria and a medium positive correlation in Italy. In these Member States, more children are born when the excess risk of child poverty increases. We find a medium causality with a very high negative correlation in Poland and the Czech Republic and a high negative correlation in Romania and Latvia. Here, fertility increases when the excess risk of child poverty decreases.

Looking at the female unemployment rate, we find a medium causality with a very high negative correlation in Germany and a low causality with a very high negative correlation in Bulgaria, a medium negative correlation in Croatia, a low negative correlation in Denmark and Slovenia and no correlation in Italy. In these Member States, fertility increases when the female unemployment rate decreases. Furthermore, we find a medium causality with a very high positive correlation in France and a low causality with a very high positive correlation in Ireland. Here, the increase in fertility is caused by an increase in female unemployment.

The other indicators gave less causal relationship with fertility than these.

In Cyprus, Estonia, Finland, Greece, Luxembourg, Malta, Spain, Sweden and Cyprus, there is no detectable causal relationship between fertility and any of the indicators included in the survey.

In summary, the causal analysis shows that there are three factors that are causally related to fertility in a third of the 27 Member States, i.e. that cause higher or lower fertility. These are:

K: difference in relative income poverty rate between households with and without children – for nine Member States and the EU as a whole

C: female unemployment rate in the 20–64 age group – eight Member States

E: difference between AROPE2020 households with and without children – for eight Member States

Cluster analysis

By including the correlation coefficients of the above three factors, a hierarchical cluster analysis was performed using Ward's method, which is one of the methods to measure the closeness between clusters. This method characterises clusters by their midpoints in a similar way to other methods, but measures the closeness of two clusters by the

increment in the total squared error resulting from their merging. Like the K-means method, the Ward method minimises the sum of the squared distances of the points from their cluster centres.

This allowed us to organise the EU Member States into three different clusters and seven sub-clusters within each cluster.

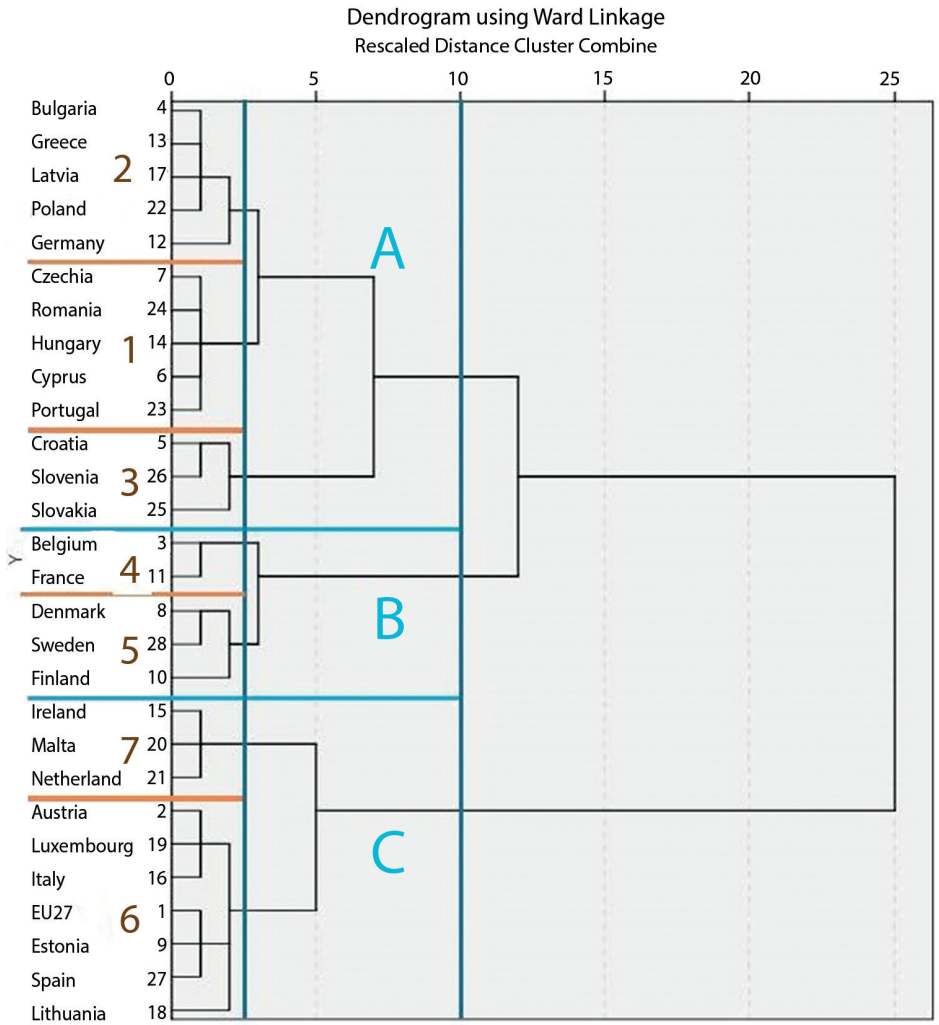

Figure 2: Ward dendrogram

Source: compiled by the author

In cluster A countries, fertility is negatively related to female unemployment and the difference in relative income poverty rates, and mostly also to the poverty surplus. Portugal, Germany, Greece, Cyprus and, apart from Estonia and Lithuania, the countries of

the Eastern Bloc are included. Their main feature is that they had much lower fertility rates in the period 2009–2015 than today.

We can break down these 13 countries into the following three sub-clusters:

In the countries of group "1" we also find a very high negative correlation with female unemployment, excess child poverty risk and excess relative income poverty. Here, clearly, an increase in fertility is associated with an increase in female labour force participation and a decrease in the poverty risk of having children – working and non-poor women have more children.

For the countries in group "2", fertility has a very large negative relationship with female unemployment and still has a large negative relationship with the excess risk of child poverty and the excess relative income poverty – working households and households at lower risk of poverty.

In group "3" countries, fertility has a large negative connection with female unemployment, negative with excess relative income poverty of children, but already positive with excess poverty of children – working households and households not living below the poverty line who take on the risk of excess poverty.

For cluster B countries, fertility is negatively correlated primarily not with relative income poverty, but with the excess risk of poverty between those with and without children. The three Nordic countries, and France and Belgium belong to this group. They still have higher fertility rates than the EU average, but they are already suffering a serious decline. The lowest fertility rate in the last decade and a half was measured in 2022.

The five Member States can be divided into the following two sub-clusters:

In the countries of group "4", fertility has a small positive connection with excess child poverty risk and excess relative income poverty, but a very large positive connection with female unemployment – more women who are not working and not at risk of poverty have children.

In the countries of group "5", fertility has little or no association with female unemployment and income inequality, but a large negative association with the excess risk of child poverty – no matter, working or not, but not at risk of poverty have children.

In cluster C countries, the fertility rate is positively related to relative income poverty, meaning that the poor have more children. Nine countries belong to this cluster, the Mediterranean countries except Greece and Portugal, plus Ireland, the Netherlands, Austria, Estonia and Lithuania. It even includes the European Union if we consider it as one country. Their fertility rates have been falling steadily and significantly, and most are already below the EU average. Both in these countries and in the European Union as a whole, fertility was at its lowest in 2022.

The nine countries can be broken down into the following two sub-clusters:

In group "6" countries, there is a medium positive connection between fertility and the surplus relative income poverty rate, and a smaller but positive connection with the other two indicators – those with surplus relative income poverty have more children.

The countries in Group "7" are the opposite of Group "1", i.e. fertility has a very strong positive correlation with all three factors – those who are not employed and at risk of poverty have more children.

Summary

Based on the above, the following answers can be given to the three research questions described in the first chapter:

1. Which of the indicators related to women's labour market participation and family living conditions, household income and financial situation in the European Union and the Member States are most strongly related to fertility?

As detailed in the previous subchapter, the correlations between the 10 indicators and fertility are shown in the table below (Table 3). (The numbers represent the number of Member States.) For 9 indicators, correlations are found in more than three quarters of the countries, and for 5 indicators, correlations are at least high in more than half of the countries. For almost all indicators, however, the direction of correlation is different, with the same indicator showing a positive correlation for several countries and a negative correlation for several others.

Table 3: Summary of fertility correlations

	positive	**negative**	**total**	**at least large**
B – female employment rate 20–64	14	13	27	19
E – AROPE2020 with children – childless	9	15	24	18
F – AROPE2030 with children	10	14	24	17
C – female unemployment rate 20–64	11	13	24	16
I – gender pay gap	15	10	25	16
D – AROPE2020 with children	8	14	22	13
K – difference in relative income poverty rate between child-headed and childless households	9	14	23	12
G – AROPE2030 with children – childless	11	11	22	11
J – difference in relative income poverty rate between genders (18–64)	7	14	21	3
H – real GDP per capita growth	9	6	15	1

Source: compiled by the author

2. For which factors can we also show a causal relationship, i.e. which factors cause a change in fertility?

As detailed previously, the Granger test revealed a total of 45 causal relationships, i.e. 45 cases where there was evidence of causality between an indicator and fertility. These are presented in Table 4 below. (The numbers represent the number of Member States.) Three indicators were found to have a detectable causal relationship with fertility in at least one third of the countries.

Table 4: Summary of Granger test causality

	total	strong	Medium	small
K – difference in relative income poverty rate between child-headed and childless households	9	1	0	8
C – female unemployment rate for 20–64-year-olds	8	0	2	6
E – AROPE2020 with children – childless	8	1	2	5
D – AROPE2020 with children	6	1	1	4
I – gender pay gap	4	0	0	4
F – AROPE2030 with children	3	0	0	3
J – difference in relative income poverty rate between genders (18–64)	3	1	0	2
B – female employment rate 20–64	2	0	0	2
G – AROPE2030 with children – childless	1	0	0	1
H – real GDP per capita growth	0	0	0	0
in total:	45	4	5	36

Source: compiled by the author

3. How can Member States be grouped into clusters?

As described earlier, the cluster analysis carried out by the Ward method distinguishes three clusters and seven sub-clusters as shown in the following figures (Figure 3 and 4).

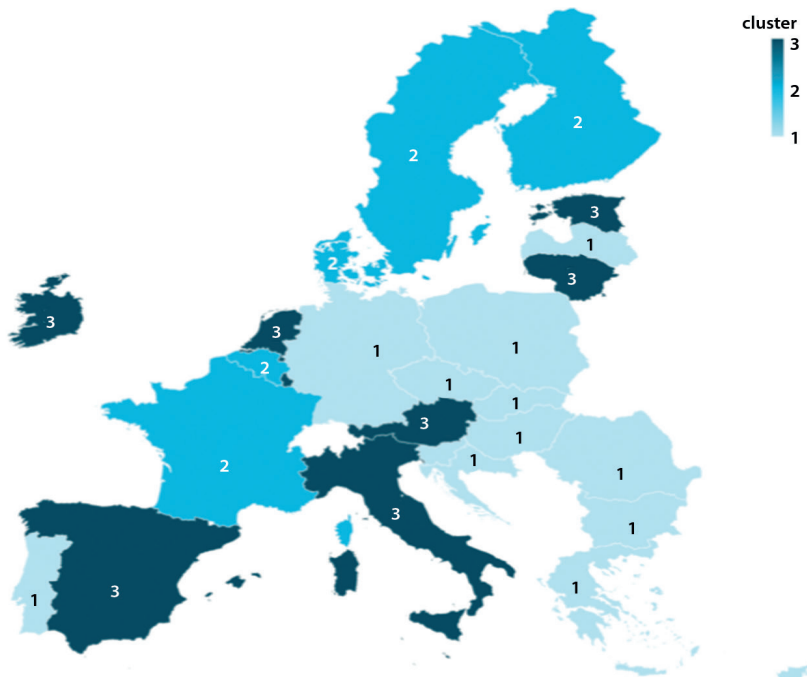

Figure 3: Cluster distribution of EU Member States by fertility and female unemployment and the risk of additional poverty or additional relative income poverty due to childbearing

Source: compiled by the author

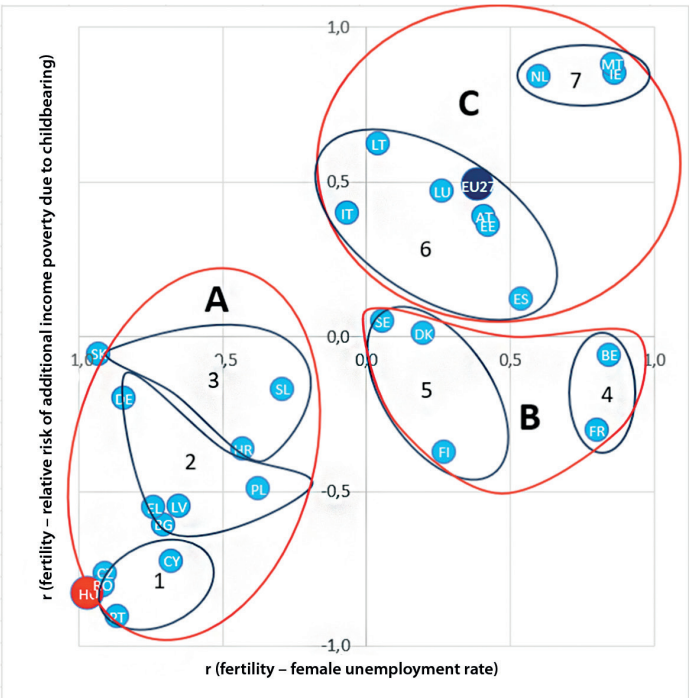

Figure 4: Cluster distribution of EU Member States by fertility and female unemployment and the relative risk of additional income poverty due to childbearing

Source: compiled by the author

In the case of clusters, different emphases should be given to the participation of women in the labour market and to the development of measures to improve the income and living conditions of families and households.

In Group A countries, increased attention should be paid to ensuring that women can keep their jobs after childbirth, are not threatened with unemployment and are able to face the challenges of the workplace as they did before having children. Furthermore, a family support system must be developed that can keep the relative income poverty rate of households with children at the level of those without children, i.e. that does not imply additional income poverty as a result of having children. For sub-clusters 1 and 2 of the group, it is also important that the AROPE2020 complex indicator does not increase with childbearing. For countries in sub-cluster 3, the indicator is currently increasing with childbearing.

In Group B and C countries, fertility is positively correlated with female unemployment. Group B countries and sub-cluster 7 of C, Lithuania and Luxembourg had the lowest fertility rate ever in 2022, but the other countries also had the lowest fertility rate since 2009. All countries in cluster B have the increase of AROPE2020 indicator, i.e. poverty associated with an increase in childbearing, and therefore fertility is now falling. And for cluster C, childbearing is associated with relative household income

poverty surplus, which is now being taken up by fewer people. The European Union as a whole is also included in this group, which explains the recent significant decline in overall childbearing. It would be beneficial for these groups, as well as for the EU as a whole, to provide additional assistance to those who are not at risk of poverty, with the aim of promoting childbearing. Furthermore, it is essential to ensure that employed women receive adequate support to establish a positive correlation between employment and fertility growth in the near future. One potential approach could be the introduction of a significant income tax credit for individuals with children or the provision of other non-welfare benefits.

The study thus confirmed the paradox already observed, i.e. that in cluster A countries, female labour market participation is associated with increased fertility, and vice versa in the other two clusters. As women's labour market participation is nowadays rising everywhere, we can see an increase in fertility in cluster A countries and a decrease in fertility in the others.

In the second chapter I have listed several studies that have analysed fertility and the labour market situation of women. The present research explains how it is possible to be right both to argue that women forego having children in order to keep their jobs (the example of Italy, Bettio and Villa, 1998)[24] and to argue that fertility increases when women have secure jobs. A discrepancy was identified in the various literature. The study demonstrated that in approximately half of the Member States, a negative correlation between unemployment and fertility was observed. Conversely, in almost half of the Member States, a positive correlation was identified. A substantial body of literature posits that an uptick in the employment rate is associated with a decline in fertility. For instance, Hondroyiannis (2010) makes this assertion.[25] The results of our study indicate that a negative correlation exists in almost as many Member States as a positive one.

It could be stated that the claims made in the previous literature are applicable only to certain groups of countries and are not generalisable.

The present study also confirms previous literature that more people have children when parents have a sense of security and confidence in the future. One factor of this sense of security is employment security, another is the security of maintaining income levels, or, in the other direction, the probability of avoiding relative income poverty, or the risk of poverty (AROPE) or the probability of avoiding poverty. If a country's family support system includes effective measures focusing on these areas, fertility will improve.

The UN indicators for sustainable development include both the employment rate and the AROPE indicators. Country-specific recommendations for measures to improve these indicators are periodically drawn up by the European Union. It is recommended that the above context be taken into account when developing these measures.

Further scientific research on this topic, even on a country-by-country or country-group basis, is also worthwhile, as it can shed light on how to initiate developments that not only improve the specific sub-region of the region, but also have a positive impact on demographic processes.

[24] BETTIO–VILLA 1998.
[25] HONDROYIANNIS 2010.

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Csaba Zalai[1]

Too Little Too Late?
An Overview of the European Union's Approach to Address Demographic Change and Some Policy Implications for the Next (2028–2034) Multiannual Financial Framework

Demographic trends in developed countries are marked by low birth rates and rising life expectancy in the last decades, as a result their population is shrinking and aging. Demographic change has always existed throughout history, but the extent of these shifts is unprecedented and will require major socioeconomic adjustments in many countries. The European Union (EU) is unfortunately one of those hit hardest by demographic change: Europe is the only continent that is expected to have a population decline until 2070, and even more alarmingly, the EU's working-age population (20–64 years) is projected to decrease by around 20% during the same period, while the share of older age groups (65 years or older) in its total population will be the second highest globally among large economies. This will not only have a major impact on the EU's position in the world, as population and economic size play an important role in the world's power structures, but it will also lead to a number of significant negative consequences that have the potential to undermine its economic and social model. In addition, demographic challenges will affect EU Member States to a different degree, as there are substantial differences between and within countries, which, if not addressed adequately, will aggravate existing economic, social and territorial disparities and create political divisions. Therefore, while most of the matters associated with demographic change still remain within the exclusive competence of Member States, the EU is increasingly active in addressing these challenges ranging from areas such as pension and employment policies or issues related to health and long-term care to education policies. The aim of this article is first to give an insight into the most recent demographic trends in the EU, as well as their main economic and social consequences in order to provide a basis for better understanding the

[1] Professor of Practice, Head of the International Organisations Research Group, Department of European Studies, Ludovika University of Public Service, e-mail: zalai.csaba@uni-nke.hu

magnitude of the challenge. Furthermore, it provides an overview of the evolution of the EU level approach to tackle demographic challenges, including the main documents adopted and the most important issues addressed, relating to economic, social and employment policies, public finances and territorial cohesion. Finally, the article raises some of the problems of the current approach and proposes a number of adjustments and policy recommendations for the incoming European Commission, in particular in view of its proposal on the Multiannual Financial Framework for the period 2028–2034, which is expected to be published in the second half of 2025.

Keywords: demographic change, competitiveness, economic and social model, Multiannual Financial Framework, cohesion policy, EU governance, EU Member States

Introduction

The European Union (EU) has been practically in a permanent crisis mode since the 2007–2008 global financial crisis. The most severe global recession since the Great Depression was followed by the European sovereign debt crisis starting in 2009, affecting a number of Eurozone Member States and reaching its turning point with the famous "whatever it takes" speech (to preserve the euro) of then European Central Bank President Mario Draghi in July 2012.[2] This challenge was followed first by the migration crisis in 2015, resulting in more than 1.8 million irregular crossings in that year alone and then by the referendum in the United Kingdom to withdraw from the European Union in 2016. It took more than three and a half years of difficult negotiations (and several British governments) until the United Kingdom finally left the Union on 31 January 2020. By a twist of fate, this was just one day after the World Health Organization declared the Covid–19 pandemic a public health emergency of international concern. While the EU's unprecedented recovery fund,[3] agreed in July 2020, was a significant driving factor behind its swift post-pandemic economic recovery, it also added to the inflationary pressures building up in the Eurozone, which was further aggravated by the energy crisis in 2021–2022. Finally, the last in the series of major crises was the Russian invasion of Ukraine in February 2022, which arguably had and continues to have the most profound political, economic and security implications on the European Union. In addition, all of these crises have taken place against the background of climate change, the fight against which the EU has made its top priority in the last years as reflected in the strategic agenda for 2019–2024, defining it as an "existential threat" in June 2019.[4]

But even against the backdrop of almost two decades of constant crises, it is rather surprising how slow the Union was to react and how little it had done at EU level to respond to the daunting demographic challenges that will profoundly shape the future of our continent. Already since the 1970s, demographers have been observing negative

2 European Central Bank 2012.
3 Regulation (EU) 2021/241.
4 European Council 2019.

trends in the population structure in Europe: low and declining fertility rates; a rapidly ageing population; coupled with a shrinking workforce. The United Nations (UN) has been providing comprehensive data and analysis of demographic trends since 1951, both globally and for all countries and areas of the world, which it re-evaluates every two years. In addition, Eurostat, the EU's statistical office, has also stepped up its efforts in the last decades on developing a comprehensive data set both at Member States and at various regional levels.

Despite all this, demographic challenges have been perceived by European leaders for a long time as a particular problem of a few, primarily Central and Eastern European Member States until 2012, when natural overall population increase in the EU had become negative for the first time. A worrying trend that has continued since then due to the rise in the number of deaths coupled with low and declining fertility rates. While migration can offset the natural decrease of population, as has been the case in a number of Western and Northern EU Member States in the last decades, nevertheless, according to the UN's[5] and Eurostat's[6] most recent population projections, even legal migration will not be able to compensate for natural population decrease in the long-term. Unless a comprehensive solution is found, the EU will have to face the sad fact, that 2020 and 2021, years when the overall population of the EU fell for the first time, will become the "new normal" in the near future.

The impacts of demographic change on the EU

The concept of demographic change describes a population's size and age structure adjusting to changes in birth rates, death rates and by migration, which themselves are the result of social shifts. Demographic transitions[7] in developed countries in the last decades are marked by low birth rates (below population replacement levels[8]) and by rising life expectancy. As a result, populations are shrinking and aging. Demographic change has always existed throughout history, but the extent of demographic change we have experienced in the last decades will require major adjustments in many areas of society, economy and politics.

In order to better understand the magnitude of the challenges the EU is facing, we need to look at the main findings of the UN's and Eurostat's most recent population projections.[9] Under the current baseline scenario, the EU's population is projected to shrink

5 United Nations 2024.

6 Eurostat 2023.

7 EU documents both use the terms demographic change and demographic transition in the same context, which will be used in the same way throughout the article.

8 The population replacement rate is the average number of children per woman (total fertility rate) that is needed to keep the population constant at the given mortality rates and is generally accepted to be 2.1 children per women in developed countries.

9 Although other studies forecast a more moderate growth compared to the UN's population projections, nevertheless, the differences are sufficiently small in order to have confidence in the major trends.

by about 3.5% by 2070,[10] down from 447.7 million in 2020 to around 432.2 million,[11] while the world's population is expected to grow by about 29.2%, from 7.887 billion in 2020 to around 10.189 billion by 2070.[12] Consequently, the EU's population share will comprise about 4.2% of the world population in 2070, down from 5.7% in 2020, while the same figure was 7.3% in 2010.[13] By contrast, the population of all the other regions of the world are expected to expand during the same period, as can be seen in Table 1. The major shift in the relative demographic status of Europe can be best portrayed by the ratio between the populations of our continent and Africa, which will undergo a complete inversion. Whereas the figure stood at 4:1 in favour of Europe in 1950, it will shift radically to 1:10 in favour of Africa by 2100.[14]

Table 1: World population projection until 2070 (figures in millions)

	2020	2030	2040	2050	2060	2070	Change from 2020 to 2070
European Union	447.7	452.7	451.6	447.9	440.1	432.2	–3.5%
Africa	1,380.8	1,727.2	2,095.6	2,466.6	2,821.5	3,145.2	127.8%
Asia	4,688.1	4,969.2	5,174.5	5,280.3	5,266.8	5,172.5	10.3%
North America	377.7	397.4	414.3	426.6	436.2	447.2	18.4%
Latin America and the Caribbean	646.9	687.7	717.1	730.0	727.1	711.1	9.9%
Oceania	44.0	49.0	53.0	57.0	61.0	64.0	45.5%
World	**7,887.0**	**8,569.1**	**9,177.2**	**9,664.3**	**9,989.2**	**10,189.2**	**29.2%**

Source: UN Population Division, World Population Prospects 2024 and Eurostat, EU's population projection 2023

In parallel to population decline, the EU's population is also getting older due to continuous improvement in life expectancy. Ageing is certainly a global phenomenon, but its speed and intensity are different from one country to another. As a consequence, and even more alarmingly, the EU's working-age population (20–64 years) is projected to decrease by almost 20%, down from 265 million in 2020 to 217 million by 2070,[15] reflecting fertility, life expectancy and migration flow dynamics. As a result, the share of older age groups (65 years or older) in the EU's total population is projected to increase from 21% in 2020 to 32% in 2070 which will be the second highest share globally among large economies. Consequently, the old-age dependency ratio (people aged 65 and above relative to those aged 20–64) is projected to sharply increase from 34.4% in 2020 to 59.2% in 2070.[16] In another words, the EU will go from having about three working-age people for every person aged over 65 years to only having less than two during the same

10 Eurostat 2023.
11 Future enlargement can slightly increase the EU overall population, however, it will not address the main challenges since candidate countries are subject to the same demographic trends.
12 United Nations 2024.
13 The figure included the United Kingdom at that time.
14 ADAM 2023.
15 European Commission 2021a.
16 European Commission 2021a.

period. Most of this increase is driven by the very old-age dependency ratio (people aged 80 and above relative to those aged 20–64), which will increase from 9.9% in 2020 to 25.7% in 2070.[17]

Demographic change will have a major impact on the EU's position in the world as population and economic size play an important role in the world's power structures, especially in our changing world to which geopolitics has returned. According to a projection by Goldman Sachs,[18] only two EU Member States (Germany and France) will be part of the world's top 15 economies by 2050, whereas there still were six countries in 2000 (Germany, United Kingdom, France, Italy, Spain and the Netherlands). These population changes will have major implications on both the importance as well as the composition of the most influential political and economic forums such as the Group of Seven (G7) or the Group of Twenty (G20). As Europe's nations become smaller and economically less powerful relative to others, the need for the European Union to use all of its collective weight becomes even more important. While not underestimating the (geo)political implications, economic and social consequences of demographic transition will imply even more fundamental changes for the future of the EU.

The combination of a shrinking and rapidly ageing population will lead to a number of significant negative consequences and has the potential to undermine the EU's economic and social model. From a competitiveness perspective, policy challenges will arise primarily in terms of labour market shortages, among others increasing the costs of production and, as the workforce ages, decreasing labour productivity and innovative capacity. In addition, a shrinking workforce means that the source of future economic growth will dramatically change in the next decades. While the annual average EU gross domestic product (GDP) growth rate is projected to remain relatively stable at around 1.3% in the long-term, labour is forecasted to make a negative contribution to growth,[19] due to the accelerating decline in the working-age population. Consequently, future EU GDP growth has to come primarily from productivity gains and innovation, thus from areas where the EU has been already falling behind its global economic rivals in the last decade.

Demographic change will also have a profound impact on savings, investments and entrepreneurship, as older people are generally more risk-averse, furthermore they are also likely to save more and invest less. Some studies suggest that countries with decreasing population tend to have bigger companies and more concentrated markets, with fewer innovative firms entering the market compared to countries with growing population.[20] Education will become even more important for maintaining and improving the productivity of a significantly smaller workforce, while the EU's total expenditure of 4.5% of GDP on education was already significantly lower than that of its global competitors such as the United Kingdom, the United States or South-Korea with 6.3%, 6.1% and 5.1% of their GDP's respectively in 2020.[21]

17 European Commission 2021a.
18 Goldman Sachs 2022.
19 European Commission 2021a.
20 Peters–Walsh 2021.
21 Organisation for Economic Co-operation and Development 2023.

These changes in the share of the working-age population in turn will pose significant challenges for the sustainability of public finances, as ageing societies cost more, while the income generated by the working-age population is set to decline. The fiscal impact of ageing is projected to represent a significant challenge in almost all EU Member States, with effects becoming apparent already during the next two decades in many countries. As a result, the overall cost of ageing, including pension, health care, long-term care and education expenditure, is set to increase over the long-term at the EU level. The total cost of ageing, which stood at 24% of GDP in 2020 in the EU, is projected to rise to 26% of GDP by 2070.[22] It needs to be noted, that current health and long-term care provisions are already considered inadequate in a number of Member States, thus the European Commission's 2 percentage point increase is rather an optimistic projection. This argument is also strengthened by recent developments in Japan, where according to data published by the Japanese Ministry of Finance, the annual average long-term care costs per citizen for the state were almost 10 times higher for people aged 75 and older compared to the age group of people between 65 and 74, while the costs for medical care was also four times higher.[23]

In parallel to the increased overall costs of ageing, a decreasing workforce also means lower tax revenues as most old-age benefits systems in the EU rely on social contributions and taxes, paid primarily by employers and employees. New sources of public funding need to be found in order to offset the decrease in social contributions and income tax. This will put an additional pressure on the long-term sustainability of public finances in EU Member States in the decades ahead, in particular for countries with high public debt ratios.

While the overall demographic trends already pose substantial challenges for the EU, this is further aggravated by the fact that these trends hide some very stark differences between and within Member States. The uneven effects of the demographic changes take several forms. Low fertility rates are a typical phenomenon of developed countries, nevertheless, these rates have and continue to vary significantly within the Union. The EU average stood at just 1.46 children per woman in 2022, although the fertility rate varied from 1.79 in France to 1.08 in Malta.[24] As shown in Figure 1, natural population change (difference between births and deaths) was already negative in about half of the Member States between 1990 and 2023, with Bulgaria, Latvia and Hungary experiencing the biggest population loss due to this component of population change. On the other hand, Ireland, Cyprus, Luxembourg and Malta had considerable natural population growth in the same period.

22 European Commission 2021a.
23 KLEIN–MOSLER 2021.
24 Eurostat 2024.

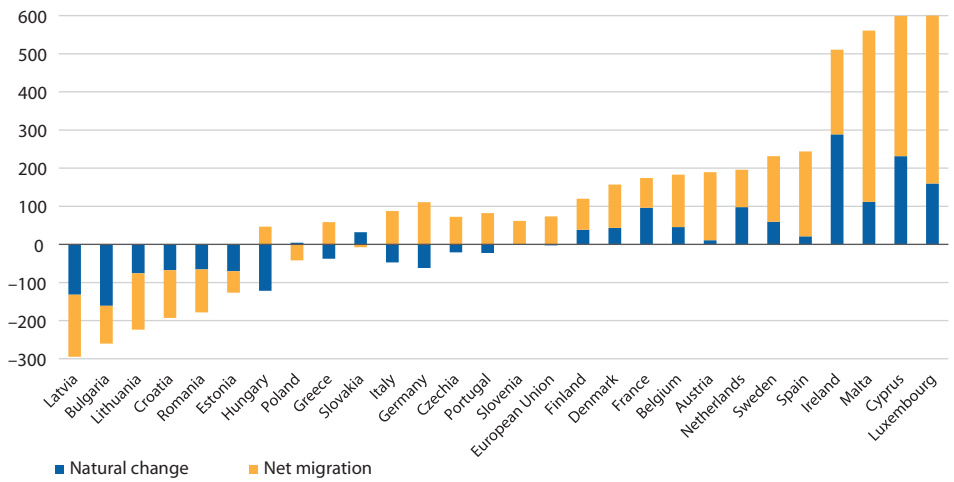

Figure 1: Natural change and net migration in Member States (1990–2023) (per 1,000 population in 1990)
Source: compiled by the author based on Eurostat data

In addition to the impact of low levels of fertility, population decline and accelerated ageing in some Member States was aggravated by mass outward migration (of primarily young and skilled people). As a result, with the exception of Slovenia, Czechia and Slovakia, the population decreased in all Central and Eastern European Member States between 1990 and 2023. The population of Latvia, Bulgaria, Lithuania, Croatia and Romania have all seen a sharp decrease of over 18% since 1990. In contrast, population increased in all the other Member States due to both positive natural change and positive net migration. Only in four countries, Germany, Greece, Italy and Portugal has natural change been negative, but since net migration remained positive, it lead to an overall population increase in these Member States as well. It is important to note, that inflows to these countries have been fed partly by migration from Central and Eastern European Member States.

These demographic trends are expected to continue to vary significantly in the next decades. As a result, Cyprus, Denmark, Ireland, Luxembourg, Malta and Sweden not only had growing populations in the past but are expected to see it continuing in the next decades, while the population of Bulgaria, Croatia, Greece, Italy, Latvia, Lithuania, Hungary, Poland and Romania is set to decline further by 2070. At the same time, the population of Austria, Belgium, Czechia, Estonia, Finland, France, Germany, the Netherlands, Portugal, Spain, Slovakia and Slovenia are projected to see an initial growth followed by a decline during the same period. These diverging population trends will also have very different effects on the working-age population of Member States. It is important to note, that future enlargement will most likely further complicate the existing social and economic problems as well as increase regional disparities within the EU, as candidate countries experience similar or, in the case of the Western Balkans, even worse demographic trends than current Member States.

These trends demonstrate that the demographic challenges will affect individual EU Member States to different degree. Some countries that are experiencing declining population and net outward migration already have a disproportionately high number of older people alongside dwindling working-age population shares, whilst others with net inward migration are not yet seeing the effects of a shrinking and ageing society. Consequently, these diverging demographic trends will not only decrease the overall economic growth at EU level but will also considerably slow down economic convergence between Member States, especially affecting the countries that joined the EU in 2004. However, while population decline is a particularly serious problem in Central and Eastern Europe, it also poses a serious problem to regions where people move from rural to urban areas within their own countries in search of better employment, education and training opportunities. In the EU, the population in rural regions decreased by 0.8 million between 2014 and 2019, by contrast the population in urban regions increased by 3.8 million over the same period.[25]

Moreover, these negative demographic trends have accelerated as a consequence of the Covid–19 pandemic and the political and economic uncertainties caused by Russia's aggression against Ukraine. Ultimately, if not addressed adequately, demographic differences will aggravate existing economic, social and territorial disparities and create political divisions. Therefore, while most of the matters associated with demographic change remain within the exclusive competence of Member States,[26] the EU has been increasingly active in addressing these challenges ranging from areas such as pension and employment policies or issues related to health care and long-term care to education policies.

Initial steps at EU level to address demographic change

As some studies correctly noted,[27] the European Commission, but most Member States as well, have rarely emphasised the strong link between demography and economic growth. There have been a number of reports and action plans on technology, innovation and competitiveness "but humans were only studied as capital, primarily from the perspective of training". It is, therefore, not surprising that the level of awareness of the demographic challenges facing the EU and its severe consequences has been increasing rather slowly among the governments and the wider public of the Member States. While most of the matters associated with demographic change were (and still remain) within the exclusive competence of Member States, in the 1980s the Commission has already started to consider the possibility of developing certain targeted policies, including an explicit family policy.[28] However, by the time Japan and South Korea, Asia's second and fourth biggest economies, were already taking a number of concrete measures confronting demographic challenges in the late 1990s, the EU was still focusing on

25 European Commission 2021b.
26 Treaty on European Union and the Treaty on the Functioning of the European Union 2012.
27 BOUSSEMART–GODET 2018.
28 JENSON 2021.

building an innovative economy in order to catch up to the United States and Japan. It is, nevertheless, important to note that while the aim of the Lisbon Strategy (launched in 2000) was to make the EU "the most competitive and dynamic knowledge-based economy in the world by 2010",[29] it was in fact one of the first major EU initiatives to highlight, as well as, to address some of the impacts of demographic change. The strategy proposed a wide range of reforms in several areas, including by raising the overall workforce participation rate and increasing participation by women and older workers, or by promoting upskilling and a culture of lifelong learning.

Nonetheless, it was the report on the mid-term review of the Lisbon Strategy in 2004,[30] conducted by a group of experts chaired by the former Prime Minister of the Netherlands, Wim Kok that, for the first time, devoted an entire section to the dramatic demographic changes in the EU and its far-reaching consequences. The report projected that the demographic challenges of ageing may cause the potential annual growth rate of the EU to fall from 2-2.25% in 2004 to 1.25% in 2040, with all that entails for entrepreneurship in the European economy. Furthermore, it estimated the cumulative impacts to correspond to a GDP per capita around 20% lower than could have otherwise be expected. Among other things, the report called on Member States to develop comprehensive active ageing strategies in order to incentivise workers to work longer and employers to hire and keeping older workers. In addition, the report also noted that selective (non-EU) inward migration will be needed to meet European labour market shortages in the decades to come.

The Kok Report inspired the European Commission to produce a number of important documents that helped shaping a strategy for how the EU could meet some of the substantial changes in the population age structure. Beyond summarising the EU's demographic trends and elaborating on its various forecasted impacts, the Commission's Green Paper[31] adopted in 2005 also initiated a series of consultations with key stakeholders of Member States. This was later followed up by a conference to discuss the issue and to collect best practices. Although the main motivation behind this was the Commission's awareness that most of the matters associated with demographic change were within the exclusive competence of Member States, nevertheless, it helped to build on the momentum by stressing that demographic change is an issue of common concern. In retrospect, it is noteworthy that the Green Paper attached a big importance to tackling the challenge of low birth rates by pointing to the considerable gap which, according to surveys, existed (and still continues to exist) between the number of children Europeans would like and the number that they actually have. Consequently, it called on the creation of appropriate mechanisms in order to narrow this gap, as well as to decrease the obstacles to private choice resulting in low fertility rates, such as expensive housing and lack of right incentives (family benefits, etc.). It also underscored the fact that never before in history has there been economic growth without population growth. Inward migration from outside the EU on the other hand was described having a "possible contribution" that could help to mitigate the effects of a shrinking population, although

[29] Council of the European Union 2000.
[30] Kok 2004.
[31] European Commission 2005.

"it is not enough on its own to solve all the problems associated with ageing and it is no substitute for economic reforms".

Following up on the Green Paper, the Commission presented a communication in 2006 titled "The demographic future of Europe – From challenge to opportunity",[32] which examined possibilities for the EU to confront demographic challenges as well as how the EU could help Member States, at EU, national and regional level as part of a long-term strategy.

The five areas of action set out in the Commission's communication:

- *promoting demographic renewal in Europe,* mainly through better conditions for families and the reconciliation of work and family life
- *promoting employment in Europe:* more jobs and longer working lives of better quality by making work more valued
- *a more productive and dynamic Europe,* by increasing productivity and economic performance through investments in education and research
- *receiving and integrating migrants in Europe* by promoting the inclusion and integration of migrants
- *sustainable public finances in Europe:* guaranteeing adequate social security and equity between generations

In addition, the communication called for a review of European policies in order to mainstream demographic challenges and recommended to the Council of the European Union and the European Parliament (EP) to consider the impacts of demographic change in the relevant policy areas. The communication also proposed to establish a European Demographic Forum in order to bring together the representatives of Member States, interest groups and experts in the field and to take stock of the latest demographic developments, furthermore to review policy responses every two years. Related to these forums, a European Demography Report was also published every two years.

Unfortunately, the momentum of confronting demographic change was lost in the aftermath of the 2007–2008 global financial crisis, which was followed by the European sovereign debt crisis. As a result, the EU's focus shifted towards reforming the economic governance rules and eventually the European Demographic Forum was discontinued in 2013, whereas the 2015 European Demography Report was the last of its kind to be published during that decade. Member States were more concerned with addressing the immediate and severe social and economic effects of the crises, to rebalance economic policies with social considerations and to address key issues related to changes brought about in the labour markets and welfare systems, than focusing on future challenges. As a result, the EU adopted the European Pillar of Social Rights[33] in 2017, containing 20 key principles and rights. Although the main areas of action related to providing equal opportunities and access to labour markets, fair working conditions and better social protection, some of them had direct implications on demographic change as well. The directive on work-life balance is a case in point, which among others regulates the extent of maternity and paternity leave.

[32] European Commission 2006.
[33] European Commission 2017.

While the Commission continued to publish some documents related to demographic change, such as the Ageing Reports, which every three years identified policy challenges and relevant options for the coordination of economic policies, the EP's Research Service has also provided an annual overview of the EU's demographic trends since 2017,[34] it was the newly elected Commission in 2019 that brought the issue of demographic change back into focus.

Demographic change returns to the EU's Agenda

By the end of 2010s the tide turned again, and due to a number of different factors, the focus returned on issues related to demographic change again. As the EU finally overcame the years of economic turmoil following the Eurozone crisis, with both economic growth and unemployment levels returning to pre-crisis levels by 2017, attention started to shift towards how to sustain them in the long-term. In addition, and as a consequence of the economic and financial crises, demographic trends worsened by the middle of the 2010s, including with the EU's total fertility rate decreasing to 1.51 in 2013 after a relative high of 1.57 in 2008 and 2010.[35] In parallel, the migration crisis starting in 2015 brought the issue of the costs and benefits of legal migration to the forefront and revealed fundamental differences between governments of and diverging societal attitudes in Member States. Finally, the outbreak of the Covid–19 pandemic in the beginning of 2020 had a major impact on the EU's economic and social resilience, especially on the elderly and the young, bringing issues in the focus, such as related to health, long-term care or accessibility as well as intergenerational fairness.[36]

In order to respond to the growing need to tackle the pressing demographic challenges, the newly elected Commission President, Ursula von der Leyen, nominated in 2019 Dubravka Šuica as Vice-President for Democracy and Demography with the mission of supporting Europe through the demographic transition. The commissioner's tasks included, among others, analysing the impacts of demographic change and the publication of a Green Paper on ageing and launching a wide debate on long-term impacts on care and pensions. The Commission's main focus was thus primarily set on issues such as the adequacy of the current social protection in the EU, policies to make the labour market more inclusive, improving work-life balance and enabling people to work longer, investing in upskilling, all in the context of an ageing population.

As a first step, and building on the previously published European Demography Reports, the European Commission adopted a Report on the Impact of Demographic Change in June 2020,[37] highlighting the main drivers of the demographic developments and their implications for the EU. The report relied on a set of comparable data at EU and regional level and focused on the major impacts of demographic change, such as on economic growth, labour markets, health and long-term care needs as well as public finances.

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34 Eatock 2017.

35 Eurostat 2024.

36 Intergenerational fairness is a concept of fairness or justice between different generations, including between currently living and future ones.

37 European Commission 2020.

Croatia, which held the Presidency of the Council of the European Union at that time, and being one of the most affected of Member States by population decline, also contributed to shift more attention to demographic change by elaborating and adopting Council Conclusions on the matter in June 2020.[38] The conclusions, among others, stressed the importance of human capital and demographic renewal that are essential requirements for economic growth and which should have the same priority at EU level as climate neutrality or digitalisation. One of the novelties of the conclusions was to raise the adverse impact of the free movement of labour, which is a fundamental freedom of the European Union, but it also pointed to the fact that labour mobility within the EU led to different phenomena in different regions (brain drain vs. brain gain) and to further aggravated population decline in a number of Member States.

The Commission launched a number of initiatives in 2021 addressing demographic challenges, starting with the Green Paper on Ageing in February,[39] which also aimed at launching a broad policy debate on issues related to ageing societies. The document, which subscribed to a life-cycle approach and considered both personal and societal implications of ageing, covered wide range of issues related to ageing societies, such as lifelong learning, health and long-term care, pensions, old-age poverty, intergenerational solidarity and loneliness. The paper was followed by a Commission report outlining a long-term vision for rural areas in June 2021,[40] designed to help rural areas in meeting challenges such as depopulation, connectivity and limited access to key services. The document identified 10 shared goals and 4 areas of action in order to promote stronger, connected, resilient and prosperous rural areas by 2040. In order to achieve these objectives, the Commission proposed a Rural Pact to mobilise public authorities, relevant stakeholders and communities and an EU Rural Action Plan with tangible flagship projects and tools. Furthermore, a new interactive knowledge management tool, the Atlas of Demography was also launched in 2021. Based on official statistics and projections from Eurostat, the Atlas has mapped national demographic challenges and corresponding policy actions, thereby enhancing the understanding of demographic change and policy responses at the local, regional and national level.

In parallel to the growing number of Commission initiatives, the increasing need of addressing the challenges of demographic change has also been reflected by the fact that European leaders started to increasingly discuss the issue, as reflected in several European Council Conclusions in 2022 and 2023, including the Granada Declaration outlining the EU's key future priorities and actions.[41] Moreover, the 2023 June European Council invited the Commission to present a toolbox of policy measures to address demographic challenges and their impact on Europe's competitive edge.[42] Responding to this request, the European Commission adopted a communication in October 2023 titled "Demographic change in Europe: A toolbox for action".[43] Drawing on the experience across the Member States, the document set out a wide range of tools, including

38 Council of the European Union 2020.
39 European Commission 2021b.
40 European Commission 2021c.
41 European Council 2023a.
42 European Council 2023b.
43 European Commission 2023a.

regulatory instruments, policy frameworks and funding, as well as a comprehensive strategy to *demographic change* structured around four pillars.

The four areas of action set out in the Commission's communication:

- *supporting parents* by better reconciling family aspirations and paid work, notably by ensuring access to quality childcare and good work-life balance
- *supporting and empowering younger generations to thrive,* develop their skills, facilitate their access to the labour market and to affordable housing
- *empowering older generations and sustaining their welfare,* through reforms combined with appropriate labour market and workplace policies
- *addressing labour shortages,* through managed legal migration, in full complementarity to harnessing talents from within the EU

Acknowledging, that demographic change is determined by life choices made by families and individuals, the demography toolbox was intended to inspire Member States to develop and implement integrated policies to address demographic challenges. Moreover, the mainstreaming of demographic concerns into policy areas was also given priority, thereby coordinating relevant policies both at EU and national level. Although it did not provide for new funding, the toolbox, nevertheless, was the first holistic strategy aiming to compile all the relevant regulatory and policy instruments and jointly agreed initiatives together with existing programmes and funding opportunities.

Finally, by adopting the Communication on "Harnessing talent in Europe's regions" in January 2023,[44] the Commission recognised that diverging demographic trends in Member States will trigger new and growing territorial disparities, therefore new and more targeted measures need to be developed to help the most affected regions tackling demographic challenges. As a result, although limiting its focus primarily on the urban-rural divide of demographic change, it developed the concept of regions in (or at risk of falling into) a talent development trap based on criteria related to the decline of working-age population, low share of tertiary education, and adversely affected by departure of young people. According to this, and as shown in Figure 2, the document identified 46 regions in Europe, accounting for some 16% of the EU's population, as being in a talent development trap and another 36, accounting for some 13% of the EU's population, which are at risk of falling into a talent development trap. In order to ensure that no region in the EU is left behind, the Commission officially launched the Talent Booster Mechanism in November 2023. This new, tailor-made, regional based and multidimensional approach included the use of existing EU funds and initiatives to support regions most affected by the ongoing demographic transition.

One of the conclusions that can be drawn from the evolution of the EU level approach to tackle demographic challenges is that, while a number of new policy tools and action plans have been adopted by the end of the mandate of the von der Leyen Commission in 2024, the EU still lacks a comprehensive approach to tackle demographic challenges. This is, to a great extent, due to the reason that EU countries are differently affected by demographic change, as well as, to the fact that most of the matters concerning demographic change remain within the exclusive competence of Member States. Nonetheless,

[44] European Commission 2023b.

the demographic toolbox, which assembles the available instruments at the disposal of governments by incorporating the best practices of Member States, is a first major step in the right direction.[45]

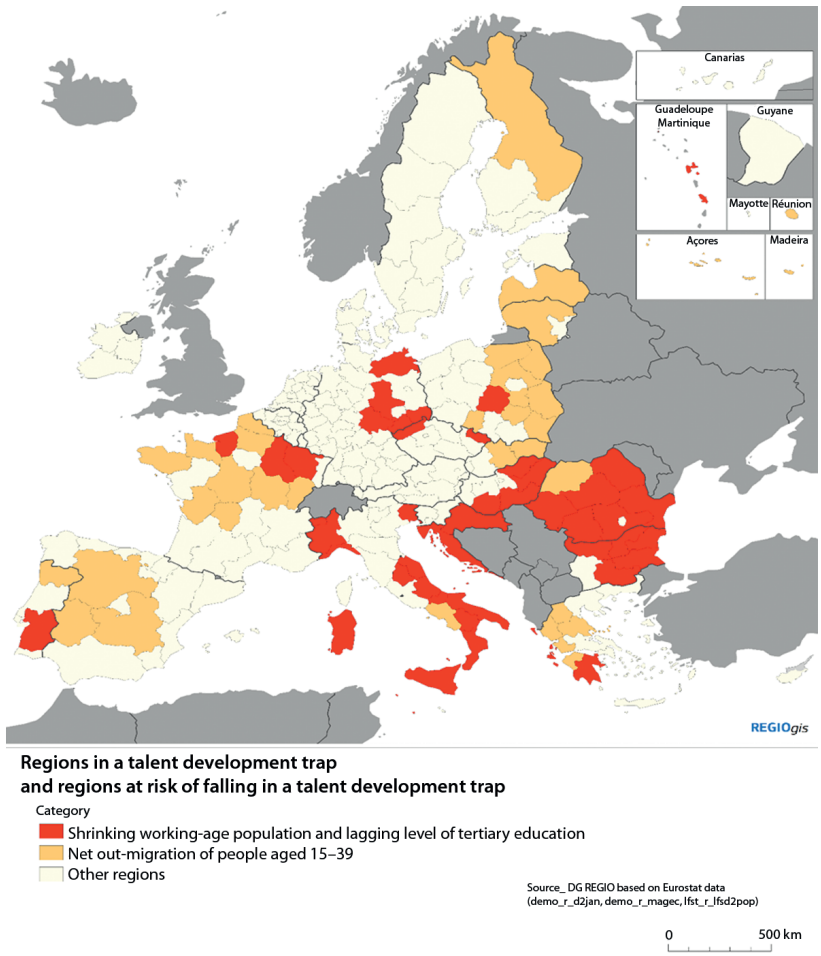

Figure 2: Regions in a talent development trap (NUTS 2 level)

Note: The EU has developed a classification known as nomenclature of territorial units for statistics (NUTS), which divides each EU Member States into 3 levels: all together there are 92 major socio-economic regions (NUTS 1); 244 basic regions (NUTS 2); and 1,165 small regions (NUTS 3) in the EU in 2024.
Source: European Commission 2023 (Communication on Harnessing talent in Europe's regions)

45 PAPE–SZÉCHY 2024.

Despite all of this, one of the challenges of the incoming Commission will be to extend the scope of the discussion on demographic change to include all relevant policy issues, including politically sensitive ones, such as how to address the problem of low and falling birth rates. In addition, the issue of finding additional resources of funding in order to help the most affected Member States and regions to tackle demographic challenges will have to be explored in more detail. This is a particularly pressing issue, as the Commission is expected to publish its proposal on the next Multiannual Financial Framework in the second half of 2025, which will outline the financing of strategic goals for the period 2028–2034.

Some policy implications for the next Multiannual Financial Framework

Preparing the proposal on the EU's Multiannual Financial Framework (MFF) for the period 2028–2034 will be one of the first major tasks of the incoming European Commission, which is expected to take office in December 2024. Designing the overall EU budget for a seven-year period is always challenging, nevertheless, this time it will be a Herculean task to reconcile the EU's strategic goals with the limited budgetary resources available to finance them. Given the many unprecedented challenges the EU is currently facing,[46] it will be of paramount importance to find the right tools and policy mix to tackle these challenges. Demographic change is a case in point, which will require major adjustments in many areas of society and economy in the Member States, which in turn will require significant additional resources. Therefore, the next MFF will need to be carefully designed to also provide help to those Member States and regions that are most affected by demographic transition. The Hungarian Presidency of the Council of the European Union in the second half of 2024 will certainly be well placed to help triggering a wider reflection on these issues. Since addressing demographic challenges is one of the main priorities of the Presidency, it could play an important role in helping the incoming Commission to find appropriate solutions to the related problems, especially in view of the Commission's proposal on the next MFF.

It is certainly too early to assess and evaluate the impacts of the new tools and programs adopted in the last few years, nevertheless, it seems plausible that some of them have been explicitly designed by the Commission as pilot projects, which, if proven to be successful, will become either new features of or will have an impact on major EU policies, such as cohesion policy. This argument is further strengthened by the findings of the 9th Cohesion Report published by the Commission in March 2024,[47] which devotes an entire chapter to the issue of demographic transition, including the concept of regions in a talent development trap. It is, therefore, useful to widen the scope of the

46 Koller–Kondor 2023.
47 European Commission 2024.

ongoing discussion on these issues by highlighting some of the shortcomings of this new approach. What follows next will be a number of critical issues raised in relation to the concept of talent development trap, as well as some points for consideration for the incoming European Commission linked to demographic change.

According to the Commission, regions are considered to be in a talent development trap if they meet the following criteria: the annual average reduction in their working-age population (25–64) was greater than 7.5 (per 1,000 population) between 2015 and 2020; the share of their working-age population (25–64) with tertiary education was below the EU average in 2020; and the share of their working-age population (25–64) with tertiary education increased by less than the EU average between 2015 and 2020. In addition, a region is considered to be at risk of falling into a talent development trap if (it is not in a talent development trap and) its annual average net outward migration rate of those aged 15–39 was greater than 2 (per 1,000 population) between 2015 and 2020. The talent development trap concept is thus a combination of criteria related to demographic trends (the change of working-age population and outward migration of young people) as well as to (tertiary) education. While the Commission claims in its 9th Cohesion Report that regions in a talent development trap have typically lower per capita GDP than others, it would have been more convincing had the Commission also included criteria related to prosperity (or income) in its definition of the concept. As a matter of fact, the arbitrary choice of the criteria related to (tertiary) education merits the question whether additional aspects have also been considered, such as employment or productivity. Furthermore, it would be interesting to see what considerations led the Commission in the end to incorporate the dimension of education in the concept. Against this background, there are a number of studies that attempt to define the concept of regional development trap by using a more complex approach,[48] therefore, and due to the length constraints of this article, the focus will be limited only to two important shortcomings of the concept of the Commission.

First, the concept of talent development trap does attempt to capture the dynamics of diverging demographic trends of regions (by including reference periods), however, it fails to capture the very different starting positions of Member States and regions. As we have seen earlier, the population of Latvia, Bulgaria, Lithuania, Croatia and Romania have all seen a sharp decrease of over 18% since 1990. In contrast, the population of Czechia and Germany increased by more than 5% during the same period, the same figure was 17% in the case of France, while altogether they account for one fifth of the regions (10 out of 46), which are in a talent development trap according to the Commission. To be fair, even these 3 countries have regions that experienced population decline in the same period, nevertheless, the significant differences in the overall population development of these countries (reflected in most of their regions) underline the need to refine the concept in order to better capture the very different starting positions of Member States (and regions).

48 DIEMER et al. 2022.

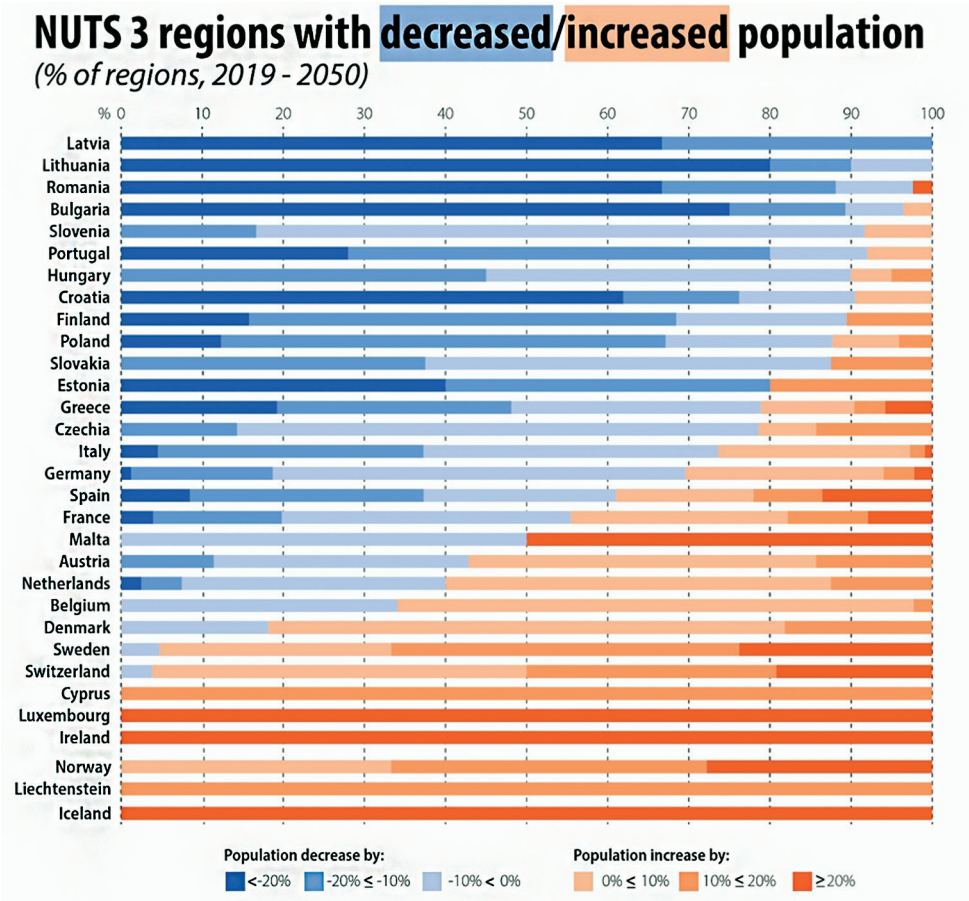

Figure 3: Regional population projections in EU and EFTA Member States (2019–2050)
Source: Eurostat 2021

Second, there is a strong argument in favour of differentiating between countries as well and not just between regions. This is underlined by the latest regional population projections published by Eurostat on the 27 EU Member States and the 4 European Free Trade Association (EFTA) countries.[49] As can be seen in Figure 3, there is a considerable variation in the projections across Member States. In Latvia and Lithuania, all the (NUTS 3 level) regions have a smaller projected population in 2050 than in 2019, most of them by at least 20%. Furthermore, there are 8 countries where the population is expected to decrease in almost all (at least in 90%) of their regions between 2019 and 2050. With the exception of Portugal, these are all Central and Eastern European Member States (Bulgaria, Croatia, Hungary, Latvia, Lithuania, Romania and Slovenia). In comparison, regional population projections in Czechia, France and Germany are much more

[49] Eurostat 2021.

balanced, while altogether they account for one fifth of the regions (10 out of 46), which are in a talent development trap according to the Commission. This is in stark contrast to Slovakia, which will only have one region with a projected positive population change by 2050, while none of its regions qualifies as being in a talent development trap.

Finally, the implementation of policy actions related to demographic change is more efficient at Member States level, since most of these matters are within the exclusive competence of the Member States. Moreover, as indicated in a recent study of the European Committee of the Regions,[50] the divisions of powers are not homogenously divided between the different levels of government in Member States, thus a regional approach will eventually lead to different outcomes.

All this implies, that it is difficult to come forward with simple, one-size-fits-all solutions and even more importantly, that the approach of tackling demographic challenges needs to be more carefully balanced between the Member State and the regional levels. As a consequence, cohesion policy in general needs to be adapted to address these challenges both in its objective, as well as it should become an additional important eligibility criterion. While the Commission's proposal on the concept of regions in a talent development trap is a move in the right direction, it has many shortcomings, therefore it should be fine-tuned. The Commission should also consider the creation of a specific fund for addressing demographic change providing support to Member States that have experienced a significant population decline in the last decades. Eligibility of funding should primarily be based on demographic data, such as the natural change of population and outward migration. Alternatively, instead of creating a specific fund, the aspect of demographic change could also be taken into account in the methodology for allocating structural funds, similar to the additional criterion related to migration flows (and greenhouse gas emissions), introduced during the 2021–2027 MFF. All these changes are of particular importance, because they would address the East-West divide in demographic trends within the EU, the existence of which was also confirmed by the Commission's 9th Cohesion Report. Such new instruments could be useful in view of future accessions as well, as candidate countries, in particular in the Western Balkans, are confronted with very similar demographic challenges.

Apart from dealing with issues of funding, the incoming Commission will also have to evaluate the recently adopted new tools and their impact in relation to demographic challenges. In addition, the demographic toolbox needs to be fine-tuned as well, while it should remain a comprehensive set of available instruments at the disposal of governments also incorporating the best practices of Member States. There are a number of important policy issues that need to be addressed. Among others, the EU needs to address the problem of low and falling birth rates, as well as the reasons behind the wide gap between the number of children Europeans would like and the number that they actually have.[51] This is, undoubtedly, a very sensitive issue politically, as Member States have a very different approach to family policy related issues. Nevertheless, the EU cannot afford the luxury to disregard certain policy options, just because they seem more costly and their effects can only be seen in the long-term.

50 Committee of the Regions 2024.

51 BIGNAMI et al. 2024.

Moreover, similar to the divide in demographic trends,[52] there is also an East-West divide in Europe regarding the attitude of citizens towards demographic change, in particular in relation to issues such as population decline, families or (legal) migration. These differences in attitudes as well as in relation to how to tackle demographic challenges (supporting families vis-à-vis supporting legal migration) have been confirmed by a number of studies and surveys,[53] but they were also apparent in the diverging public reactions in EU countries during the migration crisis in 2015–2016. According to Bulgarian political scientist Ivan Krastev,[54] the reasons for this can be traced back to the "very real and different historical trajectories of the state-building processes in the two parts of the continent" and they still continue to shape (and can even reinforce) existing cultural stereotypes. All this strengthens the argument that Member States should be allowed to freely choose the mix of policies to tackle the challenges of demographic transition. In another words, promoting legal migration and family policy measures should be seen as equally relevant tools in relation to demographic change, which would be in line with the logic of the demographic toolbox as well. It is in this context, that appropriate mechanisms should be considered in order to help countries raising their birth rates, as well as to decrease the obstacles to private choice that lead to low fertility rates, such as expensive housing or the lack of the right incentives. The Commission should, therefore, build on some of the good practices of Member States in the area of family policy and it should also consider making targeted EU funds available for (partly) funding their implementation (like in the case of legal migration). This would not only contribute to increasing competitiveness and economic growth in the long-term, but it could also help overcoming the existing East-West divide, that according to Krastev, "is the conflict most likely to bring about the disintegration of the Union".

Another important contribution to the discussion on tackling demographic challenges, which merits further development, was made by Enrico Letta, the former Italian Prime Minister in his report on the future of the EU internal market published in April 2024.[55] In order to unlock the full potential of the Single Market, Letta called for the EU to establish a fifth freedom, beyond the four freedoms that are the cornerstones of the Single Market (the free movement of goods, capital, services and persons). The principle of "freedom to stay" would be a kind of counterweight to the "freedom of movement" of persons and would help addressing the issues of brain drain, a phenomenon primarily affecting the countries of Central and Eastern Europe and, to some extent, southern Member States as well. According to the report, "by fostering local capacities and leveraging the unique assets of each region, the EU can help stimulate economic activity, create jobs, and reduce socio-economic disparities". The concept aims at providing individuals and businesses of less developed Member States and regions a more inclusive and balanced form of development by facilitating access to opportunities, infrastructure and key services, without requiring (physical) relocation or cross-border movement. Such an approach could enable persons and businesses to make a choice to move or stay,

52 Fihel–Okólski 2019.
53 Fűrész–Molnár 2023.
54 Krastev 2022.
55 Letta 2024.

rather than being forced to move due to a lack of opportunities and could, therefore, lead to redefining the European economic growth model. Decoupling social mobility from geographic mobility, thus ensuring that economic prosperity is inclusive, would benefit all EU citizens regardless of their nationality and mobility choices. The potential areas for action range from ensuring affordability and quality of services of general interests, to providing significant investments in infrastructures and digital skills or ensuring the affordability of housing. Consequently, the Commission should further develop the concept of the "freedom to stay", and its main features should be incorporated as objectives of cohesion policy instruments in the next MFF. Priority should be given to issues such as improving local living conditions (housing and public space), serving the needs of the existing population and attract new inhabitants, to the services of general interests as well as to the investment into digital infrastructure and skills.

Furthermore, finding the right balance between investments and structural reforms will be key in the next MFF. While it is evident that EU funding needs to be tailored to the specific needs of Member States, unfortunately most structural funds do not allow for adequate flexibility. One-size-fits all approach, such as incentivising structural reforms through strengthening the link to the European Semester are not universal solutions and, for some Member States, it might prove to be irrelevant at best, harmful at worst. At the same time, focusing too much on country specific recommendations and structural reforms does not take into account the different starting point of Member States, which can vary significantly. Central and Eastern European countries, for example, showed an extreme readiness and ability to make deep structural reforms in the last three decades, thus focusing on investments remains more relevant in their case, than focusing on structural reforms. Investments, especially in infrastructure and in areas like education or health care, are also crucial in order to continue their economic convergence process. Funds, such as the European Social Fund Plus (ESF+) or the Recovery and Resilience Fund (RRF), therefore, should allow for more flexibility. Member States should be able to use these funds for instance to strengthen the resilience, as well as the sustainability of their health care systems, which in turn would also help to reduce outward migration (brain drain) of health professionals. Similarly, these funds should allow countries to invest into areas related to demographic change, such as investing into infrastructure (nurseries and kindergartens) in order to support children's access to inclusive, affordable, and quality early childhood education and care (ECEC), in line with the Barcelona Targets for 2030.

A final consideration relates to the internal organisation structure of the European Commission. Mainstreaming demographic concerns in relevant policy proposals at EU level and their accompanying impact assessments also requires the existence of a dedicated structure that can ensure a holistic approach to handle these issues. However, unfortunately, there is no such structure within the services of the European Commission, thus the commissioner responsible for demography has to rely on the Directorates-General (DGs) under the responsibility of other commissioners, which tend to focus only on their particular (sectorial) dimension of the problem. Therefore, it would be worthwhile for the incoming Commission to reflect on how to better organise internal work concerning the demographic challenges the EU is facing.

Conclusions

Demographic trends in Europe have been marked by low birth rates and rising life expectancy in the last decades, as a result the population of the EU is shrinking and aging. This will have a profound impact on the EU's position in the world and will lead to a number of significant negative consequences that have the potential to undermine its economic and social model. In addition, demographic challenges will affect EU Member States to a different degree, as there are substantial differences between and within countries, which, if not addressed adequately, will aggravate existing economic, social and territorial disparities and create political divisions.

Although Europe is the continent hit hardest by demographic change, the EU was rather slow to react to these demographic challenges. One of the main reasons for this lies in the fact that most of the matters associated with demographic change were (and still remain) within the exclusive competence of Member States. While there is a growing number of important policy areas related to demographic change that are being addressed, progress in this field was constrained by the constantly shifting focus in the last decades. First, the sustainability of public finances was at the centre of discussion, thus the macroeconomic effects of ageing, as budgetary projections tried to assess the change of public spending related to pensions, health care, long-term care and education. Later, emphasis was put on labour market related issues and the social dimension of demographic change, which eventually led to a life-cycle approach, considering both the personal and societal implications of ageing. Finally, the attention shifted towards specific areas, such as ageing, rural areas as well as on regional and local aspects of demographic change.

One of the conclusions that can be drawn from the evolution of the EU level approach to tackle demographic challenges is that, while a number of new policy tools and action plans have been adopted by the end of the mandate of the von der Leyen Commission in 2024, the EU still lacks a comprehensive approach to demographic change. Nonetheless, the demographic toolbox, which assembles the available instruments at the disposal of governments by incorporating the best practices of Member States in a holistic strategy, is a first major step in the right direction. However, the incoming Commission will need to extend the scope of the discussion on demographic change to include all relevant policy issues, including politically sensitive ones.

Among others, it needs to address the problem of low and falling birth rates, as there is still a wide gap between the number of children Europeans would like and the number that they actually have. This is a sensitive issue politically, as Member States have a very different approach to family policy related issues, nevertheless, the EU cannot afford the luxury to disregard certain policy options, just because they seem more costly and their effects can only be seen in the long-term. Furthermore, there is evidence of an East-West divide in demographic trends, as well as in the perception of both the fear of population loss and the fear of openness to legal migration. Member States should, therefore, be allowed to freely choose the mix of policies to tackle demographic challenges, thus promoting legal migration and family policy measures should be seen as equally relevant tools. This would fit well in the logic of the demographic toolbox as well.

In addition, the Commission should build on some of the good practices of Member States in the area of family policy and it should also consider making targeted EU funds available for (partly) funding their implementation (like in the case of legal migration). Moreover, the Commission should consider the creation of a specific fund for addressing demographic change providing support to Member States that have experienced a significant population decline in the last decades. Alternatively, the aspect of demographic change could also be taken into account in the methodology for allocating structural funds, similar to the additional criterion related to migration flows (and greenhouse gas emissions) introduced during the 2021–2027 MFF. Such additional funding would not only contribute to increasing competitiveness and economic growth in the long-term, but it could also help overcoming the existing East-West divide within the EU. Furthermore, such new instruments could be useful in view of future accessions as well, as candidate countries are confronted with very similar demographic challenges.

The Commission should also develop further the concept of the "freedom to stay", as proposed in the Letta Report on the future of the EU internal market and its main features should be incorporated as objectives of cohesion policy instruments in the next MFF. Priority should be given to issues such as improving local living conditions (housing and public space), and to the services of general interests as well as to the investment into digital infrastructure and skills.

The Hungarian Presidency of the Council of the European Union in the second half of 2024 will certainly be in a good position to help triggering a wider reflection on these issues. Since addressing demographic challenges is one of the main priorities of the Presidency, it could play an important role in helping the incoming Commission to find appropriate solutions to the related problems, especially in view of the Commission's proposal on the next MFF, which is expected to be published in the second half of 2025. Hungary's experience with family policy related measures and incentives will also be useful to help evaluate and fine-tune recently adopted actions and instruments, in particular the Commission's demographic toolbox.

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Csaba Lentner[1] – *Tünde Fűrész*[2]

Strategic Elements of the Hungarian Family Support System after 2010: Achievements and Challenges

The study undertakes to outline the legal background of the family-friendly government policy built after 2010, its achievements and challenges. The authors examine the elements of Hungarian family policy, their effectiveness between 2010 and 2022 and the outcomes of family supports from the point of demography, welfare and well-being of Hungarians. The authors present the principles, legislative background, family policy indicators and results of this system. At the end of the study, they make an attempt to identify the new challenges and solution options in Hungarian family policy after 2022.

Keywords: family policy, having children, family support, Hungary

Introduction

The transformational economic crisis experienced during the regime change in Hungary significantly reduced the willingness to have children. The economic situation of the country has largely reflected the trust and positive vision of families in terms of childbearing, as a result of which the population decline – that has been continuous since 1981 – has accelerated after the 1990s.

Following the austerity package of 1995, indicated by the name of Lajos Bokros, Minister of Finance, the fertility rate, which shows the desire to have children (how many children a woman gives birth to on average in her lifetime), remained for a decade and a half permanently below 1.5, and even reached a historical low in 2011 (1.23).[3]

[1] Full Professor, Head of Széll Kálmán Public Finance Lab, Faculty of Governmental and International, Ludovika University of Public Service, e-mail: Lentner.Csaba@uni-nke.hu

[2] Chairman, Kopp Mária Institute for Demography and Families & Guest Researcher, Széll Kálmán Public Finance Lab, Ludovika University of Public Service, e-mail: furesz.tunde@koppmariaintezet.hu

[3] See: https://www.ksh.hu/stadat_files/nep/hu/nep0006.html

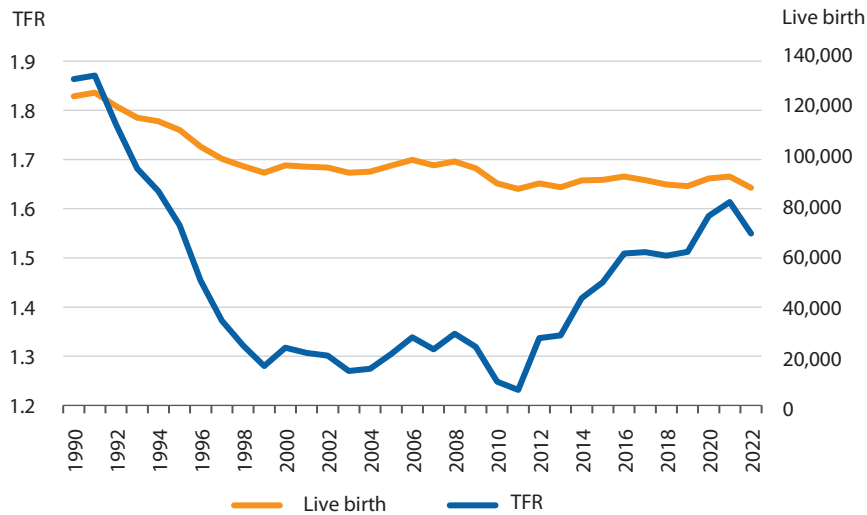

Figure 1: Development of total fertility rate (TFR) and number of live births in Hungary (1990–2022)
Source: Hungarian Central Statistical Office

In parallel, the number of births fell below 100,000, from which it has been unable to move ever since, despite the fact that in the 1990s almost 400,000 more women of childbearing age lived in Hungary. Stable, married relationships have been steadily declining since the 1970s, and the number of marriages halved by 2010 (then doubled again a decade later, by 2021). Meanwhile, the ratio of divorces to marriages has increased. By 2010, Hungary had reached the lowest point not only economically but also demographically. However, the decline in the desire to have children is a world phenomenon of early 2000s, which is most strongly manifested in the Western, developed world, despite the fact that the world's population has reached 8 billion people by 2023.[4] The time of the first childbearing is shifting to an older age in women's lives, this date shifted to the late 20s and early 30s. All these postponements were contributed by the years of prolonged learning, changing values related to societal roles, the transformation of relationship forms, the change in the institution of the family, the devaluation of the institution of marriage and the delay in leaving the parental house.[5]

Long before the 2010 parliamentary elections, the programme makers of the civil-right political bloc stated that radical changes were needed. The new concept was not only limited to the withdrawal of measures and the creation of new ones, but also represented a complete change in attitude compared to the left-liberal government's perception of families. In the government programme entitled National Affairs Policy, it was explained that the whole "social policy should be made family-oriented", so the

4 PISON 2022.
5 DOBLHAMMER–SPÉDER 2024.

planned changes dealt with the issue of supporting families holistically. The civilian government, which took office in 2010, immediately started to build a new system of family support, which was motivated not only by short-term considerations from the beginning, but also by facing the long-term challenges that are reflected in the impact of demographic processes on the economy, labour market, pension and social benefit systems, and on competitiveness and the country's future prospects in general, over several decades.

In this study, we seek for the framework, the strategic and philosophical foundations behind the Hungarian family policy system developed and operated between 2010 and 2022, the challenges faced during the practical application of the theoretical foundations, what has been achieved and what has not been achieved in terms of the demographic and economic situation of the country, as well as the wealth and well-being of families, and what all this means in a European context. In addition, we discuss the new phenomena that national family policies have had to face in the era of threats starting with the pandemic of the 2020s and continuing with the war crisis.

Main characteristics of the family policy strategy of the 2010s

After 2010 a new period has begun in Hungarian public policy in which families are seen as a resource, family support elements are not only budget expenditure items and starting a family is not only a private matter, but where family support is an investment in our common future, and having children is a public matter that is the most personal of all, but still decisive for the service of public interests.[6]

The individualist approach has been replaced by the strengthening of communities, especially the support and protection of families that ensure the survival of the nation. Family planning has become the most personal public matter, which means that the child and the family, in addition to remaining a private matter, appear as a valuable resource to be supported at the level of society as a whole. The fact that family policy had become a prioritised governmental sector could happen due in large part to the traditionally family-oriented thinking of Hungarians,[7] which provided an excellent basis for family-friendly construction. Building on the pro-family attitude of Hungarian people, a number of innovative family support tools tailored to the actual needs of families were introduced, some of which were more and some less successful, but each offered a new opportunity for families in different life situations.

Among other things, this is the specialty of Hungarian family support: it does not offer universal, equal solutions, but tries to offer optional solutions tailored to every life situation. This leaves significant leeway for families by giving them the freedom to decide to make use of it. Unlike the general practice in Europe, which[8] rather classifies

6 Fűrész 2024.
7 Gere 2023.
8 Jenson 2020: 52.

policies focusing on children as family policy tools due to different family and parental interpretations, Hungary considers the whole, intergenerational family as its target group. In many cases, some supports can be used from the foetal age, which also highlights the pro-life nature of the Hungarian family strategy. There are several family support elements that focus on family members of different age groups and different roles at the same time, so that the given supports strengthen each other or are being offered at the same time. Hungarian family policy does not provide separate opportunities for women or men, children or parents, young people or the elderly, but seeks to support the family as a whole and in its entirety, providing as much family support as possible that improves the lives of family members both together and individually (think, for example, of family taxation, where parents make use of the tax allowance jointly, of the home creation program that is tied to the number of children, or of the child care fee for grandparents or of Women40, called grandmothers' pension, which strengthen the connection between grandchildren and grandparents).

Linking work and family is a principle that defines the whole family support structure. Family policy does not operate means-tested, like social policy, since raising children is not a disadvantage. Hungarian family policy focuses on parents working and raising children, whose livelihood is primarily and most securely provided by their working income, which is supplemented and through tax incentives increased by family support elements. This is why many family supports are linked to employment and social security status, thus separating family policy from means-tested social policies. Although it took time for family policy to become an independent policy not only at the level of legislation and words, but also in everyday practice (moreover, as a horizontal policy, it managed to maintain the links with other administrative areas), it then became one of the most accepted and socially supported governmental areas.[9]

Reasons for the strategic importance of family policy

The question arises as to why and for what reasons it is of central importance for Hungary to strengthen families along the operation of a comprehensive and active family policy. Several major areas of expertise can be identified, which makes family policy strategically important for Hungary. In addition to the aspect of improving the population situation and the survival of the nation, the effect of family policy measures on economic welfare and emotional well-being is at least as important,[10] which makes it worthwhile and necessary to support the institution of the family. Family circumstances, prospects and operations fundamentally affect the situation and future of individuals, that is, family members, narrower communities, families and wider communities, the nation.

The reason for the importance of the demographic aspect is that the population of Hungary has been declining continuously since 1981, and the population of the country has decreased by one million in the four decades since then. This is a strong reason why it is undoubtedly one of the most basic goals for Hungary to be able to stop or at least slow

[9] FŰRÉSZ et al. 2023.
[10] FŰRÉSZ 2024.

down the country's population decline. In this, a pronatalist (birth incentivising) family policy can play a significant role. Of course, there are other ways to maintain or increase the population, as the population of a country is affected by three factors: the number of births, the number of deaths and net migration. However, of these three factors, only the increase in the number of births is not associated with significant risks affecting the ethnic and cultural composition of society and is not adapted to pre-existing conditions, that is, the number of elderly people. The Hungarian family policy after 2010 aims to ensure the country's population, and with it its labour market status, by improving the internal birth rate, that is, by endogenous factors.

Although migration may increase the population and the number of people of working age in the short term, it is important how the cultural and ethnic composition of the host society changes in the long term. Employment and demographic policies based on migration must definitely take into account that they can temporarily increase fertility and alleviate labour shortages. Pál Demény strongly pointed out that[11] to treat the demographic problems of Europe by mass immigration is an illusion, because it can only affect the population size in the short term and temporarily. In addition, it is not a reassuring solution from an economic and labour market point of view, because the contribution of those arriving in illegal migration waves to the operation of the host country's economy is much less than the financial burden of their admission. For this reason, economic sustainability cannot be achieved on the basis of immigration alone.[12]

Extending healthy life expectancy and thus increasing the retirement age can also be a temporary solution to demographic and labour market problems, as living longer and working longer can reduce population loss and labour shortages, but in the absence of replacement, this cannot be a permanent solution in the long term. The only forward-looking population solution that can positively affect the future is to increase the number of births, which is risk-free and based on conditions not already existing. In order to stimulate births, it is necessary to mobilise the internal resources of society, that is, to support families and encourage childbearing, which represent a real chance to create a balanced social equilibrium. This is why Hungary strives to address its demographic problems primarily with a population policy whose primary and decisive basis is an extensive system of family support. However, improving the demographic situation and using pronatalist (birth incentivising) tools can only partially be the goal of family policy, although it undoubtedly plays a very significant role in its shaping.

Mária Kopp said: "the birth of every child is our common matter, interest and joy",[13] which is manifested in the fact that the family and the child born in the family, in addition to contributing to the improvement of Hungary's demographic situation, also means raising the employees of the future, thanks to whom the country's economy can remain competitive and the pension and social security system can remain sustainable. In addition, research supports that the child is a source of joy and living in the family is the basis of mental competitiveness, a factor that is one of the main determinants of balanced mental state in the majority of people. The welfare and well-being of families,

11 Demény 2016.
12 Oláh 2015.
13 Kopp–Skrabski 2020.

their quality of life and their comfort affect the functioning of the country as a whole. The value of the family is therefore of decisive importance from the demographic, economic (welfare) and mental (wellbeing) point of view.

Framework of Hungarian family policy since 2010

Hungarian family policy is based on the philosophical and strategic elements described above, combined with specific objectives. When the family policy of the government between 1998 and 2002 was formulated, it was already stated that a family policy can be successful if it is stable, targeted, and, at the same time complex and sufficiently flexible.[14] Long-term predictability is of decisive importance for childbearing and upbringing, and one of the greatest values of family policy is its ability to provide stability to families for the responsible upbringing of children. It is important that this is done in a targeted way, as families have different needs in different family life situations. It is a distinct advantage if it provides many different support options in a complex way, which adapt flexibly to changes in the lives of families due to external or internal reasons.

Family policy is linked to the connection between work and family life, to the remuneration of parents working and raising children, when it states that having children should be a financial advantage for a family and not a disadvantage. This approach goes beyond the general family policy goal of compensating for the financial disadvantages arising from having children. Hungarian family policy wants to achieve more: that in terms of income, wealth and employment, those who raise children should be better off than those who do not, not only in the same way. This goal, which goes beyond a compensation for disadvantages, is served by a wide range of family support elements:

- the various tax benefits (family tax and contribution relief and targeted personal income tax exemptions)
- favourable financial schemes, loans and loan waivers for families with only children or in the case of having children
- subsidies to support the growth of wealth (e.g. home creation, car purchase support)
- labour market benefits (insurance-linked childcare benefits, additional leave days for working parents)
- child welfare measures, which can also reduce the burden on families by providing certain services (free nursery, free and compulsory kindergarten, free textbooks for all students, discounted meals for children)

The priority part of family policy is home creation, helping families to buy their own apartment or house. The importance of an independent, own home is also decisive for the development of a family lifestyle and the improvement of the financial situation of families. Owning a home is a manifestation of long-term commitment, which is a necessary prerequisite for getting married and having children. A proprietary home is an imprint of a lifestyle based not on the contingency of "anywhere," but on the

[14] Lakner 2012.

safety and certainty of "somewhere". This feeling of belonging "somewhere", along with attachment and remaining connected to our roots is more pronounced in families with children than in those without children, and home means predictability and security for them. In addition, one of the prominent manifestations of the middle class of families with children is the possession of their own home.[15]

The self-evident, yet controversial approach of Hungarian family policy is that it should be based primarily on mothers. To mothers, without whom – in the words of Martin Luther – quite simply "the world would not survive", which means not only the ability to bring children into the world, but also the daily, unpaid work in the family, the majority of which is carried out by women everywhere in the world. According to Hungarian calculations, if unpaid, invisible work done primarily by women, in families or voluntarily, were included in GDP, it would be 25% higher.[16] In addition, it should not be forgotten that care provided by women is no longer an obvious endowment, but an activity related to women's own decisions, which is why it is of utmost importance that the economic and social recognition and appreciation of motherhood be at the highest possible level. In the case of a woman, in order to make a decision in favour of motherhood, it is necessary to provide the supports that make becoming a mother the most desirable life situation for a woman, not only spiritually but also financially. This is why Hungarian family policy positively discriminates against mothers and applies tools and measures that target only mothers and not parents in general (for example, 100% of the previous salary is provided for maternity leave or mothers with four children and mothers who have children under the age of 30 receive a personal income tax exemption). Certainly, most of the family support measures can also be used by fathers based on the decision of the parents, so the strengthening of the important and decisive role of fathers in the family-by-family support has not been impaired, in fact, it has become more pronounced. An example of this is: previously, only one of the parents was entitled to additional leave days after the birth of the child, but after 2012, both of them were entitled to the same leave.[17]

Legal background to support families

In the Hungarian legal system, family policy appears in some way at all levels of the legal source hierarchy, from the Fundamental Law to local regulations, thus providing a wide range of protection to family values, children and parents. Family policy, which provides support for families, is a horizontal sector related to many other policies, and accordingly, we can find regulations related to family support in many legal sources of the Hungarian legal system. In the following, the aim is not to present the Hungarian family support system in the Hungarian legal source hierarchy in full, but to demonstrate with examples, highlighting the laws that have a significant and direct impact on families' lives.

15 György 2024.
16 Szép – Szőkéné Boros 2010.
17 Veres 2012.

Family policy in the Fundamental Law

In the National Avowal section of the Fundamental Law, there is a change of attitude that refers to the importance of focusing on families: "We hold that the family and the nation constitute the principal framework of our coexistence, and that our fundamental cohesive values are loyalty, faith and love."

The definition of the family and the need to protect it in Hungary are set out in the Fundamental Law[18] as follows:

> "(1) Hungary shall protect the institution of marriage as the union of one man and one woman established by voluntary decision, and the family as the basis of the survival of the nation. Family ties shall be based on marriage or the relationship between parents and children. The mother shall be a woman, the father shall be a man.
> (2) Hungary shall support the commitment to have children.
> (3) The protection of families shall be regulated by a cardinal Act."

Article XV states that "By means of separate measures, Hungary shall protect families, children, women, the elderly and those living with disabilities."

Article XVI provides for the rights and duties of parents and children as follows:

> "(1) Every child shall have the right to the protection and care necessary for his or her proper physical, mental and moral development. Hungary shall protect the right of children to a self-identity corresponding to their sex at birth, and shall ensure an upbringing for them that is in accordance with the values based on the constitutional identity and Christian culture of our country.
> (2) Parents shall have the right to choose the upbringing to be given to their children.
> (3) Parents shall be obliged to take care of their minor children. This obligation shall include the provision of schooling for their children.
> (4) Adult children shall be obliged to take care of their parents if they are in need."

Due to the protection of family values and child protection, the Parliament has voted on the amendments to the Fundamental Law several times in recent years, as follows.[19]

The Fundamental Law was amended for the first time in 2013, when a precise definition of marriage was introduced in the Fundamental Law, defining that marriage can only be established as a relationship between a man and a woman.

In 2019, Article 7 (3) was given a new provision, defining the person of the mother and the father as follows: "The mother shall be a woman, the father shall be a man."

[18] See: https://njt.hu/jogszabaly/en/2011-4301-02-00
[19] Varga–Mázi 2022.

Cardinal law on family protection

Act CCXI of 2011 on the protection of families, that is, the Cardinal Law on Family Protection, as one of the foundations of constitutional state political life, was established on[20] the basis of Article L (3) of the Fundamental Law. Its creation was justified not only by the provision of the Fundamental Law, but also by the fact that several laws with family content, which were in force in parallel or even contradictory, regulated and influenced the daily life of families, which did not provide an actual framework for the protection and support of families. The law creates the predictability, stability and security in the regulation of families that was lacking in previous years. This is illustrated, for example, by Section 22 (3), which states that, in order to ensure the security and guarantee of family support, "In case the provisions on the amount of support and on the period and criteria of eligibility for support are amended, a period of at least one year after promulgation of such amendment shall be provided in preparation for its coming into force, unless it is favourable for the beneficiary of such provision."[21]

The law emphasises that the family is the repository of the nation's survival, as the smallest unit of society, without whose balanced functioning there is no harmonious society. The law provides a framework regulation insofar as it specifies the principles for the protection of families, which set out the direction of state duties related to the family and marriage as recognised and to be protected values and institutions, as well as the related state obligations. It defines the most important provisions regarding the content of the various rights, obligations and discounts, while the detailed rules are contained in separate laws that require a simple majority, especially those that already exist.

An important part of the law is the legal status of the family and the definition of the obligations and rights of the parents and the child, which partly meant the regulation of the legal provisions in force at the cardinal level of the law. The law also provides special protection for parents raising children in the field of employment, whereby the legislator wanted to strengthen the existing conditions in labour law rules that ensure harmony between work and family.

The cardinal law expresses the social and family policy paradigm shift that took the broader issue of family support to a higher level, and as a result, changes had to be made in lower-level legislation related to the protection of families and children.

Family support at the statutory level

There are a number of laws that regulate different dimensions of family life related to family policy, in addition to the family law chapters of the Civil Code, the Labour Code, the laws on tax or the Criminal Code contain passages related to family policy in the same way as the laws on family support, health insurance benefits or the protection of children. This wide range of laws that directly affect families makes family policy a truly diverse, horizontal policy.

20 Szabó 2012.

21 Act CCXI of 2011 on the protection of families.

Among the numerous laws, we highlight Act LXXXIV of 1998 on the support of families, which was promulgated in the first year of the first Orbán government, on 24 December 1998, as an example. Its significance is shown by the fact that after the austerity years of the Bokros package, it regulated the cash benefits of families uniformly. This law placed the system of financial support related to raising children on a completely different basis.[22] For the sake of unification, the rules on various subsidies – which were previously regulated in several laws – were included in one law. In the 25 years following the entry into force of the law, the law has been amended more than a dozen times in order to better adapt financial family support to the changed living conditions and needs of families. Despite its comprehensive nature, this law regulates only a small part of the wide range of family support elements, covering only cash benefits offered on a universal basis.

Therefore, when we talk about supporting families in a comprehensive sense, the rules of countless laws should be considered. Family law passages appear in the Civil Code, the legislation relating to the factual situation "domestic violence" instead of "violence within the family" is part of the Criminal Code, family taxation or other tax allowances for families are included in tax laws, the regulation of family allowances subject to insured status are found in the Health Insurance Act, child welfare measures and services are part of the Child Protection Act, the employment of parents is regulated by the Labour Code and we could go on. Thus, the regulation of family support is very diverse and diversified, posing a significant challenge for codifiers, but even more difficulties for legal practitioners at different levels of state administration.

Regulations on family benefits at the decree level

Detailed rules of family policy are usually displayed at the decree level. Family policy decrees specifically define a multitude of rights and obligations for families, support schemes and other regulatory aspects. Decrees on family policy are usually made at the initiative of the executive bodies, the government or the ministry. These decrees detail how the laws will be implemented and the specific measures in the family policy areas. The decrees allow the government to act quickly in situations (such as a pandemic emergency) that require it. The purpose of the decrees is to detail the practical application of the legislation and to take concrete implementing measures to support families' lives.

This includes the regulation of one of the priority areas of family policy, home creation, which was specifically implemented at the decree level. The Family Housing Subsidy (CSOK) can be seen as the flagship of the home creation program, which, although it actually covers one subsidy (although undoubtedly in many sub-variants), was already regulated from the beginning by two decrees: Government Decree No. 17/2016 (II. 10.) on Family Housing Allowance for buying or extending second-hand homes and Government Decree No. 16/2016 (II. 10.) on housing subsidies for buying or building a new home.

[22] Dani – Kottáné Baranyi 2018.

Regulations on family support at the local level

Local municipalities can make and apply a number of regulations in the interest of families, to improve their living conditions, to support them and to strengthen the local community. These regulations are multifaceted and affect families in different areas. Some examples of areas in which municipal assemblies can make local government decrees affecting families are: family allowances and benefits, housing allowances, childcare, kindergarten and school allowances (such as grants for tuition waivers, school meals or student scholarships), cultural and recreational opportunities (such as library use, free or discounted attendance at sports events or cultural events), health and social services, but also municipalities can create an appropriate environment for families by means of regulations with measures that make families feel more at home in the settlement, such as the creation of family community spaces or family-friendly transportation solutions (pass for parents with small children, children's pass). For example, the system of transport and travel discounts started from a local, city level, and after several years, some of its elements became nationwide (for example, in Kaposvár, there has been a pass for parents with small children since 2003, which was introduced in the capital in 2009, where children under the age of 14 can travel for free since 2021, and by 2024, travel has become free for children under the age of 14 throughout the country). Thus, travel discounts first appeared at local levels, and then with the introduction of the discounted country and county pass, these solutions rose to the level of government.[23]

In the Hungarian legal source hierarchy, family policy, elements of the family support system, its various appearances and implementations are present at all levels. As a relatively new field, its regulation is very fragmented, which reflects and represents its horizontal nature, but at the same time it shows the vertical nature that in the hierarchical system it is present in some way everywhere from the highest level of legislation, the Fundamental Law, to the lowest levels.

Insight into Hungarian family policy measures

In order to alleviate the financial burden of raising children and put working parents in a financially advantageous position, family policy supports families with tax benefits, childcare and schooling benefits and favourable financial constructions. Most of the financial support is linked to a social security relationship, but there are also some that are provided on a universal basis for every child. Direct support for children also means support for families, so indirect family support includes a number of measures in the field of public education and in relation to early childhood education and care. In creating a work-life balance, through the cooperation of employment policy and family policy, parents, and in some cases even grandparents, can benefit from many discounts and opportunities, which indicates the intergenerational nature of the family support system. Research proves that, in addition to a stable relationship and income from work,

[23] Government Decree No. 91/2023 (III. 23.) on the amendment of government decrees on transport.

an own home is the most important factor for having children and raising them, so a number of measures have been introduced in the field of housing in Hungary.

One way to take on the financial burden of families is to increase their net income. This is ensured by different tax benefits, of which up to several can be applied at the same time. These include the family tax allowance, the tax benefit for newly married couples, the personal income tax (PIT) exemption for young people under the age of 25, the PIT exemption for mothers under the age of 30 and the PIT exemption for mothers with four or more children.

The family tax benefit is the flagship of the Hungarian family support system, which was introduced in 2011, establishing family-type taxation in the country. Already in the case of a pregnancy after the 91st day, a discount can be claimed in relation to the tax base, the amount of which depends on the number of children in the family. Since 2014, the discount can also be applied from the contributions, so lower-income families have also been able to take advantage of the opportunity.

Another important pillar of support for families with children is the direct cash benefits provided to them. These include universal forms of support (family allowance, maternity allowance, child care allowance, child raising allowance, child home care allowance) or benefits linked to social security contributions (employment relationship) (infant care fee, child care fee).

Family allowance has existed in Hungary since 1912, and throughout its history of a century, it was initially available only to a certain part of families in a wide variety of ways, but for decades it has been the main non means-tested subsidy, although tied to the number of children and the status of the family (single-parent or two-parent family). Although attempts were made in the 1990s to link it to an income limit, it was eventually retained as a universal benefit for all children. In fact, it consists of two parts, which are child-raising benefit and schooling support. The child-raising benefit is due from the birth of the child until 31 October of the year of becoming a compulsory student, the schooling support is due for the entire duration of the compulsory education, until the end of secondary education, unless the student does not continue school after the end of his/her compulsory education (at the age of 16).[24] The right to family allowance may be terminated or its payment may be suspended since the amendment of the law in 2011 if the child misses 50 school hours in the school year or 20 school days in the kindergarten without justification. As a result of the family allowance subject to attendance at school and kindergarten, the number of unjustified absences decreased significantly.[25]

Family benefits linked to employment, increased by more than 20% between 2010 and 2022,[26] which shows that the number of employees has increased significantly among those who have children, so there have been more mothers who worked before the birth of their children. This is also supported by employment data, as the employment rate of women aged 25–64 in the maternal age group increased from 74% to 85% between 2010 and 2023.[27]

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24 KRISTÓ 2015: 148.
25 HERMANN 2018.
26 See: https://www.ksh.hu/stadat_files/szo/hu/szo0006.html
27 See: https://www.ksh.hu/stadat_files/mun/hu/mun0025.html

The infant care fee is due during maternity leave up to the child's age of six months and its amount is 100% of the former calendar day income of the mother. Thanks to it the income of mothers in the postpartum period is higher than their previous net wages, as only 15% personal income tax is deducted from it. This compensates for the situation that during the breastfeeding period mothers usually can't earn money.

During parental leave, the mother or father is entitled to child care fee (70% of previous wage with a ceiling of, 140% of the prevailing minimum wage) based on the family's choice and during this period, it is possible also to work, i.e. parents can have their salary and childcare benefit at the same time. This measure shows that in Hungary parents necessarily don't have to choose between work and child care, there is a wide range of options upon the freedom of family's decisions, for example university students and grandparents are also eligible for child care fee if this is the family's choice.

The baby expecting subsidy is one of[28] the most popular form of family supports after its introduction in 2019, it significantly turned the desire to marry and have children in Hungary in a positive direction. It is a free-to-use, interest-free loan of up to HUF 10,000,000 (HUF 11,000,000 since 1 January 2024), which can only be used by married couples. The loan is interest-free from the beginning, and at the birth of the second child, 30% of the outstanding debt shall be released, and at the birth of the third child, the entire outstanding debt shall be released.

Many students attending higher education institutions have difficulty in financing their studies, for which student loans may be the solution, which is a favourable credit structure, but still meaning that new graduates are starting their lives with a loan, which may hinder the establishment of a family. Different student loan waivers related to the birth of children offer a solution to this, for example the entire debt will be forgiven in the case of women who give birth before the age of 30.

Institutional education and care of children in Hungary is historically widespread. One of the basic pillars of child and family protection is the health visitor service, which was founded in 1915 and is considered a hungaricum. The duties of the health visitors are extremely diverse, maternity care, childcare, women's protection, and the organisation of various screening tests are all part of their duties. Thanks to their effective work, among other things, the vaccination of children in Hungary is very extensive, almost complete, in order to prevent various diseases.

The daily childcare nursery system for children aged 0–3 underwent a significant transformation; it's aim was to have a nursery in every settlement where at least 40 young children under the age of three live. Thanks to the transformation, the number of nursery places doubled by 2022 compared to 2010, and nursery care is available in three times more settlements.[29]

As of September 2015, participation in free kindergarten care is mandatory for children from the age of 3, compared to the previous age of 5. With this, mothers can return to the labour market earlier, and for children, especially disadvantaged children, this has created a serious opportunity for socialisation and inclusion.

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28 Nyírády et al. 2020.

29 See: https://www.ksh.hu/stadat_files/szo/hu/szo0006.html

The physical and mental protection of children in nursery, kindergarten and school is a decisive element of the family- and child-centred social policy after 2010, major measures were the launch of healthy and free children's catering (meal), free textbook supply in public education and daily physical education to all pupils.

Support for parents working and raising children appears in the Labour Code in the same way as for certain family allowances.

The Labour Code, adopted in 2012,[30] aimed to make family and work as compatible as possible, and to enable employees to cope in both areas. One of the tools for this is the different types of leave for children, for example paternity leave or additional paid leave of both employed parents until the child's age of 16.

Home creation has an important role among Hungarian family policy measures because one of the prerequisites for starting a family is the creation of your own home. The Family Housing Subsidy (CSOK) – as a non-reimbursable grant, and later as an interest-subsidised loan – serves this purpose. For the purchase of a new apartment, a family with three children or planning to have three children may have been entitled to a total of HUF 25,000,000, of which HUF 10,000,000 is the non-reimbursable subsidy (CSOK) and HUF 15,000,000 is the 3% interest-subsidised CSOK loan. From 1 January 2024, CSOK Plus, an interest-subsidised loan scheme, appeared as a renewed form of support. In this context, a loan with a maximum interest rate of HUF 15,000,000 for one child, HUF 30,000,000 for two children, and HUF 50,000,000 for three children can be applied for a property purchase. With CSOK, the government supported the home creation of almost 250,000 families between 2015 and 2023,[31] meaning that a quarter of Hungarian families were able to move to a more suitable home, thanks to CSOK.

Home renovation support was also available in a defined period between January 2021 and December 2022. This program has helped families with at least one child under the age of 25 renovate their home. Half of the renovation costs were subsequently reimbursed by the state, up to a maximum of HUF 3,000,000.

Major achievements of family policy between 2010 and 2022 in EU comparison

The effectiveness of family support can be evaluated and interpreted in a number of ways and in several dimensions, but due to the complexity of family policy, a uniform indicator system cannot be used to measure their effectiveness. For this reason, a number of outcome indicators are presented below, which take into account certain demographic, economic and competitiveness effects of family support, without being exhaustive.

30 Act I of 2012 on the Labour Code.

31 See: https://kormany.hu/hirek/meghaladta-az-ezret-a-csok-plusz-igenylok-szama

One but not exclusive role of family supports is to improve the demographic situation. In Hungary, this is a particularly important question, which is related to historical experiences, as Hungarians, as a people living among great powers for centuries, had to fight constantly for the survival of their population, their culture and the nation in general. Johann Gottfried Herder predicted the disappearance of the Hungarian people[32] as early as 1791, when he discussed that "the language of a small number of Hungarians among others may not be discovered after centuries". This is why the demographic aspect is so important for Hungary, especially if we look at the population decline of the last decades. The population of Hungary has been declining continuously since 1981, and the population of the country has decreased by one million in more than four decades since then (although there are still half a million more Hungarians living within the borders of Trianon than in 1950). For this reason, one of the most basic goals is for Hungary to be able to stop or at least slow down the country's population decline. The development of the population is affected by three factors: births, deaths and net migration, but only the first of them is directed exclusively to the future and does not pose significant risks like illegal migration. For this reason, Hungary chose the lengthy and more difficult path compared to the migration solution, increasing the number of births by supporting families. Although there has not yet been a breakthrough in this field in nominal terms, if we look at the indices of population indicators comprehensively, we can see the results of the pronatalist family policy that encourages childbearing.

In Hungary, the desire to have children and get married was at a historic low in 2011. In the European Union, Hungary had the lowest total fertility rate with a value of 1.23 (which shows that if fertility data for a given year were to remain constant, a woman would give birth to an average of 1.23 children in her lifetime)[33] and the country ranked third worst in the number of marriages per thousand people (3.6 marriages per thousand inhabitants on average).[34] By 2022, the fertility rate increased to 1.56, surpassing not only the EU average (1.43), but also all Western, Northern and Southern European Member States (except France). Hungary has had the sixth best fertility indicator among the 27 Member States of the European Union by 2022, although it is still far below the 2.1 level that ensures the level of reproduction. It should be added that in no country in Europe does the fertility rate reach the 2.1 level required for reproduction.

[32] Herder 1791.

[33] See: https://ec.europa.eu/eurostat/web/population-demography/demography-population-stock-balance/database

[34] See: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Marriage_and_divorce_statistics

2011			2022		
Ireland	2,03	1.	1.	France	1,79
France	2,01	2.	2.	Romania	1,71
Sweden	1,90	3.	3.	Bulgaria	1,65
Finland	1,83	4.	4.	Czechia	1,64
Belgium	1,81	5.	5.	Slovakia	1,57
Netherlands	1,76	6.	6.	Hungary	1,56
Denmark	1,75	7.	7.	Denmark	1,55
Estonia	1,61	8.	8.	Slovenia	1,55
Slovenia	1,56	9.	9.	Ireland	1,54
Lithuania	1,55	10.	10.	Sweden	1,53
EU-27	1,54		11.	Belgium	1,53
Luxembourg	1,52	11.	12.	Croatia	1,53
Bulgaria	1,51	12.	13.	Netherlands	1,49
Croatia	1,48	13.	14.	Latvia	1,47
Romania	1,47	14.		EU-27	1,46
Malta	1,45	15.	15.	Germany	1,46
Slovakia	1,45	16.	16.	Portugal	1,43
Czechia	1,43	17.	17.	Estonia	1,41
Austria	1,43	18.	18.	Austria	1,41
Italy	1,42	19.	19.	Cyprus	1,37
Greece	1,40	20.	20.	Finland	1,32
Germany	1,39	21.	21.	Greece	1,32
Cyprus	1,35	22.	22.	Luxembourg	1,31
Portugal	1,35	23.	23.	Poland	1,29
Spain	1,34	24.	24.	Lithuania	1,27
Latvia	1,33	25.	25.	Italy	1,24
Poland	1,33	26.	26.	Spain	1,16
Hungary	1,23	27.	27.	Malta	1,08

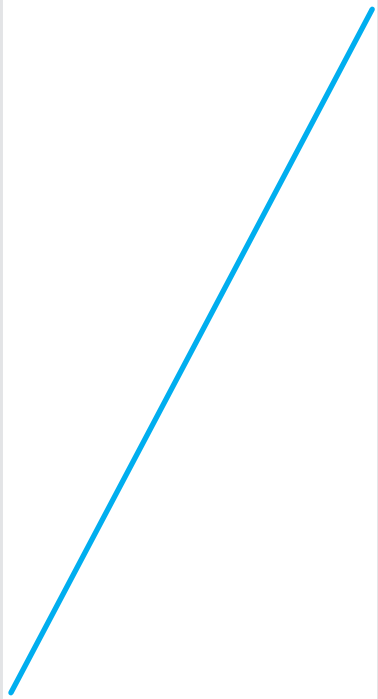

Figure 2: Total fertility rate (TFR) in EU member countries in 2011 and 2022

Source: Eurostat

Paradoxically, despite the increase in the desire to have children, there is no increase in the population of the majority of Central and Eastern European states, which highlights the fact that in the western half of Europe, it is mostly not natural increase, but only migration is the cause of stagnation or a slight increase in the population, that is, the maintenance of the population of the European Union is clearly and exclusively the result of positive net migration. Between 2012 and 2022, the population of the EU increased by 6 million people, despite the fact that the fertility rate decreased by 5 percentage points.[35]

Therefore, migration may temporarily contribute to the increase of the population, but in the long term it cannot compensate for the natural decrease resulting from the balance of births and deaths. In the European Union today, the community is growing

[35] See: https://ec.europa.eu/eurostat/web/population-demography/demography-population-stock-balance/database

with fewer than 4 million newborns per year, the share of those under the age of 14 has fallen below 15%, while that of those over the age of 65 has exceeded 20%, which predicts the further aging of the old continent.

In addition, the data of the EU statistical office reveals that in 2022, one in five newborns in the European Union was born to foreign mothers with a background of outside the European Union. In Austria, Belgium, Germany, Sweden, Spain and Malta, every third, in Portugal, Ireland, France, every fourth, in Italy, the Netherlands, Denmark, every fifth newborn has a foreign mother, in Hungary only 5% of the children have foreign-born mothers. In Luxembourg, two out of three children are born to foreign mothers. The mothers of one in four newborns in Germany and Sweden come from outside the European Union.[36] Meanwhile, the fertility rate, which shows the average number of children per woman, has decreased from the previous two to around one and a half (for example, in Sweden). Two-thirds of foreign mothers stem from non-EU countries, mostly from Asian or African backgrounds.

Based on these data, it can be concluded that the illusion of stopping population decline by migration, "demographic idealism", foreshadows[37] serious social effects, as the famous Hungarian demographer Pál Demény predicted decades ago when he wrote that although "migration policy can temporarily alleviate age distortion in the short term, but probably only at the cost of radically transforming the cultural and ethnic composition of the host society".[38]

A stable relationship is considered the hallway of having children, as more children are born in marriage than in other relationships. For this reason, it is noteworthy that the number of marriages in Hungary has doubled by 2021 compared to 2010, the crude marriage rate has already increased to 7.4 in 2022, which was by far the highest in the European Union (the EU average is only 3.9). As a result, the number of children born out of wedlock has decreased significantly in Hungary, and today only a quarter of children are born out of wedlock (formerly every second newborn). The number of divorces, as well as the number of abortions, has steadily decreased, from which it can be concluded that from 2010 the long decades of declining demographic processes had stopped and a trend reversal occurred.

Fortunately, this was not the case, despite the fact that it was also necessary to struggle with a special Hungarian characteristic during the 2010s: this is the negative Ratkó effect, which had an impact on births and deaths. Its essence is that the members of the large age group born during the prohibition of abortion in the Ratkó era of the 1950s retired in the 2010s, at an age when the frequency of deaths is increasing, and therefore the number of deaths has not decreased despite the increase in the healthy average life expectancy. In terms of births, this Hungarian characteristic also had negative effects, as by the 2010s, the population of those born in the 1970s was leaving the ideal age of childbearing, and the number of women of so-called childbearing age decreased at an unprecedented rate year by year. Despite the fact that Hungarian women had more children on average (that is, fertility increased), as their number was

[36] Fűrész–Szakáli 2024.
[37] Bradley-Farrell 2023.
[38] Demény 2016.

constantly decreasing (the number of the 20–40 age group decreased by more than 300 thousand between 2010 and 2022), the number of births could not increase significantly with the increase in the fertility rate indicating the desire to have children. Therefore, Hungary embarked on the implementation of a pronatalist, birth-incentivising policy in the most difficult situation possible.

The economic incentivising and welfare-increasing role of Hungarian family supports is shown in the improvement of employment, income, wealth and poverty data, that is, welfare indicators. In addition to the reproductive function of the family, production and consumption functions are combined, fundamentally influencing economic processes. Production, that is, labour and the income derived from it, ensures welfare based on consumption, and higher consumption strengthens the entire economy, invigorates it, creates new jobs, increases production, investment and savings, thereby improving the country's competitiveness. In modern welfare societies, children growing into adults are a guarantee of the future generation's ability to pay taxes and contributions. Due to the relatively high rate of income redistribution, individual efforts to raise children are seen as a benefit at the level of society.[39] Therefore, it is justified to consider family support elements as an investment towards society as a whole, and this is also the reason why one of the most important goals of family policy is that those who are involved in the creation of public goods, that is, in the upbringing of future employees, should receive a premium, that is, they should be financially in a more advantageous situation through family supports.

Hungary has set itself the goal of building a work- and family-based society, as employment and having children can only be mutually reinforcing and not inadvertently mutually exclusive.[40] In Hungary, the increase in employment, especially the increase in the participation of mothers in the labour market, was accompanied by an improvement in the desire to have children, that is, in fertility. It is especially striking that, according to Eurostat data, the employment rate increased the most among women with large families and young children between 2010 and 2022 (220% for women with three or more children and for women with children under the age of six)[41] which were the highest increasing in the EU. The simultaneous increase in employment and childbearing indicates that the work-life balance is emphasised at individual level and at the level of society as a whole in Hungary after 2010, and the reconciliation of work and family is realised at both micro and macro levels.[42]

The economic stimulus effect of family support elements is mostly related to employment, which increases the welfare and boosts the economy of the whole society, which then provides a predictable, secure basis for having children and raising them. This is the cycle that needs to be maintained in order to preserve the unity of the family. Strengthening family cohesion is already a saving in itself, as the disintegration of families causes significant costs for both the individual and the state. This is the economic reason why it is worth spending on the stabilisation of families and relationships, which

39 ANDORKA 1987.
40 NOVÁK–FŰRÉSZ 2021.
41 See: https://ec.europa.eu/eurostat/databrowser/view/lfst_hheredch__custom_13116895/default/table?lang=en
42 FŰRÉSZ 2024.

is much more beneficial from the point of view of society as a whole than the benefits that seek to compensate for the costs arising from families falling apart, often creating a kind of welfare dependence on the members of the affected families.[43] Linking family support elements to employment also played a decisive role in decreasing poverty. Compared to 2014, the rate of those at risk of poverty and social exclusion decreased the most in Hungary, and in 2023, the rate of those exposed to poverty in Hungary was lower than the EU average, we were ranked 13th in the EU ranking as compared to the previous 24th place.[44]

2011			2022	
Bulgaria	49,1	1.	1. Romania	32,0
Romania	40,9	2.	2. Bulgaria	30,0
Latvia	40,1	3.	3. Spain	26,5
Lithuania	33,1	4.	4. Greece	26,1
Croatia	32,6	5.	5. Latvia	25,6
Hungary	31,5	6.	6. Lithuania	24,3
Greece	31,0	7.	7. Estona	24,2
Ireland	30,9	8.	8. Italy	22.8
Poland	27.2	9.	EU27	21.4
Spain	26,7	10.	9. Luxembourg	21,4
Cyprus	24,6	11.	10. Germany	21,3
EU-27	24,5	12.	11. Croatia	20,7
Portugal	24.4	13.	12. France	20.4
Estonia	23.1	14.	13. Portugal	20,1
Malta	22,1	15.	14. Malta	19,8
Belgium	21,0	16.	15. Hungary	19,7
Slovakia	20.6	17.	16. Ireland	19,2
Germany	19,9	18.	17. Belgium	18,6
Slovenia	19,3	19.	18. Sweden	18,4
France	19,3	20.	19. Denmark	17,9
Austria	19,2	21.	20. Austria	17,7
Sweden	18,5.	22.	21. Slovakia	17,6
Finland	17,9	23.	22. Netherlands	17,0
Denmark	17,6	24.	23. Cyprus	16,7
Luxembourg	16,8	25.	24. Poland	16,3
Netherlands	15,7	26.	25. Finland	15,8
Czechia	15,3	27.	26. Slovenia	13,7
			27. Czechia	12,0

Figure 3: People at risk of poverty and social exclusion in 2011 and 2022 in EU member countries
Source: Eurostat

[43] Goodhart 2019: 292.
[44] See: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Living_conditions_in_Europe_-_poverty_and_social_exclusion&oldid=584082

In addition to employment, the change in the wealth and income situation of families is an important indicator of the increase in family well-being and thus the economic performance of a country, which also indicates the development of the situation of the middle class. Based on these indicators, the share of the middle class in Hungary in 2021 was 62.1% compared to 49% in 2011.[45] The widening and expansion of the middle class is mainly due to the increase in the welfare of those living in a family and the significant increase in per capita income in all family types.

From the point of view of social future prospects, the financial growth of families is a kind of manifestation of care, the ability to self-determination, on the basis of which individuals can control their destiny.[46] This future-forming care is the key to the growth of families. Without it, there would be no economic growth, just as there would be no family support elements without economic growth. In Hungary, an economic policy to stimulate demand has created the financial foundations for a complex system of family support, which uses tools that in themselves react on the economy and stimulate growth. Active government, which includes encouraging employment and home creation, can significantly affect the growth of families, but in order for family support to have a sufficient impact, the sustainability and stability of the state budget must be continuously ensured, even in challenging times such as the pandemic.[47]

The effect of family support elements on the quality of life, comfort and well-being is related to the socialisation and psychological protection function of the family. Research proves that among the factors that improve physical and mental health, the role of family, a stable relationship and social support stands out, "a good marriage and a loving, harmonious family are serious health factors" and "one of the most important sources of happiness is an inclusive and supportive community".[48] The state of mind is decisive when making life decisions that then affect the quality of life and functioning not only of the individual, but of society as a whole. In connection with this, Hungary's cardinal law on family protection states: "There is no well-functioning society without harmoniously functioning families." The results of the research prove that it is worth supporting families and promoting a family lifestyle in itself because the family has a significant role in protecting physical and mental health, it is a "positive, health-preserving cultural micro-community that helps overcome stressful situations",[49] which improves resilience, especially needed in times of crisis. Therefore, the importance of the family is also the basis of social immunity from a spiritual point of view.[50]

The large-sample Hungarostudy research,[51] which measures the mental state of Hungarians, found that the well-being indicators of Hungarians, especially women, improved compared to 2012. Previously, on a scale of one to ten, the average level of satisfaction and happiness was less than seven, but by 2021, it had risen to more than seven, and for those raising minor children it had risen to more than eight. The

45 György 2024.
46 Szántó et al. 2022.
47 Sági–Lentner 2022.
48 Kopp–Skrabski 2020.
49 Kopp–Skrabski 2020.
50 Fűrész 2024.
51 Nagy – Horváth-Varga 2022.

month-by-month research conducted by the KINCS Wellbeing Barometer[52] since 2020 indicates that those raising young children and those in stable relationships feel best when judging their own health, satisfaction and happiness. On a scale of one to ten, they give the highest values when asked about their happiness, that is, the child and the relationship are factors that increase the feeling of happiness.

New challenges – new solutions

The 2020s brought new challenges to the Hungarian family support system. The active and consistent family policy until then had to face new phenomena such as the pandemic caused by the coronavirus, and Russia's war of aggression against Ukraine that broke out in February 2022, which created a completely new situation at the macroeconomic level and thus in the daily life of families. Families were just beginning to get out of the difficult situation caused by the epidemic that claimed lives and caused the economy to decline, and began to process the shocks suffered due to Covid, when the war broke out in the country's neighbourhood, causing another economic crisis.

Since the 2020s, the main task of family policy and social and economic policy in general has been to protect Hungarian families from the negative effects of external conditions. During the pandemic, a significant challenge was the transition to digital education, the closure of kindergartens, nurseries and other restrictions that hindered work. In this situation, it was helpful to extend the moratorium on loan repayment or childcare benefits. In 2021, a number of restart measures were introduced, which were intended to stabilise the financial, income and welfare situation of families: food and gas price stop, home renovation program, wider use of the fringe benefit SZÉP card (Széchenyi Leisure Card). In February 2022, in order to compensate for the shock caused by the pandemic, the government refunded the personal income tax paid in the previous year to all parents raising children (regardless of the number of children) in a lump sum, up to the average wage at that time, that is, up to HUF 809 thousand could be returned to a working parent. This significant amount has helped families to be more financially prepared for the situation burdened by inflationary growth caused by the energy crisis that has been unfolding since the summer of 2022. The regulation of overhead prices, as well as measures to curb inflation (such as the price monitoring system), have contributed to tackling the difficulties.

The 2022 census further highlighted population structural problems that require even more attention. Age structure, population decline, the increase in the number of childless people are phenomena that require a new approach in many respects. The population of the country decreased to 9.6 million, still, it is a positive development that the number of children under the age of 14 has not decreased. However, it is telling that the proportion of childless has increased in the adult population.[53] Statistical data also reveal that, like in other developed countries, the age of childbearing is extending in

[52] Fűrész–Wappler 2022.
[53] Szilágyi–Rövid 2024.

Hungary,[54] and according to medical experiences, this is the main reason why more and more couples are struggling with fertility issues. In order to mitigate the negative effects of these processes, the Hungarian government introduced several measures in 2023 that specifically encourage those under the age of 30 to have children: mothers who have children under the age of 30 are exempt from personal income tax, in this previous case their entire student loan is remitted, and as a result of the changes, the baby expecting subsidy is more strongly targeted at younger age groups.

In the year 2023, as a result of the energy and economic crisis caused by the war, Hungary was characterised by extremely high inflation, which has also put families in a difficult position. In order to compensate for the negative effects, new family policy measures were introduced and announced in 2024. From 1 January, the CSOK Plus interest-subsidised home creation loan was introduced with significantly increased loan amounts. In addition, the limit amount of the baby expecting loan was also increased. In order to make these discounted loans available to special taxpayers as well, several facilitations were introduced for them: banks must recognise half of their proceeds as income during the credit assessment and they only need to prove a social security relationship of one year when receiving the subsidies. The nursery subsidy is available for working parents with small children, which can be used as a monthly non-refundable amount (HUF 50,000 – approximately EUR 125) and can be used for the child's nursery meal and care fee in all rural nurseries in the country. However, the most important novelty for families might be the promise of the doubling of the family tax and contribution allowance. According to the plans, in 2025, the amount of the family tax allowance – that affects all working parents but has lost a lot of its value – will be doubled. This can contribute to economic growth by encouraging consumption and improve the demographic situation by encouraging the birth of siblings.

The deterioration of macroeconomic indicators in the years after 2020 was reflected in the daily lives of families, and the decline in real wages and solvent demand, despite increasing employment, reduced the desire to have children. In 2021, the total fertility rate was 1.61, which fell to 1.56 by 2022,[55] and the number of births also fell to a historical low, which, in addition to a delaying attitude due to the uncertain external environment, has also been compounded by a significant decline in the number of people of childbearing age.

Summary

The drastic decrease in the willingness to have children in developed countries reached Hungary after the 1980s. This will have a negative impact on the economy and the future pension system and labour market positions. The decline in the number of live births was "only aggravated" by Hungary's unfavourable economic situation for decades, which also pushed the motivation and chances of having and raising children in a negative direction.

54 See: https://www.ksh.hu/stadat_files/nep/hu/nep0007.html
55 See: https://ec.europa.eu/eurostat/databrowser/view/tps00199/default/table?lang=en

In the economic environment that stabilised after 2010, the family support system has become of paramount importance not only from a social policy point of view, but also the state financial instruments for motivating childbearing are a priority within economic policy. Family policy and state financial instruments prevail in a mutually reinforcing manner, the demographic and economic impact of which could jointly improve competitiveness.

At the same time, the authors of the study consider it important, in addition to providing financial benefits, to further develop services and infrastructure supporting child bearing and the implementation of a holistic approach, which includes direct state financial support as well as other family policy instruments that are relevant to the family across generations. The essence of the Hungarian Government's human policy is reflected in the fact that the economy, pension system and labour market are fundamentally provided by the Hungarian population and the birth of Hungarian children, by endogenous factors, that is, it relies on internal human resources. The study presents the principles, legislative background, the family policy indicators and results of this system.

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