Interreg Danube Region

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COOPOWER

Country report Hungary

by HÉTFA Research Institute

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List of abbreviations

DRP	Danube Region Programme
Jems	Joint electronic monitoring system
LP	Lead partner
MA/JS	Managing authority and Joint secretariat
PP	Project partner
PR	Partner report
PPR	Project Progress Report

1. Introduction

This document aims to validate and refine the needs and challenges identified during the proposal stage, taking into account the local and national context regarding the labour market integration of vulnerable young people. Additionally, the country reports will establish common ground among partners to facilitate subsequent project activities and enhance partners' localised knowledge and understanding of the challenges and opportunities within employment services through intersectoral cooperation.

The primary research method employed is desk research, supplemented by additional interviews for validation. There were five interviews conducted with local stakeholders who have relevant knowledge and experience regarding the topics of the report: teachers, colleagues of the local municipalities, a vineyard administrative colleague, health psychologist. The interviews were conducted both face-to-face and online/via phone in December 2025.

This activity is essential for understanding local needs, informing evidence-based policymaking, and guiding strategic decision-making processes. Therefore, it serves as a cornerstone for the cooperative implementation of the project, contributing to O1.1 overall. The results will directly inform and be incorporated into the local strategies (O3.3) and the transnational strategy (O3.4).

2. Problem

Demography. Hungary's population has been declining nationally, though immigration partly offsets losses. In contrast, rural areas face sharper demographic decline due to outmigration and low birth rates. Between 2014 and 2024, the population of Hungary decreased by 2.8%, while the population of Borsod-Abaúj-Zemplén (BAZ) county decreased by 8.6%, and the population of Tállya decreased by 17.9%. The population is aging, with fewer people under 65 and rising shares of elderly, particularly acute at the local level. Between 2014 and 2024, the proportion of people aged 65 and over increased from 18% to 21% in Hungary, and from 17% to 22% in Tállya, while 16.4% of the Hungarian population belongs to the 15-29 age group, which is almost equally distributed between rural and urban areas. (Eurostat) In Tállya, 17% of the population belongs to this group. Large cities and county capitals remain more attractive due to jobs and better living standards, while small rural areas continue to depopulate. Young people are moving away due to a lack of educational and employment opportunities, lower wages and poor commuting options, but they then face serious housing difficulties in cities.

Economy. Before COVID-19, Hungary's GDP grew at around 6% annually, but the pandemic caused temporary contractions. Growth resumed afterwards, though volatile. Northern Hungary contributes 7–8% of national GDP, but lags behind the country in per capita terms. The structure of enterprises reflects national trends: agriculture is numerically dominant, but trade, manufacturing, and construction drive turnover and employment.

Education. Early school leaving continues to be higher than the EU average, especially in disadvantaged regions, where rural and low-educated families are most affected. Communities like Tállya illustrate these challenges particularly strongly. Participation in higher education is generally lower in the region than the national average. Adult learning is showing positive trends and is gradually catching up with EU levels, though Hungary tends to favour non-formal over formal training. Many adults still face barriers to participation, often due to limited time, financial constraints, or a lack of perceived benefits—issues that are especially pronounced among older and rural populations. People with disabilities encounter even greater obstacles, with higher dropout rates and significantly lower rates of higher education completion compared to the EU.

Health, poverty and social exclusion. Hungarians' self-perceived health has been improving but still lags behind the EU average. Older adults are especially affected: far fewer report good health, and a significant share describe their health as poor. While functional limitations are less widespread, they tend to be more severe when they do occur, particularly in rural areas. Life expectancy has risen but remains shorter than in most EU countries. Infant mortality has declined overall, yet regional disparities persist, rural municipalities facing weaker access to services, higher health risks, and fewer options for taking sick leave.

In Hungary, youth opportunities have improved overall over the past decade, but significant structural inequalities remain. The NEET rate among 15–29-year-olds declined from above the EU average in the early 2010s to 10.9% by 2023, after a temporary rise during the COVID-19 crisis,

broadly tracking EU trends. However, Hungary has a higher-than-average share of low-educated young people and women excluded from the labour market, with a pronounced urban–rural divide: tertiary attainment among 30–34-year-olds is 50% in urban areas but only 17.4% in rural ones, and rural youth face higher NEET and unemployment rates. Gender gaps are also wider, driven by higher female inactivity, particularly in rural areas. Early school leaving has remained relatively high (11.6% in 2023), partly linked to the reduced compulsory school age. While employment has risen and youth unemployment has fallen substantially since 2014, many young people remain inactive due to education, family responsibilities, or discouragement, and are more likely to be in precarious jobs. Housing poses an additional barrier, as rapidly rising prices, limited rental options, and insecure tenancies make it increasingly difficult for young people and families to access affordable, suitable housing, affecting mobility, education, and family formation (Bördős-Koltai, 2022).

Poverty risks have eased somewhat at the national level, bringing Hungary closer to EU averages, but inequalities remain pronounced. Pensioners and the unemployed face rising or persistently high poverty risks, and rural areas continue to struggle with entrenched disadvantage. In northern regions, poverty is especially widespread, with children from low-educated families particularly exposed. Low wages, fragile labour markets, and demographic decline compound these risks, leaving single-parent, elderly, and low-educated households highly vulnerable. Housing affordability has also deteriorated since 2022, with many low-income renters spending an unsustainable share of their income on accommodation.

Digital economy and society. Household internet access in Hungary is now close to EU levels, by 2022–2023 Hungary had caught up, and by 2024 94% of households had internet access, nearly identical to the EU level. However, Hungary lags behind in the adoption of more advanced digital tools: only 4.9% of households use virtual assistants, smart speakers, or related apps, compared to 16% in the EU. Similarly, home energy management systems are less common (8% vs. 14% in the EU). Among young people aged 15–29 in education, 51% use the internet for learning, below the EU average of 56.6%. However, among secondary-school students aged 16–19, usage is higher in Hungary (71–77%) than in the EU (62–63%), largely due to strong connectivity coverage. The main lag remains in disadvantaged groups: by income quartile, only 10.9% of the lowest-income group use the internet for education, compared to the national average of 22.5%, showing how socio-economic inequality limits digital learning. Digitalisation lags behind the national level. Internet use in enterprises is only 60%, below both Hungary (69%) and the EU (68%). Sectoral gaps are pronounced: in construction and administrative services, internet usage is just 33–37%, compared to 50% nationally and EU-wide. E-commerce turnover shows mixed performance: Hungary is above EU levels in transport and manufacturing, but weak in administrative services (3.8% vs. 11% EU).

Given the combined pressures of demographic decline, weak labour market opportunities, persistent educational disadvantage, and entrenched rural inequalities, the situation in Northern Hungary—and particularly in Borsod-Abaúj-Zemplén county, where the pilot will take place—requires a youth-focused, community-level intervention that strengthens both human capital and local social infrastructure. The evidence shows that young people in these areas face multiple,

overlapping barriers: limited access to quality education and training, lower digital uptake, constrained mobility, fragile employment prospects, and insufficient support networks. These factors heighten the risk of early school leaving, NEET status, and long-term socio-economic exclusion.

A pilot is therefore needed that provides locally accessible, non-formal learning pathways, career guidance, and mentoring, while also addressing the social dimension of exclusion through community-building and intergenerational exchange. Establishing a dedicated community space in Tállya—as proposed in the pilot—directly responds to the gaps and problems of the labour market transitions and opportunities of the vulnerable youth of the area. Such a programme can offer workshops to build practical and digital skills; youth events that foster confidence, belonging, and civic engagement; and stakeholder meetings that align training with local labour market needs. Crucially, it reduces the need for young people to relocate for opportunities, supports the inclusion of vulnerable groups, and counters rural isolation.

This approach is well suited to the structural realities of Borsod-Abaúj-Zemplén county, where low wages, weak service availability, and limited institutional capacity hinder youth activation. By integrating schools, employers, municipal actors, and NGOs, the programme can create a coordinated support ecosystem connecting young people to training, employment, and community resources. In doing so, it not only addresses immediate skill gaps but also contributes to long-term regional resilience, demographic stabilisation, and the reduction of socio-economic inequalities in one of Hungary's most disadvantaged regions.

3. Analysis

3.1. Population and demographic statistics

3.1.1. Population and age structure

TABLE 1
Main demographic data

	Country level	NUTS2 level
Total population	9,584,627	1,083,327
Proportion of 15-29-year-olds in the total population	16.31%	16.8%
Proportion of females in total population	51.76%	51.63%
Median age of population	44.5 years	44.1 years
Median age of population - females	46.4 years	46.6 years

Source: (Eurostat, 2025b)

Population decline remains a persistent demographic challenge in Hungary, although immigration partially mitigates its impact. The overall density stands around 105 inhabitants per km2, it suggests a relatively balanced distribution on a macro scale. Despite this, the national average conceals internal disparities, especially between more urbanised and rural areas. Moreover, the average age of the population has increased steadily between 2020 and 2024, indicating both a demographic aging process and potential long-term pressures on labour supply and social services.

The decline in population at regional level (NUTS2 – Northern Hungary) is more severe, as migration flows do not offset natural decrease. Outmigration is particularly strong, which exacerbates demographic shrinkage. The population density at regional level of the pilot area is lower, around 85 inhabitants per km2, pointing to less concentrated settlement structures. The demographic aging trend mirrors the national one, though with slightly lower average age values (by 0.1–0.2 years), which underlines regional vulnerability but also indicates similar structural tendencies across the country. Overall, Northern Hungary illustrates how regional disparities deepen the national demographic crisis, with stronger outmigration and weaker compensating factors.

The problem intensifies further at county and municipality level. Smaller settlements experience sharper population losses—on average, a yearly decrease of 1.72% and a cumulative drop of over 13% since 2016. Outmigration is strongest here, as larger towns, especially county seats, are more attractive due to employment opportunities, infrastructure, and living standards. While county-level population density values (87–89 inhabitants/km²) are somewhat higher than the regional average, there is no clear trend, reflecting localized demographic imbalances. This means that municipalities such as the pilot location, Tállya are at demographic decline, facing shrinking populations, aging, and structural disadvantages that threaten long-term sustainability.

3.1.2. Marriage and fertility

TABLE 2
Main socio-demographic data

	Country level	NUTS2 level
Mean age at first marriage - females	30.2 years	
Mean age at first marriage - males	32.9 years	
Mean age of women at childbirth	30.2 years	
Proportion of live births outside marriage	24.42%	
Proportion of live births from 15 to 29 years in the total live births	41.3%	

Source: (Eurostat, 2022a)

National marriage statistics show that in 2023–2024 about 28–29% of the population was single, while the proportion of married people fell slightly to 36.7%. Divorce rates hover around 10%. Fertility patterns also show that mothers are mostly aged between 20 and 30, making up about 25–30% of births, while teenage motherhood is relatively low nationwide (around 4.5%). Educational levels have shifted during the past decade: both low-education and high-education shares declined slightly, while fluctuations in degree attainment can partly be explained by COVID-related policy easing on getting the certification in 2019–2020.

Marriage and fertility data reveal sharper swings than the national picture, partly due to smaller population numbers os the region and on county level: the impact of policies like CSOK (family housing support program- provides financial assistance to married couples to help them buy or build a home in Hungary offering favourable loans with lower interest rates) was particularly visible, boosting marriage and birth rates for a few years before declining again. Notably, teenage motherhood is more common on lower levels than nationally—about 10% of mothers are under 20 compared to 4.5% at the national level.

In Borsod-Abaúj-Zemplén county, fertility trends mirror regional patterns but with sharper edges: about 11% of mothers are under 20, far above the national average, suggesting both socio-economic disadvantage and limited educational opportunities. As Tállya represents the local manifestation of Hungary's demographic crisis, rapid outmigration, aging, and a high prevalence of young motherhood create structural vulnerabilities that threaten long-term sustainability.

3.1.3. Life expectancy and infant mortality

TABLE 3
Main life expectancy data

	Country level	NUTS2 level
Life expectancy at less than 1 year_Total	76.6	74.9
Life expectancy at less than 1 year_Males	73.6	76.3
Life expectancy at less than 1 year_Females	79.6	78.1
Infant mortality rate	3.8	5.7

Source: (Központi Statisztikai Hivatal, 2025)

Life expectancy has risen steadily in recent decades in Hungary. According to the Hungarian Central Statistical Office (KSH), in 2024 life expectancy at birth reached 73.6 years for men and 79.6 years for women, up from lower values recorded in 2001 and 2012. Eurostat data also confirm continuous increases between 2008 and 2017, and by 2017 the gap between educational groups had narrowed somewhat: men and women with higher parental education lived significantly longer, with average life expectancy ranging from 72 to 79 years depending on ISCED category. Infant mortality has declined nationally, from 4.5 deaths per 1,000 live births in 2014 to 3.0 in 2023, though inequalities remain—children born to parents with lower educational attainment are more exposed to higher risks. In summary, Hungary's overall health indicators are improving, but differences by gender and education still reveal structural inequalities in health outcomes.

Trends are similar at regional level with some minor deviations. Male life expectancy is higher than the national average at 76.3 years, while female life expectancy is slightly lower at 78.1 years, reflecting both improvements and persisting gender gaps. Infant mortality, however, is consistently higher in the region than in Hungary overall. While it decreased until 2017, it rose temporarily in 2018 and again after 2022, increasing by one point within two years, which suggests persistent vulnerabilities in maternal and child health. The regional data confirm that health outcomes are strongly tied to socio-economic and educational structures, with disadvantaged communities more exposed to premature mortality. The region shows a mixed picture: modestly better outcomes for men, slightly worse for women, and elevated infant mortality compared to national averages, underlining regional health inequalities.

At the county level, available health data show outcomes similar to the regional averages. Male life expectancy is around 76.1 years and female life expectancy 78.0 years, both close to regional values but still lagging behind more developed parts of Hungary. Infant mortality, while variable due to smaller population sizes, tends to follow the regional pattern of being higher than the national average. Since no separate health statistics exist for Tállya, the pilot location itself, its situation can only be inferred from county-level data. Given the settlement's small, aging population and socio-economic challenges, it is likely that health outcomes are at least as vulnerable as the wider county averages.

3.2. General economic accounts

3.2.1. National economic accounts

TABLE 4
Main national economic accounts data

	Country level	NUTS2 level
Gross domestic product (GDP) at current market prices (Euro per capita)	20,500	12,900
Euro per inhabitant in percentage of the EU27 (from 2020) average	54%	34%
Current prices, purchasing power standard (PPS, EU27 from 2020) per capita	29,200	18,400

Source: (Eurostat, 2025c)

The Hungarian economy showed strong nominal GDP growth before COVID-19, averaging around 6% annually. The pandemic caused a sharp downturn, with a 5% contraction in 2020, but growth quickly resumed in subsequent years with greater volatility. Between 2021 and 2023, annual GDP increases averaged 12.3%, highlighting the post-crisis rebound. In terms of gross value added (GVA), annual growth was typically between 3–6% until 2020, when it dropped by 4.6%, followed by recovery in 2021 but weaker performance in 2022 and 2023 (+4.5% and -0.4%). Investment activity (gross fixed capital formation) has generally risen since 2014, with only two exceptions (2016 and 2020), when contractions of -9.1% and -7.8% occurred. Wages also followed a positive trajectory, with an average annual increase of 5.3%, interrupted by a decline during the COVID-19 year.

GDP dynamics largely mirrored the national trend at regional level but with higher variance. Northern Hungary region contributes about 7–8% of Hungary's GDP, and before the pandemic it grew at an average rate of 7.2%, though yearly fluctuations were large (ranging between 2% and 12%). In 2020, the region's GDP contracted by 3.3%, less than the national fall, but its recovery was weaker: between 2021 and 2023, average growth was 9.5%, compared to Hungary's 12.3%. GVA fell by 3.4% in 2020, then rebounded in 2021, but contracted again in 2022 and 2023 (-1.1% and -3.7%). Investments show similar volatility: while growth averaged 16.8%, contraction years were sharper than nationally (-15.7%). Wages increased by about 5% annually, slightly below the national average, and dropped by 5.5–6% in 2020. The economy of the region follows national patterns but remains more volatile, with weaker post-crisis recovery and persistent structural disadvantages compared to stronger regions.

The economic performance of the county of the pilot reflects these regional patterns but with sharper fluctuations. Until 2019, nominal GDP grew strongly, averaging 9.2% annually, but contractions occurred in 2019, 2020, and 2022 (around –1% each). Between 2021 and 2023, however, growth resumed at an average of 8.2%, slightly weaker than the regional and national pace. GVA generally followed the regional trajectory, though in 2023 the county stood out with a notable +12.4% increase, contrasting with national and regional stagnation, possibly linked to

sector-specific developments. Since Tállya is a small rural settlement within this county, its local economy cannot be measured separately in these statistics; however, its prospects are closely tied to county-level performance, especially in viticulture, agriculture and small-scale services.

3.2.2. Business statistics

TABLE 5
Main business statistics

	Country level	NUTS2 level
Number of enterprises	901,708	
Business churn - birth and death rate - percentage	12.06%	

Source: (Eurostat, 2023)

The enterprise structure of Hungary shows clear sectoral dominance. While Eurostat data does not include agriculture, national statistics confirm that agriculture accounts for the largest share of enterprises nationwide. Beyond this, the most common areas of activity are trade, construction, and professional/scientific/technical services, which together represent about half of all registered companies. In terms of employment, the manufacturing sector stands out, followed by trade and construction. Looking at net turnover, trade and manufacturing again dominate, underlining their weight in the national economy. Enterprise dynamics show consistent growth: each year about 90–100,000 new enterprises are registered, while around 50,000 cease operations. Only in 2022 was there an exceptional increase in closures, leading to a temporary decline in the total number of active enterprises. By size, SMEs account for roughly half of all companies, with micro-enterprises making up 45%. Growth dynamics (measured nationally in employment terms) show that the fastest-expanding enterprises are in manufacturing, trade, and hospitality, followed by construction, professional services, and administrative activities.

The sectoral structures of the region resemble national patterns but with distinct emphases. Manufacturing, trade, professional services, and construction dominate, while real estate activities also hold a larger role compared to national averages. Enterprises in the region account for about 7% of the national total, showing 5% annual growth until 2023, when a –7% decline was recorded. By size, the distribution reflects the national picture: micro-enterprises (42.2%) and SMEs (47%) together dominate the enterprise landscape.

At the county level enterprise dynamics follow regional trends but with even sharper fluctuations. The county alone accounts for more than half of the enterprises in the region, underscoring its economic weight. Until 2022, the number of businesses grew steadily by around 5% annually, but in 2023 it contracted by –8%, slightly more than the regional average. Sectoral distribution mirrors the regional profile, with manufacturing, trade, construction, and professional services in leading positions. This highlights the county's central role in the enterprise landscape of the region, though it remains vulnerable to cyclical downturns.

At the local level, agriculture and viticulture plays a distinct important role. Out of 413 registered enterprises, 117 are micro and small firms, while the rest are in the 10–49 employees' category (exact shares unknown). Besides agriculture and viticulture, there is a significant presence of businesses in hospitality and catering, reflecting the village's tourism potential (wine culture, gastronomy, accommodation). Thus, Tállya's enterprise landscape is dominated by small-scale agricultural ventures but also shaped by a growing cluster of tourism-related businesses, which differentiate it within the county context.

Commuting has a significant impact on the earning potential of the population. The county, which relied on heavy industry before the fall of communism, has undergone significant change. Today, most of these factories and enterprises have either closed or been acquired, and due to industrial modernisation, the remaining companies require far fewer workers than before. Another major employer was vineyards, but this sector has also undergone significant structural transformation over the past two decades. Tállya still has more than 1,000 hectares of vineyards, making it the second-largest vineyard-holding settlement in the Tokaj-Hegyalja region. The local economy therefore continues to rely heavily on traditional industries such as engineering and agriculture. These industries are able to employ large numbers of unskilled young people, but they offer few opportunities for those who are better educated and seeking higher-paying jobs.

3.3. Labour market situation

3.3.1. Employment

TABLE 6
Main employment data

	Country level	NUTS2 level
Employed persons (total, 15 - 24 years old)	263.5	
Employed persons (females, 15 - 24 years old)	116	
Employed persons (total, 15 - 74 years old)	4,699.3	
Employed persons (females, 15 - 74 years old)	2,210.9	

Source: (Eurostat, 2025a)

The labour market has shown steady progress, with some setbacks during the COVID-19 pandemic. The minimum wage is set annually, historically standing at 41–42% of the mean wage until 2020, after which it fell to 38–39%, before rising again to 40–45% in 2023–2024. Among young people aged 20–29, employment rose consistently after 2015, surpassing the EU average, with an annual growth of around 1%, aside from a pandemic-related dip. The recovery was strong, with a sharp +3.1% increase after COVID-19, and employment reached 75.1% in 2024. This exceeds the EU level, where employment among 20–29-year-olds was 66.5% in 2024, though differences by age group remain significant (25–29 at 82.5%, compared to 20–24 at lower levels). Gender gaps also persist, with women's employment slightly lower (62.8–79.5%) than men's, although both remain above EU averages. Part-time and temporary employment are strikingly lower than in the EU: while EU part-time rates range from 52% to 14%, Hungary's are only 18–2.5%, largely due to informal labour and undeclared "grey" employment. Similarly, temporary contracts are less common (Hungary's 31.1% for youth vs. 65.7% EU average).

Employment trends on regional level follow the national trajectory but at a consistently lower level. The employment rate has been between 67% and 70%, showing improvement after 2015 but stagnating during the COVID years. The region also reflects lower average wages compared to the national mean, with many jobs concentrated in lower-paying industries such as manufacturing, construction, and agriculture. While the recovery after the pandemic was visible, structural weaknesses—including an ageing workforce, relatively high inactivity rates, and dependence on a narrow industrial base—limit convergence with stronger regions of Hungary. Thus, while the region participates in the same upward trend as the national economy, it lags behind in overall employment outcomes and income levels.

The labour market outcomes at local level are weaker still. Employment rates are 65–69%, lower than both regional and national averages. In Tállya, registered jobseekers have declined in total, though the number of older unemployed has increased, highlighting demographic challenges. Long-term unemployment remains a persistent issue, with 50–60 residents unemployed for over a year in most years. Public works programmes have played a significant role: while initially engaging as many as 81 participants, the figure has stabilised at around 30–35 in recent years (the

total population of Tállya has been around 1,600 persons in 2025). At the same time, wages in the county remain low: the gross average wage is about 20% lower than the national level, reflecting the structural disadvantages of the local labour market. The picture at the county and municipal level underscores a dual challenge—persistent structural unemployment combined with underpayment—making the labour market less attractive for younger and more skilled workers.

3.3.2. Local characteristics of the labour market

According to the interviews, the following conclusions can be made regarding the local labour market.

Structural Changes in the Labour Market

Before the political transition and during the 1990s, the district centre, Szerencs, played a central role in the region. Several large factories and state-owned enterprises operated there (sugar factory, chocolate factory, sewing workshop, agricultural field-producing cooperative, Hungarian State Railways), providing employment opportunities even for the rural population. Bus services operated from every settlement in accordance with shift schedules, thus commuting was ensured. For women, seasonal agricultural campaigns offered opportunities for short-term, higher income through casual work, which was particularly utilized by women with lower educational attainment. Today, most of these factories and enterprises have either closed or been acquired, and the remaining companies, due to industrial modernization, require far fewer workers than before. The regional centre, Miskolc, underwent similar structural transformation: with the decline of heavy industry, only a few larger companies remained, which can no longer absorb the rural labour supply. Although the four-lane expansion of Highway 37 was completed a few years ago, making the city more accessible by road, this does not solve the commuting problem for rural residents. Those without cars cannot commute by public transport, as schedules do not align with shift work. Many lack the skills required for factory jobs or are unwilling to work shifts, making employment in Miskolc an unsuitable alternative. It is important to note that for the remaining rural intelligentsia, Miskolc provides the most significant labour market opportunities, requiring them to undertake continuous commuting.

The traditional agricultural sector of the region: the Viticulture Industry

Another major labour-absorbing sector was vineyard work, which has also undergone significant structural transformation over the past two decades. Tállya still possesses more than 1,000 hectares of vineyards, making it the second-largest vineyard-holding settlement in the Tokaj-Hegyalja region. Viticulture, rooted in medieval traditions, played a decisive role in shaping regional identity. Prior to the political transition and even in the early 2000s, nearly every local family-owned small vineyard plot (during socialism, each family was entitled to 0.3 hectares). Larger families cultivated their collective plots together, earning significant supplementary income from grape sales, partly to the predecessor of Grand Tokaj Ltd. (which exported wine to the Russian market), and partly to buyers from the Great Hungarian Plain (who purchased up to 30,000 quintals annually—by the 2020s this figure had dwindled to negligible levels). With the collapse of the Russian and Great Plain markets, producers seeking livelihood from viticulture shifted from

quantity-based to quality-based production, focusing on smaller volumes of high-quality wine for domestic and international markets. Quality was achieved through yield limitation, strict planning, and process supervision. Wineries preferred to cultivate their own grapes rather than purchase from others, as selling raw grapes was unprofitable due to high production costs. Although COVID-related tourism decline forced some producers to cease operations, those who modernized (e.g., producing reductive, tank-aged wines instead of traditional oxidative barrel-aged wines, selling bottled rather than bulk wine, or adopting biodynamic practices) and who utilized diversification grants to establish hospitality services survived and continued to operate. For small families in rural settings, these wineries provide outstanding livelihoods. Such family wineries typically employ a permanent, registered workforce—mostly middle-aged individuals familiar with the entire winemaking process—though often only minimum wage is officially declared, with the remainder paid in cash. As this skilled generation ages, wineries face challenges: younger people find vineyard work unattractive, taking it only temporarily and without long-term perspective, despite higher-than-average local incomes. Parents also discourage children from pursuing viticulture, directing them toward less demanding professions, and rarely encourage specialized education at secondary or tertiary levels, which could lead to higher-level technological roles rather than manual labour. The few young people who do pursue specialized studies usually remain in family wineries or gain broad experience in larger wineries before advancing to higher-status positions.

Today, among family farms in traditional viticulture settlements, only those involving multiple generations and successfully utilizing small-scale winery and hospitality-related grants have survived; others have ceased operations. Parallel to this, vineyard concentration has increased: large domestic and foreign-owned estates have emerged, relying heavily on mechanization and requiring far less manual labour than traditional cultivation. In large-scale operations, higher incomes are attainable only with specialized (primarily tertiary) viticulture qualifications. Vineyard labour is physically demanding, requires flexibility (with climate change shifting seasonal work periods, especially in summer), and offers fewer opportunities than before. Similar trends are observed in the field of crop production: modernization and mechanization reduced labour demand. In both viticulture-tourism and agriculture, employers prefer casual labour, thus workers lack income during winter months and are ineligible for state housing or renovation subsidies due to lack of creditworthiness.

Low Wage Levels – and Exceptions

Wages in the region are below the national average across all sectors except public administration and state-owned enterprises. Among young families, typically the men earn well, while the women contribute far less to household income and bears the burden of childcare. Women's labour market prospects are worse: commuting is difficult with small children, employers discriminate due to frequent absences, and part-time opportunities are virtually non-existent. Consequently, women often seek local employment, frequently at municipal offices.

Skilled tradesmen earn well, especially as entrepreneurs rather than employees. The best-paid trades include auto mechanics, plumbers, electricians, painters, tilers, masons, and other construction workers. The recent state loan programs (baby-expecting loan, rural housing subsidy,

home modernization programs) generated high demand for skilled workers, who capitalized on this by raising fees, achieving outstanding financial conditions in rural contexts.

Outmigration

Outmigration is particularly high among young people. Interviewees estimated that one-third to one-half of secondary school graduates leave for work abroad, another third move to the western border region to commute to Austria or work abroad on temporary contracts. Primary reasons cited were lack of job opportunities and low wages, but also lack of entertainment options and disappearance of community spaces. Skilled young people find jobs abroad more easily and earn far higher wages than in Hungary. Few return, due to accustomed living standards and general dissatisfaction perceived in Hungary, where many see no clear future worth returning for. Interviewees emphasized that outmigration is especially painful among academically stronger youth, who pursue higher education, leading to the erosion of rural intelligentsia and making local societies less attractive for educated youth.

Those who remain typically: (1) care for elderly parents needing constant support, (2) have young children and rely on grandparents for childcare, (3) lack alternatives or startup capital, (4) inherit a property enabling family establishment and access to state subsidies, (5) prefer rural environments for family life, or (6) continue family businesses, especially wineries.

Entrepreneurship among Youth

Youth entrepreneurship is viable only in certain, mainly construction-related trades. These trades are in shortage due to aging professionals, ensuring demand and decent livelihoods. However, interviewees noted Hungary's entrepreneurial environment is unsupportive: few startup grants exist and regulations are complex and rapidly changing. Thus, even skilled, motivated youth can only start businesses if families provide the initial capital for tools, property, or vehicles; otherwise, they must work as employees for a lower income. Rarely, youth identify market niches and establish businesses (online or offline), requiring not only capital and entrepreneurial skills but also knowledge of online marketing. Some are bold enough to try: in Tállya, two young men (one Roma) opened barber shops, meeting strong local demand—one operates officially, the other informally.

3.3.3. Trainees

The information on trainees is very limited and fragmented. Only 2016 data is available, and institutional frameworks do not provide systematic monitoring of trainee employment. As a result, analyses rely on complementary indicators such as part-time employment and young workers' labour market entry. Historical data suggest notable volatility: between 2008 and 2016, there was a dramatic surge in manufacturing trainees, with numbers increasing tenfold by 2012, before declining to a still elevated fourfold increase by 2016. These patterns reflect broader dynamics of Hungary's industrial labour market, where the demand for practical, short-term training spikes in response to cyclical industrial needs.

Broader labour statistics confirm that young workers and part-time employment remain structurally lower than national and EU levels in the region of the pilot location. The region's reliance on manufacturing and processing industries suggests that it is likely to have mirrored the national surge in trainee employment in these sectors between 2008 and 2016. However, the absence of institutional data limits evaluation of how strongly these opportunities were embedded in formal education-to-work transitions. Instead, youth employment trends provide indirect evidence: while overall youth employment in Northern Hungary improved post-2015, its level remained below the national average, implying that access to structured trainee pathways may be weaker than in stronger regions. This highlights the persistent vulnerability of young workers in the Northern Hungary region, where fewer institutionalised training frameworks exist despite the region's industrial base.

County-level indicators point to the same trend of weaker youth employment and relatively low wage levels, which would discourage firms from investing in structured training schemes. For Tállya, no direct data on trainees is available, but given the municipality's small size and reliance on agriculture and viticulture, formal trainee schemes are unlikely to have been significant. Instead, labour market entry for young people often occurs informally or through short-term seasonal work, rather than institutionalised trainee programmes. Thus, while national-level data show large fluctuations in trainee numbers, local realities in Tállya suggest that such institutionalized programmes are marginal, and early-career labour market participation is shaped more by informal or family-based economic activity.

3.3.4. Unemployment

TABLE 7
Main unemployment data (Thousand person)

	Country level	NUTS2 level
Unemployed persons (total, 15 - 74 years old, less than primary, primary and lover secondary education)	68.4	14.2
Unemployed persons (females, 15 - 74 years old, less than primary, primary and lover secondary education)	31.5	6.5
Unemployed persons (total, 15 - 74 years old, all ISCED 2011 level)	220.4	35.7
Unemployed persons (females, 15 - 74 years old, all ISCED 2011 level)	101.8	18.2

Source: (Eurostat, 2025d)

Unemployment remains uneven across age groups, with youth particularly disadvantaged. Among those under 20, the unemployment rate is 36%, far above the EU average of 20%. In the 20–24 age group, Hungary's unemployment is 12%, closer to the EU level, while for older age groups the rate stabilises between 5% and 9%. Long-term unemployment among 15–29-year-olds has fallen over time, converging with the EU average at around 2%, though Hungary's decline halted earlier than

in the EU. Support mechanisms exist – registered unemployed can receive a benefit for up to 90 days, set at 60% of previous earnings but capped at the daily minimum wage – but it is conditional on at least 360 days of prior employment or business activity, which might not be applicable for many young people. The main reasons for unemployment in Hungary have traditionally been illness/disability, lower educational attainment, or family care duties. Since COVID-19, however, the lack of job opportunities has become the dominant cause, accounting for 35–37% of cases, compared to only 9.9% at the EU level. Overall, Hungary's unemployment profile is shaped by high youth unemployment and a structural shortage of job opportunities, especially outside major urban centres.

Unemployment rates are consistently higher across all age groups than national averages. The range is between 9.5% and 17%, with young people particularly affected. Long-term unemployment among those aged 15–29 is around 3%, higher than both the national and EU averages. The dominance of manufacturing and agriculture in the region, combined with lower levels of education and limited economic diversification, contributes to structural unemployment. The shortage of local jobs—exacerbated during and after COVID-19—has reinforced outmigration trends, particularly among young and skilled workers.

Unemployment challenges are even sharper at local level. The county has some of the highest unemployment rates in Hungary, reflecting its socio-economic disadvantages and limited industrial diversification. In Tállya, unemployment is not tracked in headline statistics, but registered jobseekers are a persistent group, with long-term unemployment common. The structural lack of opportunities is particularly acute in rural settlements like Tállya, where agriculture and seasonal tourism dominate but do not provide stable, year-round employment. As a result, many residents depend on short-term public work programmes or migrate for work elsewhere. In sum, the county and municipal level reflect the harshest dimensions of unemployment in Hungary: persistently high rates, limited job creation, and structural reliance on public employment schemes.

3.4. Education system

3.4.1. Participation in education and training

TABLE 8
Main enrolment data

	Country level	NUTS2 level
Pupils enrolled in upper secondary education, total	435,116	
Pupils enrolled in upper secondary education by programme orientation – general	213,738	
Pupils enrolled in upper secondary education by programme orientation – vocational	221,378	

Source: (Eurostat, 2022b)

At the national level, participation in education shows worrying demographic and structural trends. The number of pupils in grades 5–8 stagnated until 2021, with annual changes close to zero, but since then has declined steadily at an average rate of –2.4% per year, compared to –0.5% before 2021. A sharper drop of 4.5% occurred in 2021, coinciding with the COVID-19 crisis. In contrast, the EU average shows weak growth or stagnation, underlining Hungary's divergence. Gender differences appear, with boys slightly outnumbering girls at this stage. At upper-secondary level, vocational pathways have gained ground: nationally, vocational students have caught up with and in some cases overtaken general education, while in the EU the two tracks remain stable in proportion. Post-secondary vocational participation has declined both in Hungary and regionally. In higher education, the number of students fell until 2020, followed by a gradual increase, but by 2024 participation had only just returned to 2017 levels. About 1% of the population is enrolled in tertiary education, though this is below the EU's steady upward trend. Female participation is higher, in line with EU patterns. Early school leaving remains a concern: in 2023, 4.1–6.7% of students dropped out nationally between ages 14–16, higher than the EU average. Overall, Hungary faces declining pupil cohorts, slower recovery in higher education enrolments, and persistent challenges in early school leaving despite improving NEET rates.

At the regional level, the trends are more severe. The number of pupils in grades 5–8 followed national stagnation until 2021, then dropped more sharply by –5% in that year. The proportion of vocational secondary students is higher than the general track, confirming the region's reliance on applied, labour-market-oriented education. While the EU shows stability between vocational and general education, Northern Hungary diverges with a stronger vocational focus. In higher education, participation remains very low: only 0.5% of the regional population is enrolled, half the national share, reflecting weaker access to tertiary institutions and lower retention after secondary school. School attendance rates are also concerning: at 17 years of age, only 80% remain in education, compared to 87% nationally and 92% in the EU. The share of successful secondary school graduates is gradually decreasing, undermining long-term human capital development. Thus, the region illustrates the structural weaknesses of the national education system in sharper

form—smaller cohorts, weaker pathways into higher education, and high reliance on vocational training.

At the county and local level (Borsod-Abaúj-Zemplén and Tállya), the decline is even more pronounced. County-level data follow the regional pattern of shrinking cohorts and weak progression into higher education. In Tállya, the effects of demographic decline are clearly visible: after relative stability, student numbers in grades 5–8 fell by 25% in 2022, a steep decline amplified by the village's small population base. While exact higher education data are not available for the settlement, the county's low rates suggest that Tállya students are underrepresented in tertiary pathways. Local dropout rates are influenced by socio-economic disadvantages, with early school leaving and weak transition to upper-secondary education more common among boys. Despite this, NEET rates in the wider region align with EU averages at around 11%, suggesting that while many young people are disengaged from education, a portion remains in (occasionally informal or precarious) work. In sum, Tállya exemplifies the acute local impact of demographic decline on education: smaller cohorts, high volatility in enrolment, limited higher education opportunities, and socio-economic vulnerability all threaten long-term human capital development.

3.4.2. Out-of-school rate and early leavers from education and training

School and training dropout rates have declined in recent years but remain above the EU average, standing at around 10–11%. Most early leavers are not employed, placing them at higher risk of social exclusion. Boys are more likely to leave education early than girls. Disability plays an important role: 40–44% of early leavers aged 18–24 report some or severe disability, which strongly limits further education and labour market participation. While trends show improvement over time, Hungary still faces significant challenges in aligning with EU targets on early school leaving. In summary, although dropout rates are falling nationally, Hungary continues to face a structural problem with rural students, and disadvantaged groups disproportionately represented among early leavers.

The situation at regional level is considerably worse. Early school leaving stands at 21.6%, roughly double the national rate and far above the EU average. The indicator has fluctuated in recent years, but by 2024 it began to rise again. Given that EU data show a clear link between urbanisation and dropout (with rural areas experiencing higher rates), the challenges in Northern Hungary—one of the least urbanised regions of the country—are especially pronounced. This reflects structural disadvantages: lower household income, weaker educational infrastructure, and fewer local opportunities for transition to secondary or tertiary education. Overall, the region illustrates how peripheral regions concentrate the highest risks of dropout, perpetuating cycles of educational and social disadvantage.

No direct dropout statistics are available on local or county level, but indirect evidence suggests that the problem is even more acute than at the regional level. National rural data show dropout

rates of 16.9% in the countryside, compared to 4.3% in small towns and 9.3% in urban areas, and the county is among the most disadvantaged. This strongly implies that dropout rates in the county—and by extension in rural settlements like Tállya—are above national averages. Socio-economic disadvantages, high unemployment, and limited access to higher-level education contribute to the problem. In Tállya specifically, the small population base and sharp decline in school-age cohorts (as seen in earlier data) make educational progression fragile: even small changes in enrolment translate into sharp percentage swings, and the outmigration of young families further exacerbates risks. Thus, for the local level, early school leaving can be considered a structural challenge, closely tied to rural disadvantage, poverty, and limited educational pathways.

The interviews' results showed that due to lack of access to precise data, interviewees could not provide exact figures on secondary school dropout rates, but they observed similar trends. Although compulsory schooling ends at age 16, many disadvantaged youngsters with poor academic performance do not even begin secondary education—despite being legally impossible, it still occurs. Dropout rates are reportedly highest in vocational schools, while technical schools and grammar schools show lower dropout, varying by institution. Interviewees agreed that commuting or dormitory placement is not a primary cause of dropout, as rural students are aware that further education requires daily commuting or living in a dormitory. Dormitory accommodation is available in all towns, but quality varies greatly: some dormitories help overcome disadvantages and provide positive role models, while others hinder students, with unsafe environments and disruptive peers.

Reported causes of dropout include poor choice of school or specialization, excessive workload for both students and teachers, mental stress, and individual life circumstances.

According to the interviews, the **transition from elementary to secondary education** also has its challenges. Although the Hungarian state launched several career orientation programs over the past two decades, these were short-lived, constantly replaced by new initiatives. Currently, the Career Orientation Measurement System (POM) is available for both primary and secondary students, offering descriptions of professions and degrees, questionnaires for self-assessment, and guidance toward suitable fields. However, interviewees could not assess its actual use or impact. Students primarily rely on family for career decisions. Schools organize career days with guest speakers, often recruited through teachers' personal networks, but relevance to students' interests is uncertain. For higher education, the felvi.hu portal is the most widely used resource, providing comprehensive, user-friendly information on admissions. Personalized assessments or structured support are unavailable.

Interviewees agreed that teachers expect uniform performance from all students, often dismissing weaker ones instead of nurturing their strengths, leading to lost talents. Talent development and differentiated education are thus ineffective in primary schools. The root cause is outdated content and methodology since the political transition, failing to adapt to competency-based education demanded by our rapidly changing world. Consequently, many students dislike learning by primary school and lack motivation for further education, viewing it as forced failure rather than opportunity. Some argued that vocational secondary education is pointless, as 13-year-olds cannot

realistically choose careers. They suggested secondary schools should focus on developing students' strengths and supporting basic competencies, serving as facilitators of orientation.

Opinions varied on students' career awareness. Some believed only a few percent know their true interests, while most are uncertain, applying randomly or based on fashionable, locally available programs (e.g., cosmetology, hairdressing, chef). These require either significant capital or exceptional talent, which students often underestimate. Meanwhile, trades such as auto mechanics or electricians are in demand but require strong math skills, excluding students with weaker academic results in this field. Others argued students generally choose well and complete their programs, though data on actual employment outcomes is lacking. Interviewees noted vocational programs dominate among local primary school graduates, with fewer choosing technical schools and even fewer general or specialized grammar schools.

Secondary Education

According to the interviews, recent educational policy has clearly directed pupils toward vocational training, offering scholarship programs as incentives. These scholarships are particularly attractive to rural, lower-income youth and their families, making vocational education appealing. However, mobility between different vocational fields is limited: in the dual training system, vocational subjects already carry significant weight in the first year. Thus, if a student wishes to transfer to another specialization after the first year, they must pass equivalency exams covering an entire year's worth of vocational material. For students with learning difficulties or lower motivation, this is an insurmountable challenge. Consequently, they either restart ninth grade in a new specialization—joining a younger cohort—or drop out of vocational training altogether.

The introduction of the centralized admission system has also led to a quasi-segregation of schools. Vocational schools offering only trade qualifications tend to attract students who either did not apply to higher-level institutions due to poor grades and entrance exam results, or who were rejected, as well as those whose families depend on the vocational scholarship for financial reasons. As a result, the overall student quality in these institutions has declined. Some interviewees argued that not only are the students weaker, but the quality of teaching is problematic: teachers are either university graduates with no practical experience in the trade, teaching out of necessity rather than vocation, or retirees with practical expertise but no pedagogical training and skills. Such teaching staff cannot motivate students or foster enthusiasm for the profession. In the dual system, therefore, the role of partner employers is crucial: a supportive employer who values talented students (and pays them well beyond the scholarship) can become a role model and exert long-term influence on youth work socialization. Conversely, a negative employer can alienate students not only from the trade but from work itself. There are, however, outstanding dual training models: for example, the educational program developed at Tokaji Ferenc Secondary School in the field of pedagogy was presented internationally in 2025 in France as a recognized method, adaptable as best practice across the EU.

3.4.3. Access to information and obstacles to participation in education and training

At the national level, interest in educational information is below the EU average. Among adults aged 25–64, 42% of Europeans seek formal and 20% informal educational information, while in Hungary the rates are only 24% and 10%. Women show higher levels of interest than men in both categories. Younger adults are more active: in the EU, 49% search for formal and 37% for informal information, compared to 40% and 20% in Hungary. Interest grows with educational attainment—those with higher qualifications are more likely to seek further learning opportunities. Internet use has become the dominant source: by 2011 Hungary surpassed the EU average (73.3% vs. 70%), while reliance on institutions, books, and traditional media has declined sharply.

The willingness to participate in education and training shows a mixed picture compared to the EU. More Hungarians fall into the group of those who have already studied but do not want further training, while fewer are in the group of those who studied and want to continue. Similarly, the share of people who have never participated but would like to is smaller in Hungary than in the EU. Among those who never participated, the majority also had no intention (HU: 80%, EU: 79%), particularly among older adults. For younger people, this figure is lower (67–69%), but more youth report barriers as the reason for non-participation, most often related to time constraints (schedule) rather than personal choice (19–20%). In Hungary, time-related barriers are more common than in the EU, while financial barriers are also significant: 17% nationally vs. 14% in the EU, especially among older adults. Family-related reasons are less frequent in Hungary (9–12%) compared to the EU. Gender differences are visible: women cite more personal/family reasons, while men more often report no interest. In summary, Hungary shows weaker demand for continued learning than the EU, with structural barriers—particularly time and costs—limiting participation even among those motivated to study further.

At the regional level no data is available, but indirect evidence suggests even lower interest than the national average. Given the region's lower educational attainment and weaker participation in lifelong learning, the demand for both formal and informal learning information is likely below the national level. Thus, the regional context likely reflects both lower demand and weaker institutional supply of educational information compared to the Hungarian average. At regional level, no direct statistics are available, but indirect evidence suggests obstacles are more severe than the national average. The region's lower educational attainment, higher early school leaving, and weaker tertiary participation point to a population less inclined to seek further training.

Specific data are also not collected on local level. However, considering the county's high rates of early school leaving and lower tertiary participation, it is reasonable to infer that active information-seeking about education and training is limited. In rural communities like Tállya, education-related decisions are often shaped more by local opportunities and family background than by active information search. This implies that at the local level, interest in educational information is weaker still, and support structures (schools, municipalities, NGOs) play a crucial role in bridging information gaps.

Barriers can be expected to be particularly high in the pilot area. In rural municipalities like Tállya, where income levels are around 20% lower than the national average and education opportunities are limited, the main constraints are likely to be cost and accessibility. Local schools provide only basic levels of education, while access to secondary and higher institutions requires commuting or relocation.

3.4.4. Education and training outcomes

The transition from education to work shows both strengths and weaknesses compared to the EU average. Fewer young people in Hungary leave education with only ISCED levels 1–2 (11–12%), compared to 19.5% in the EU, and this group has declined steadily from 16% earlier. The majority fall into the middle qualification group (levels 3–4), representing 55–60%, higher than the EU's 44%. By contrast, the share with tertiary education (levels 5–8) remains lower in Hungary (29–30% vs. 36% in the EU), though it has risen from 24% in recent years. Regarding labour market integration, the share of NEETs (18–29-year-olds not in employment, education, or training) has declined over time, with only a temporary spike during COVID-19. Nationally, Hungary performs close to the EU average (12–17%), and women have seen marked improvement, with rates falling from around 20–22% to 15% by 2024. In summary, NEET rates are moderate by EU standards but reveal vulnerabilities during crises.

The picture is less favourable regionally. The share of youth with only levels 1–2 education is about 20%, nearly double the national figure, and progress has been minimal. Most students still achieve levels 3–4, similar to national shares, but the proportion with tertiary education is much lower—only 17%, ten percentage points below the national level. NEET rates in the region are persistently higher, ranging between 20–25%, well above both the Hungarian and EU averages. The increase in NEETs began already in 2018, before COVID, peaking around 2020–2021, then declining until 2023, before rising again in 2024. Women are particularly disadvantaged, with NEET rates fluctuating between 30–35%, roughly double the national average. Territorial differences are also pronounced: rural areas show much higher NEET levels, while towns and suburbs align more closely with EU patterns.

There is no direct data available, but broader trends suggest a difficult transition from school to work. The county reflects the region's challenges: high early school leaving, low tertiary participation, and structural unemployment all limit opportunities for young people. For a rural settlement like Tállya, where small school cohorts and socio-economic disadvantage are common, many young people likely end education at vocational or lower secondary levels, with relatively few pursuing higher education. Given limited local employment options (mainly agriculture, viticulture, and seasonal hospitality), NEET rates are likely higher than even the county average, with young women particularly vulnerable.

Interviewees unanimously agreed that, consistent with national statistics, the number of students applying to higher education is very low. For vocational graduates without a secondary school diploma, university is not an option, and few pursue adult education to obtain a high-school diploma after trade training. These students typically either seek employment in their trade, work in factories in unrelated but well-paid positions, or migrate out of the region. Among secondary school graduates, nearly all grammar school students continue to higher education, while technical

school graduates apply in varying proportions. Those applying to specialized higher education programs (e.g., IT graduates applying to software engineering) receive significant bonus points, giving them an advantage over grammar school graduates. Two interviewees noted that about five years ago, trends shifted positively: university admission thresholds became lower, student loan opportunities became widely known, and well-paid student jobs became broadly available, enabling youth to finance their studies.

3.4.5. Adult learning

Adult participation in education and training is below the EU average but shows signs of convergence. In the last 4 weeks, participation among 18–24-year-olds declined until 2020, then increased again to 58.7% in 2024, narrowing the gap with the EU (60%). For 25–29-year-olds, Hungary remains behind the EU (18% vs. 26% in 2024), though the overall trend is similar: a decline between 2018–2020 followed by growth. Among 30–54-year-olds, the gap nearly closed by 2024 (EU 13%, Hungary 12%), as both increased steadily since 2015. For those 55 and over, participation stagnated until 2020, then rose to 5% nationally vs. 6.3% in the EU, exceeding 2015 levels. Gender differences are marked: Hungarian women were behind the EU average until 2022, but their participation grew rapidly to 13% in 2024, close to the EU's 14.8%. By activity status, Hungary shows higher participation among inactive adults but much lower participation among the unemployed (5.3% vs. EU 19.5%). In terms of education levels, most adults in training are tertiary graduates (58.7% vs. EU 63%), while Hungary has a larger share of participants with general secondary education (16.7% vs. EU 9.6%). Overall, Hungary's adult learning participation is weaker in formal education but stronger in non-formal pathways, with recent convergence driven by younger and female learners.

Adult learning participation follows national trends but at consistently lower levels. The gap with the EU average has also narrowed in recent years, with women showing a similar catch-up pattern. Non-formal education is relatively widespread, but limited local access to higher education and training institutions constrains opportunities for formal study. Employment structures (manufacturing, agriculture, and low-skill services) also mean that much of adult learning is job-specific or vocational rather than academic. Thus, the region reflects the national trend of convergence but faces structural barriers to broadening formal participation in education and training.

At the county and local level no direct statistics exist, but the pattern can be inferred. With county wages averaging around 20% below the national average and high rates of early school leaving, formal adult education is likely limited. Non-formal learning, often delivered through short vocational courses, public work schemes, or employer-provided training, is probably the main form of adult learning in the county. In rural municipalities such as Tállya, participation in adult learning is constrained by both supply (fewer local institutions) and demand (lower motivation due to weaker labour market opportunities). Still, non-formal learning linked to agriculture and hospitality in the area is likely more common than formal study. At the local level, adult education is thus shaped by immediate economic needs, with limited scope for formal pathways but some reliance on non-formal and workplace-related learning opportunities.

3.5. Health, poverty and social exclusion

3.5.1. Health issues

Self-perceived health among adults aged 16–64 is slightly below the EU average but has improved over time. Around 77–78% report good or very good health, while 16–17% consider their health fair and about 5% report bad or very bad health. The gap with the EU average has narrowed, but with age the differences widen: Hungarians' health deteriorates more sharply, especially after 65 years, when only 25% report good health compared to 40% in the EU. In this group, 51% describe their health as fair and 24% as bad/very bad, significantly worse than the EU's 17%. Employment status also matters: after age 35, there is a 10–12% gap in favour of the employed, highlighting the health divide between active and inactive groups. Functional limitations show a mixed picture: in 2019, walking difficulties were above the EU average, while other limitations were at or slightly below EU levels. Severe limitations, however, are more common in Hungary, suggesting that while fewer people report moderate problems, those who do are more likely to face serious health issues. Rural–urban differences also exist: limited walking is more common in rural areas (25%) than in cities (16–20%), and above the EU average (15–17%). Health limitations also affect men slightly more, and education shows a clear protective effect: the higher the education, the fewer health problems are reported. Overall, Hungary shows improving perceptions of health, but aging, rural disadvantage, and severe limitations remain major concerns.

At the regional level no separate detailed self-perceived health data are published, but indirect indicators suggest poorer outcomes than the national average. The region's lower life expectancy, higher infant mortality, and lower employment levels point to weaker health conditions. Rurality plays a key role: given that the region is less urbanised than the national average, walking limitations and other functional impairments are likely more common, reflecting both physical work exposure and limited access to healthcare services.

At the county and local level direct data are lacking, but socio-economic context strongly suggests above-average health challenges. Borsod is one of Hungary's most disadvantaged counties, with higher unemployment, lower wages, and weaker access to quality healthcare, all of which correlate with worse health outcomes. Health-related work absences are reported to be lower in rural areas than in cities, not because of better health but because residents cannot afford to miss work—this is especially relevant in agricultural and seasonal labour contexts common in rural areas. In summary, county and local conditions magnify national and regional health inequalities, with Tállya representing a case where economic hardship and rural disadvantage translate into poorer health outcomes and hidden health burdens.

Interviewees agreed that due to digitalization and the accelerated pace of modern life, young people today possess very different skills and needs compared to one or two generations ago. Regarding peer interactions, it was repeatedly noted that children have become more introverted, do not express their problems, lack solidarity, and verbal abuse is strongly present. Neither parents nor teachers are able to manage this phenomenon. Verbal abuse is also common among adults, particularly on social media platforms, making such communication forms appear normal to

children. Genuine community spaces are unavailable to students, so peer interactions are largely confined to digital environments.

In parent-child relations, problems include parental overburdening, lack of active attention to children, and the strong influence of parents' own digital content consumption habits. Since parents spend their free time in front of screens, children adopt this as a model. Fewer children today have at least one adult with whom they maintain a sincere, intimate relationship, foreshadowing the emergence of mental health problems. Some interviewees noted that parents compensate for lack of attention and genuine upbringing by always siding with the child, which not only distorts children's self-image but also worsens school–student relations.

Regarding leisure activities, interviews highlighted the dominance of digital spaces: in rural areas, especially small villages, few children have the inclination or opportunity for hobbies or sports beyond phone or computer-based entertainment, leading to increasing isolation. Another impact of digitalization—already affecting school performance—is the decline in self-expression and reading comprehension skills, which remain fundamental requirements in the education system. This creates growing tension and pressure on pupils. Many interviewees observed that children's attention is harder to capture in schools, posing challenges for teachers in maintaining motivation. Meanwhile, it is an unspoken reality that the rise of artificial intelligence diminishes the practical relevance of much of the knowledge schools aim to impart.

According to interviewees, the perceived severity/complexity of youth mental health challenges has increased the pressure and performance demands cause stress comparable to that experienced in the adult society, leading to more frequent deviant behaviours and maladaptive coping strategies. Among youth, this manifests in the increasing prevalence of severe clinical disorders. Whereas 20 years ago mood disorders, anxiety disorders, and trauma-based conditions were common and manageable, now personality disorders, are increasingly frequent. Not only has their prevalence risen, but the proportion of severe cases has also grown.

Another area of mental illness is addiction: phone addiction, dependence, on social media, gaming addiction, and use of psychoactive substances are increasingly common among youth. While in Tállya and surrounding villages the latter remains rare, in the most poverty-stricken regions (Abaúj and Taktaköz) it is already a serious problem. Youth most often access homemade "bio" substances derived from crystal compounds, or substances used with heating devices smuggled from Slovakia. These can cause severe damage with prolonged use (3–5 out of 100 bio-users develop schizophrenia, an irreversible condition that in most cases prevents independent living, leading to guardianship). Support services for addiction are available only at the HÁLÓ Low-Threshold Service for Addicts in Szerencs, which is either unknown or inaccessible to many affected individuals, and typically serves those who have already reached a level of insight and acknowledgment of their addiction. Since early 2025, with the appointment of a new government commissioner for drug policy, police have started to actively participate in school-based information and prevention activities. Civil organizations engaged in similar work were only authorized in October 2025 to officially conduct awareness programs in schools, promoting supportive services.

3.5.2. Disability - Access to education and training

People with disabilities face significant barriers in accessing and completing education compared to the EU average. In terms of recent participation, adults with disabilities are much less likely to be in education or training in the last 4 weeks. NEET rates are extremely high: while in the EU 31.4% of young people with disabilities are NEET, in Hungary the figure is almost double, at 59%. Early school leaving is also worse: overall in Hungary it stands at 10.1% vs. 9.4% in the EU, but among students with disabilities the gap is far larger—41.2% leave school early compared to 24.6% in the EU. Educational attainment levels reflect these inequalities: only 11.1% of Hungarians with disabilities reach tertiary education, far below the EU's 21.4%, while the share at levels 3–4 (secondary education) is closer to the EU (45–55%), and the share at the lowest level (levels 0–2) is similarly high in both cases (32–33%).

At the regional level no direct disability-specific education data are published, but the broader context suggests even greater disadvantages. The region has higher early school leaving, lower tertiary participation, and weaker labour market integration than the national average. These systemic weaknesses likely compound barriers for people with disabilities, making participation in both general and vocational education more difficult. Rural areas, which dominate the region, face additional challenges in terms of accessibility of schools, support services, and inclusive learning environments.

No formal statistics exist, but local socio-economic conditions point to significant barriers. In the county, where overall education outcomes are weaker and school leaving higher, children and youth with disabilities are likely to face compounded disadvantages: fewer inclusive facilities, less specialised support staff, and limited access to tertiary pathways. In rural municipalities such as Tállya, where school-age cohorts are already small and resources limited, access to disability support is minimal, often requiring travel to larger towns. Families with fewer financial resources face further difficulties in ensuring participation. At the local level, this means students with disabilities are at the highest risk of early school leaving, exclusion from further training, and limited access to higher education opportunities.

3.5.3. Disability - Access to the labour market

At the national level, people with disabilities face significant disadvantages in accessing the labour market compared to both the general population and the EU average. The disability employment gap was above 30 percentage points until 2017 but has since narrowed: currently 27% in Hungary vs. 24% in the EU. Even so, only 2.7% of employed persons in Hungary have a disability, compared to 8.3% in the EU, showing how underrepresented they are in the workforce. Employment is most common in employee status, with relatively few self-employed. Unemployment rates are higher across all education levels: 13.7% in Hungary vs. 9.5% in the EU. Long-term unemployment (12+ months) is especially severe: 50% in Hungary vs. 40% in the EU. Labour force participation is slightly higher overall (78% in Hungary vs. 75% in the EU), but among people with disabilities it is dramatically lower: 38.5% in Hungary vs. 55% in the EU. Educational attainment shapes employment outcomes strongly: among those with levels 1–2, only 26% of disabled people are employed vs. 45% overall; at levels 3–4, the gap is 41% vs. 82%; and at tertiary level, 60% vs. 92%.

In the EU, these gaps are smaller, highlighting that Hungarian disabled workers remain disadvantaged even when highly educated.

At the regional level no specific disability labour market data are available, but indirect evidence suggests worse conditions than nationally. The region's lower education levels, higher unemployment, and weaker job creation amplify the structural barriers already faced by disabled people. Given that labour force participation for disabled persons is already only 38.5% nationally, the figure is likely even lower in Northern Hungary, where fewer inclusive workplaces exist and economic activity is concentrated in physically demanding sectors (manufacturing, construction, agriculture). Long-term unemployment is also likely more entrenched, reflecting limited reintegration support and weaker employer incentives. Thus, regional disparities compound the barriers for disabled people, reinforcing exclusion from the labour market.

At the county and local level no direct statistics are available, but socio-economic context suggests strong disadvantage. Borsod is among Hungary's poorest counties, with high unemployment and dependence on low-skill jobs. For people with disabilities, this means fewer accessible opportunities, limited vocational rehabilitation, and a high reliance on public work schemes or inactivity. In a rural settlement like Tállya, opportunities for formal employment are scarce even for the general population, which implies that disabled residents face double exclusion—first from the labour market, and second from training or requalification options. At the local level, disability is therefore a major barrier to economic participation, with outcomes likely worse than both county and national averages.

3.5.4. Risk of poverty

Poverty risk indicators have improved since 2015 but remain uneven across groups. Overall, the at-risk-of-poverty rate fell from 30% to 20.2% to 2024, now slightly below the EU average of 21%. Women consistently face about 1 percentage point higher risk. Among the employed, Hungary has converged with and even dropped below the EU average: in 2024, 9.7% vs. 10.9% in the EU. By contrast, pensioners' poverty risk has surged since 2022, rising from 18% to 28%, while the EU remained stable at 18–19%. For the unemployed, Hungary's rate climbed sharply to 71.8% in 2024, compared to 66% in the EU. Income inequality is also reflected in quintiles: the lowest quintile's risk dropped to 70% by 2020 but rebounded to 79% in 2024, while middle quintiles converged more with the EU. Household structure matters: single-parent and single-pensioner households are most vulnerable, and in 2024 even childless single-adult households rose to 82% risk. Educational attainment strongly influences risk: for those with only ISCED 1–2, poverty risk fell to 37.5% by 2018 but rose again to 46.5% in 2024, while for tertiary graduates it dropped to 6%, well below the EU's 10–12%. Geographically, urban poverty risk is lower (13–14% vs. 22% in the EU), but rural rates remain high: ~25% in Hungary vs. 21–22% in the EU. In sum, Hungary has reduced overall poverty risks, but vulnerable groups—pensioners, unemployed, rural populations, and the low-educated—face rising risks despite national convergence with EU averages.

At the regional level, poverty risk is consistently higher than the national average. After falling from 35% in 2015 to 28% by 2019, the trend reversed, rising steadily to 29% in 2024, widening the gap with Hungary's national rate of 20.2%. The severe material deprivation indicator—very low work intensity in households—also shows the region lagging: although it fell from 13% in 2015 to 7% in

2024 (compared to 5% nationally), it has remained above the country average throughout. Children of low-educated parents are particularly vulnerable: while Hungary overall still records higher risks than the EU, the regional rate is likely well above 70%, reflecting intergenerational disadvantage. Thus, Northern Hungary remains one of the most poverty-exposed regions, with structural weaknesses and rural disadvantage driving persistently higher risks.

At the county and local level, no direct poverty statistics are available, but indirect indicators confirm severe risks. Borsod is one of Hungary's poorest counties, with lower wages, higher unemployment, and weaker educational outcomes, all of which strongly correlate with poverty. Rural households are particularly exposed: national data show ~25% poverty risk in rural areas, and given Borsod's disadvantage, the rate is likely even higher locally. In Tállya, small population size, demographic decline, and dependence on agriculture, viticulture, and seasonal tourism heighten vulnerability.

The most poverty-stricken settlements are not primarily in Tokaj-Hegyalja but in the northern Abaúj region and the Taktaköz area, which also have higher proportions of Roma populations.

Interviewees made consistent observations regarding disadvantaged groups. All agreed that in every settlement, those remaining in public employment and unable to transition to the open labour market programs are considered as disadvantaged. Public employment wages are too low to ensure even minimal subsistence. While some supplement their income with casual work, many of them cannot or lack motivation. Long-term public employment leads to deepening poverty: without savings or creditworthiness, individuals cannot improve their situation. Housing deteriorates due to lack of maintenance, health declines, social ties shrink, and they fall into a poverty trap.

Alcoholism, however, is reportedly less widespread than in previous generations. Among families, alcohol dependence is rare, more common among single, divorced, or widowed men.

Disadvantaged families are primarily characterized by lack of income, not necessarily accompanied by low education as well. Parents often do not work, relying on state transfers and municipal aid. Interviewees attributed this to habituation and lack of work socialization, rather than ethnicity. These families struggle particularly with heating in winter, burning anything available in old stoves, relying on municipal or charity firewood programs. Infant care is a major challenge due to high costs of formula, diapers, and medicine. Food and clothing shortages are less common thanks to social services and charities. In Tállya, a soup kitchen serves about 200 people, ensuring hot meals for the poorest families. However, parents often fail to support children's education, leaving them unmotivated and with little chance of escaping poverty. For such children, attentive teachers can provide crucial support in their educational attainment. Among the elderly, pensions around 250,000 HUF are considered high, yet many manage with frugality, covering utilities, saving for firewood, and economizing on food. Some, however, cannot afford necessary medications.

Although poverty indicators in Tállya and nearby villages show no ethnic differences, interviewees noted weaker work socialization among Roma populations, characterized by lack of regularity and planning.

Although **interviewees** did not observe differences in poverty indicators in Tállya and its immediate surroundings based on ethnicity, they nevertheless considered work socialization skills to be weaker among the Roma population. Within Roma communities, lack of regularity and planning was frequently mentioned, manifesting in employment as well: many Roma employees working in small local enterprises are often absent and unreliable in consistently showing up at the start of work. This poses serious challenges for businesses, particularly in viticulture. However, it is rare for someone to lose their job due to unreliability, as wineries have become accustomed to managing tasks with the available labour force. At the same time, all interviewees agreed that while this phenomenon is more common among Roma, it cannot be generalized—there are many reliable, hardworking Roma employees as well. Another phenomenon more characteristic of Roma than of the majority population is early childbearing, particularly among girls with low educational attainment. The reasons cited include lack of sexual education within Roma communities and the absence of parental attitudes that motivate children toward learning. Young mothers typically live in partnerships; their partners are employed, many with good trades, able to support their families. However, not all young Roma couples have independent housing, many of them still living with their parents.

The Role of Schools in Overcoming Disadvantages

Interviewees working in education agreed that parents are the most decisive actors in children's lives, and that family attitudes almost always override teachers' efforts to overcome disadvantages. When problems arise with students' academic progress or behaviour, schools attempt to engage parents directly, but with limited success. One interviewee described the situation as follows: *"It requires intervention into such an intimate sphere that many parents find offensive. Today, parents themselves often struggle with failure in their work, lack of life goals, absence of aspirations, relationship problems—in short, adults themselves experience failures. To then be confronted with the fact that they are not raising their child well is simply too much."*

At the Tállya primary school, the proportion of students classified as 2H or 3H (disadvantaged categories related to poverty indicators) has decreased in recent years, but in everyday life there are no real differences among children in terms of performance or behaviour. A noticeable trend, however, is that the local elite no longer enrols their children in the local school, preferring institutions in Szerencs with better reputations, sometimes church-run.

All interviewees agreed that over the past decades, inclusion has not been successfully achieved—neither within education nor at a larger societal level—despite numerous projects and grants aimed at supporting inclusion in the region. Today, the centralized school authority (KLIK) seeks to address disadvantages through national or regional projects, resulting individual schools' lack of resources to promote tailored inclusion projects answering to local needs. At the same time, both primary and secondary education have introduced scholarship programs that combine financial support with mentoring, offering advancement opportunities for disadvantaged youth. However, these programs are more accessible to motivated students, and not to those in the most disadvantaged circumstances.

3.5.5. Housing cost overburden rate

Housing cost pressures have fluctuated but worsened in recent years. The housing cost overburden rate—households spending more than 40% of disposable income on housing—fell below the EU average between 2018 and 2021, averaging about 5%, compared to 8% in the EU. However, since 2022, the burden has risen sharply, increasing by almost 6 percentage points, and now aligns with or slightly exceeds the EU average. Vulnerable groups are most affected: among those with incomes below 60% of the median, the burden surged from 12% in 2021 to 34% in 2022, placing Hungary above the EU average. For higher-income households, the burden is lower (2024: 4.2% in Hungary vs. 3.8% in the EU). By income quintile, the poorest households are most exposed: their burden dropped to 8% in 2021 but rebounded to 27% in 2024. Market renters face the greatest challenge: over 40% of Hungarian tenants spend more than 40% of their income on housing, compared to 19% in the EU. Even mortgage holders are worse off: 10% in Hungary vs. 5% in the EU. Geographically, housing burdens are highest in cities (11% in 2024, above the EU average), while towns, suburbs, and rural areas all shifted from being below EU averages before 2021 to above them after 2022. Specific groups—single pensioners, single women, and single-parent households—are the most severely affected. Overall, Hungary shows rising housing vulnerability, especially among low-income renters and older or single-person households.

At the regional level the trend broadly mirrors the national picture, but with more volatility. In 2021, the housing cost burden was only 1.7%, well below the national average of 2.4%. By 2022, it increased to 6.8%, still lower than the Hungarian average of 8.8%. However, in 2023, the regional rate rose above the national figure (9.9% vs. 8.8%), before falling again to 6.8% in 2024. This volatility suggests that households in Northern Hungary are highly sensitive to economic shocks, with limited buffers against rising housing costs. Thus, although the region generally performs better than national averages, sudden increases highlight structural fragility among vulnerable households.

At the county and local level no direct statistics are published, but local socio-economic conditions suggest higher vulnerability than in the region overall. Borsod county, with lower incomes and higher unemployment than the national average, likely has a larger share of households at risk of overburden, particularly among low-income rural residents. For Tállya, where housing stock is older and incomes are limited, households may face lower nominal housing costs but higher relative burdens due to low earnings. Vulnerable groups identified nationally—single elderly women, pensioners, and single-parent households—are likely at even higher risk in Tállya, given the settlement's aging population and limited labour market. In sum, while absolute housing costs may be lower in rural areas, relative affordability pressures are high in Borsod and Tállya, compounding broader poverty risks.

3.5.6. Material and social deprivation

A: Material and social deprivation has declined substantially since 2015, though gaps with the EU remain, especially for the unemployed and the less educated. Among the employed, deprivation fell from 29.5% in 2015 to 10.3% in 2024, close to the EU average of 8.2%. Among the unemployed, however, the gap remains wide: although the rate dropped from 80.4% in 2015 to 56.3% in 2024, this is still well above the EU average of 38.6%. Education is a strong determinant: at ISCED 1–2, Hungary and the EU are closer, but at ISCED 3–4 the Hungarian rate is 13.4% vs. 9.6% EU, showing that even secondary-educated workers face greater risks. Territorial divides are striking: in 2024, deprivation rates in cities were 10.6%, close to EU levels, but in towns and suburbs 16.6% and in rural areas 21.7%, far above the EU's 11.9%. Severe material and social deprivation also fell nationally (from 24.1% in 2015 to 9.3% in 2024) but remains heavily concentrated in rural areas (12.4% vs. 5.4% in cities). In sum, while Hungary has made impressive progress in reducing deprivation, unemployment, education level, and rural residence remain major risk factors.

Deprivation rates are consistently worse than national averages. The overall material and social deprivation rate decreased from 45.9% in 2015 to 28.5% in 2024 but remains far above the national average of 16.3%. Severe deprivation also shows persistent regional disadvantage: while the national rate fell to 9.3%, the region stood at 18.1% in 2024. This reflects the region's structural vulnerabilities: lower incomes, higher unemployment, and fewer services. Rural disadvantage is especially pronounced, with a sharper divide than at the EU level. Thus, the region demonstrates slower convergence and continued concentration of material and social hardship, especially outside urban centres.

At the county and local level no direct data are available, but deprivation risks are likely even higher than the regional average. Borsod is among Hungary's poorest counties, with weaker employment, lower education attainment, and higher unemployment, all strong drivers of deprivation. In a small rural municipality like Tállya, these structural disadvantages are compounded by outmigration, an aging population, and reliance on low-income agriculture and seasonal tourism.

3.6. Digital economy and society

3.6.1. Personal and household access

Household internet access has improved significantly over the past decade. In 2014, access levels were still below the EU average, but by 2022–2023 Hungary had caught up, and by 2024 94% of households had internet access, nearly identical to the EU level. In terms of digital devices, internet-connected TVs are now the most widespread, present in about 56–57% of households, in line with the EU. However, Hungary lags behind in the adoption of more advanced digital tools: only 4.9% of households use virtual assistants, smart speakers, or related apps, compared to 16% in the EU. Similarly, home energy management systems are less common (8% vs. 14% in the EU). Overall, while basic access and television-based digitalisation are well established, Hungary remains behind in adopting newer smart technologies. This suggests that while digital connectivity has converged with the EU, uptake of advanced applications is slower, particularly outside major urban centres.

At regional level no separate statistics are published for digital device usage, but indirect evidence points to slightly lower uptake than the national average. While internet access has expanded strongly even in disadvantaged regions, smart technologies remain less common due to lower household incomes and older housing stock, which limit demand for items such as energy management systems. Basic access (internet and smart TVs) is likely close to the national average, while newer devices show a greater gap. Thus, the region broadly reflects national convergence in access, but adoption of advanced tools is likely slower than in wealthier areas of Hungary.

Household internet access is assumed to be broadly aligned with the regional average on local level—high in terms of coverage, but with notable gaps in usage of advanced digital technologies. In Tállya, households are likely well connected at the basic level (internet access, television), but adoption of smart speakers, apps, or energy management systems is minimal, both for cost reasons and due to lower demand. As in other rural communities, digital inclusion depends more on affordability and perceived usefulness than on availability. In sum, while connectivity in Tállya is no longer a barrier, digital transformation remains partial, with smart technology uptake lagging well behind EU levels.

3.6.2. Information society

Digitalisation in education and the economy has advanced, though gaps remain compared to the EU. Among young people aged 15–29 in education, 51% use the internet for learning, below the EU average of 56.6%. However, among secondary-school students aged 16–19, usage is higher in Hungary (71–77%) than in the EU (62–63%), largely due to strong connectivity coverage. The main lag remains in disadvantaged groups: by income quartile, only 10.9% of the lowest-income group use the internet for education, compared to the national average of 22.5%, showing how socio-economic inequality limits digital learning. In consumer use, online shopping frequency is close to EU averages: 61.7% of Hungarians purchased online in the last 3 months (vs. 60% EU), and 74% in the last 6 months (vs. 71% EU).

Digitalisation lags behind the national level. Internet use in enterprises is only 60%, below both Hungary (69%) and the EU (68%). Sectoral gaps are pronounced: in construction and administrative services, internet usage is just 33–37%, compared to 50% nationally and EU-wide.

At local level only connectivity data are available, but indirect evidence points to weaker digital adoption. At the county level, digitalisation aligns with regional patterns: low uptake in trade and administration, but modest strength in manufacturing and transport. In rural municipalities such as Tállya, household internet access is now high, but educational use and e-commerce adoption likely remain well below national averages, due to lower incomes and smaller consumer bases.

3.6.3. Digital economy

In business, internet usage is widespread: 69% of Hungarian enterprises (10+ employees) use ICT for operations, in line with the EU average (68%). However, there are sectoral weaknesses: construction and administrative sectors show usage of only 33–37% regionally, compared to 50% in both Hungary and the EU. E-commerce turnover shows mixed performance: Hungary is above EU levels in transport and manufacturing, but weak in administrative services (3.8% vs. 11% EU). Overall, Hungary's digital economy shows strong coverage and good consumer uptake, but inequality in access and sectoral gaps limit full convergence with the EU.

In e-commerce, regional turnover in trade is only 5%, half of both national and EU levels (10%). Meanwhile, manufacturing and transport show relatively stronger performance, closer to the EU average, though from a smaller base. The regional profile thus reflects the broader economic structure: digitalisation is stronger in export-oriented industries but weak in local services. Northern Hungary's digital economy remains constrained by its weaker enterprise structure, leaving it behind the national and EU averages, particularly in service-oriented sectors.

For local businesses, digital presence is limited: agriculture and small-scale hospitality dominate, with few firms able to invest in e-commerce or advanced ICT. Thus, while basic connectivity exists, the local digital economy in Tállya remains shallow, with limited integration of digital tools in both education and enterprise activity.

3.6.4. Personal digital skills

Digital skills have improved steadily and are now slightly above the EU average. A high share of the population has at least basic digital competences, supported by broad internet coverage and recent national digitalisation initiatives. The improvement has been continuous over the past decade, both in Hungary and across the EU, though Hungary has closed much of the earlier gap. Education plays a strong role: higher levels of schooling correlate with stronger digital skills, mirroring EU trends. Demographics remain key—younger cohorts treat digital skills as basic knowledge, while older generations lag significantly. Overall, Hungary shows a positive trajectory in digital skills, with relatively strong coverage but persistent divides by age, education, and location.

At regional level digital skill levels are assumed to be lower than the national average, given the region's weaker educational attainment and lower household incomes. While younger people achieve digital competences comparable to peers nationwide, older adults and rural residents are

more likely to lack basic skills. Regional efforts to expand connectivity have helped, but digital skill gaps remain especially large in disadvantaged groups. Thus, the region reflects the same generational strengths as the country, but with deeper structural divides that limit equal participation in the digital economy.

Indirect indicators suggest even greater challenges at local level. In the county, the combination of low educational attainment and limited economic opportunities constrains digital skill development, especially among adults. In rural municipalities like Tállya, where agriculture and small-scale tourism dominate, digital competences are likely to be concentrated among younger people and those engaged in education, while older generations may rely little on digital tools. At the local level, digital skills are unevenly distributed, with strong generational divides and limited opportunities for lifelong digital learning.

4. Solutions

4.1 Strategic goals

The pilot programme aims to enhance youth employability and labour market integration. It seeks to provide young people with practical skills, non-formal learning opportunities, and career guidance which improve their chances of finding meaningful employment. Particular attention is given to vulnerable groups, including NEETs, young women, and youth from low-educated or economically disadvantaged families, ensuring the initiative directly addresses those most affected by unemployment and limited opportunities in rural areas.

Another central goal is to strengthen social cohesion and community engagement. By creating a dedicated community space, the programme encourages networking, intergenerational exchange, and cooperation between young people, schools, local authorities, employers, and NGOs. This helps reduce rural isolation, fosters inclusion, and builds a supportive local ecosystem for youth development that can endure beyond the pilot phase.

The programme also focuses on aligning education and training with regional economic needs. During the planning of pilot activities, all relevant information provided by local stakeholders via interviews have been taken into account, and all interviewees (school representatives, local youngsters, employers and NGOs) have been informed about the planned activities thus they had the opportunity to pre-validate them. The finalization of the pilot plan will take place during the 1st LCI meeting in 2026. Labour market needs have been also taken into consideration in terms of professions as well as competencies: the region's unique winemaking tradition and the related labour market needs as well transversal competences required by SMEs and multinational companies have been collected and prioritized. During the design pilot activities, high emphasis has been put on future labour market competencies and development of resilience, based on recently published reports and papers such as The Future of Jobs Report and The New Future of Work.

Activities will be co-designed with local stakeholders to reflect the skills required by the labour market in Tállya and the wider Borsod-Abaúj-Zemplén county. This ensures that youth gain relevant competencies while also contributing to broader objectives such as reducing socio-economic inequalities, enhancing digital literacy, and supporting local economic resilience. By targeting these strategic goals, the pilot aims to create a model for youth empowerment in disadvantaged rural areas.

4.2. Proposed intervention (where it's applicable)

Youth unemployment and socio-economic inequalities remain critical challenges in Hungary, especially in disadvantaged regions such as Northern Hungary and rural municipalities like Tállya. National data shows that early school leaving and low tertiary participation continue to limit opportunities for young people, while regional figures indicate higher NEET-rates, particularly among women. The labour market integration of young people is further constrained by limited access to training, mentoring, and inclusive community structures. Strengthening access to non-formal education, career guidance, and social infrastructure is therefore essential to equip youth with both practical skills and the confidence to engage in the labour market.

The proposed pilot activity of establishing a community space with workshops, stakeholder meetings, and youth-oriented events directly aligns with these solutions. By creating a dedicated platform for learning and exchange, the pilot offers both education and training, and social capital building, two critical gaps identified in the country report. It provides a bridge between education and employment by giving young people access to guidance and peer support. Larger community events promote inclusion, visibility, and intergenerational exchange, helping to overcome rural disadvantages. As such, the pilot represents a valid and innovative means of promoting youth integration into the labour market: it addresses inequalities by empowering young people locally, while also connecting them to broader economic and educational opportunities.

Another strength of the pilot activity is its ability to respond to the regional and local specificities of Borsod-Abaúj-Zemplén county and municipalities like Tállya. These areas are characterised by demographic decline, high early school leaving, and limited labour market opportunities. The community platform can function as a locally accessible resource hub, reducing the need for young people to relocate for every form of support or training. By anchoring the activity within the community, it directly addresses the problem of rural isolation while simultaneously strengthening local social cohesion. This is crucial in areas where public institutions and formal training pathways are less accessible or underfunded.

An important feature of the pilot is its emphasis on stakeholder cooperation. By involving schools, employers, NGOs, and municipal authorities, the project ensures that activities reflect local labour market needs and connect youth to real opportunities. Currently there are no formal agreements with stakeholders, but within the pilot program's territory there is strong cooperation and reliable personal connections that may create the foundation of future MOUs once the stakeholders recognize the potential of formal MOUs. Stakeholder meetings create channels for collaboration and sustainability, while workshops can be co-designed to match the competencies required by employers. This multi-actor approach not only benefits participants directly but can also integrate the pilot into broader regional development strategies aimed at tackling unemployment and inequality. By targeting one of the most affected groups—rural youth—the initiative addresses the root causes of socio-economic inequality and contributes to regional convergence.

5. Conclusions

Hungary demonstrates notable progress in convergence with EU averages in areas such as poverty reduction, youth employment, and digitalisation, yet regional disparities remain a defining challenge, particularly in Northern Hungary and rural communities like Tállya. Demographic decline, uneven economic performance, early school leaving, health disadvantages, and persistent poverty risks continue to reinforce cycles of disadvantage at the regional and local level. At the same time, the country's expanding digital infrastructure, gradual improvements in adult learning, and more resilient economic indicators provide a foundation for inclusive growth. The central task ahead is to ensure that these strengths translate into tangible benefits for vulnerable groups and disadvantaged regions. Addressing the interconnected issues of education, labour market inclusion, and social protection in rural areas will be essential for reducing inequalities, supporting long-term demographic sustainability, and promoting cohesion across the country.

The evidence shows that early school leaving, low tertiary participation, and high NEET-rates—especially among young women—continue to restrict labour market prospects in Tállya. These barriers are compounded by a lack of training opportunities, weak social infrastructure, and insufficient mentoring pathways. In this context, strengthening access to non-formal learning, career guidance, and supportive community structures emerges as an essential step toward improving young people's socio-economic integration.

The proposed pilot activity directly responds to these identified gaps by establishing a community space that combines education, training, and social capital building. Through workshops, stakeholder meetings, and youth-focused events, the pilot creates a locally accessible platform that reduces rural isolation, supports skill development, and bridges the transition between education and employment. By engaging schools, employers, NGOs, and local authorities, the initiative ensures that its activities remain relevant to labour market needs and are embedded in broader regional development strategies. As such, the pilot offers a credible and innovative approach to empowering rural youth, addressing structural inequalities, and promoting long-term labour market inclusion in some of Hungary's most disadvantaged areas.

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