

Supporting Adult Education Policy Through Data Collection and Registries – Experiences of the Visegrad Countries in the context of individual learning accounts and quality assurance developments

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Abstract

This article examines the role of adult education registries and data collection in supporting policy development across the Visegrad countries (Czech Republic, Hungary, Poland, and Slovakia), with a specific focus on Individual Learning Accounts (ILAs) and quality assurance. Utilising Richard Desjardins' typology of adult learning systems, the study employs a mixed-methods approach, including policy document analysis and 42 stakeholder interviews, to evaluate how these nations manage their information in-

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frastructure. The findings reveal that while formal education sectors are comprehensively tracked, the non-formal vocational sector remains fragmented, often suffering from information asymmetry and market failures. Comparative analysis highlights diverse national strategies: Hungary has adopted a centralised, mandatory registration model, whereas the other V4 nations rely on more voluntary or market-driven systems linked to public funding. The authors identify four strategic approaches to registry development – legal obligation, funding-linked registration, voluntary participation, and organic development—which we read as institutional expressions of the „patchwork capitalism” that characterises the region’s transition and the absence of a settled skills-formation regime for adults. The article concludes by relating each approach to the scope, coordination and quality-assurance demands of Individual Learning Accounts. The contribution is an empirically led comparative mapping, read through the lenses of information economics and skills-formation theory rather than a purely theory-testing exercise.

Keywords: adult education, Visegrad countries, individual learning accounts, data registries, quality assurance, non-formal learning.

JEL: I21, I28, J24

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1. Introduction

The integrity and quality of information in registries are fundamental to all stages of policy development – from conception and design to implementation and evaluation – especially in fields like adult learning, where the needs and conditions can be diverse and dynamic (Roumell & Roessger, 2019). Such data can reveal trends, needs and gaps in the education system – including learners’ demographics, learning preferences and career trajectories – enabling more targeted and effective policy interventions. The growing interest in data-driven approaches to workforce development makes the underlying information infrastructure a policy concern in its own right – part of what the public-administration literature describes as datafication and governance-by-data (Williamson, 2017) and, in the digital-era-governance tradition, as the re-integration of public services around shared administrative data infrastruc-

tures (Dunleavy et al., 2006). The interoperability of registers and the “once-only” principle now promoted in EU digital-government policy make the design of this infrastructure a governance question in its own right which is the focus of this article.

Reliable registries – which include information on the accreditation status of training providers and programmes – also matter to learners and employers: they can reduce information asymmetry and help assure quality and the expected return on investment in education and training. In the language of information economics, a reliable registry works as a signalling and certification device (Spence, 1973; Akerlof, 1970): by making verified quality observable, it counteracts the adverse selection that arises when learners and employers cannot distinguish good from poor provision before purchase. Reliable and accessible data should enhance the efficiency of the search for the appropriate training offer and, therefore, contribute to better investments in human capital. The Council Recommendation on individual learning accounts of 2022 recommends developing public registers of training offers: “There is also a need for up-to-date public registries of recognised training through dedicated single national digital portals accessible to all, including people with disabilities, and, preferably, interconnected with the Europass platform” (Council Recommendation, 2022). This has also been indicated in the Impact Assessment study conducted by the European Commission (EC, 2021). The development of ILA will depend on the scope of the training offered to learners, as adults have different needs.

However, quality assurance of learning opportunities and qualifications and the collection and quality of the data in the registries is a multi-aspect issue. It must be assured that the information provided by the training provider is accurate and true (e.g. that the training in carpentry will, in fact, be about carpentry) and that the learning outcomes and competencies developed are up to date and relevant to the labour market (e.g. the skills offered to carpenters will be relevant for employment).

This raises a key question for policymakers: how to ensure both broad scope and quality assurance of data in ILA-linked registries and portals. This poses particular challenges for countries where the adult learning sector is mostly organised via private markets, and policy impact is limited. The experience of market failure within education and training markets has been widely discussed in economics (Booth & Snower, 1996). The failures at stake are of several distinct kinds: adverse selection, where hidden quality drives good provision out of the market (Akerlof, 1970); moral hazard in the behaviour of providers once training is publicly funded; the under-investment in general skills that arises because their returns are partly appropriable by other employers (Acemoglu & Pischke, 1998); and the public-good character of

registry data itself, which no single provider has an incentive to supply. Therefore, there are three key aspects of registries that need to be analysed. First, the scope of registries, i.e. what segments (sectors) of adult education and training are covered by the registry data which is available to learners and employers and to policy makers. This will be investigated with the support of Desjardins (2017) typology, see below. Second, the coordination mechanisms between policymakers governing different segments of adult education and training sectors and registries. Third, quality assurance mechanisms and feedback loops. How is the training offer included in the registries (Is it voluntary? Is it obliged by law? How is the reliability of information verified and assured?).

The establishment of public registers in many European countries is also linked to the development of national qualifications frameworks for lifelong learning (Markowitsch & Dębowski, 2022) and more broadly with adult learning policies supported by allocation of European Union funds. This causal story, i.e. EU funds and recommendations driving national registry development, is an instance of the Europeanisation of education policy through soft governance: the open method of coordination, benchmarks and funding conditionality rather than binding law (Lange & Alexiadou, 2007; Milana, Klatt & Vatrella, 2020). The individual-learning-accounts recommendation and the qualifications-framework agenda are recent examples of the same soft-law dynamic.

In the article, we analyse solutions adopted in the four Visegrad countries (V4), namely the Czech Republic, Hungary, Poland and Slovakia, regarding developments of registries and data collection in the adult education sectors with particular attention to the vocationally oriented adult education sector. Following Desjardins' adult training systems typology (2017), we aim to identify how data in adult learning subsystems (sectors) is collected and used by policymakers and stakeholders. We distinguish between data (registries) regarding learners and data (registries) regarding the training offer. The analysis of data collection systems will be conducted against the background of policy frameworks that underpin adult learning in the Visegrad countries, noting the interplay between European Union recommendations and national priorities, including the structure of governance of adult learning and financing measures.

The findings aim to contribute to the broader discourse on adult education systems and inform future policy development within and beyond the Visegrad region. The article draws on evidence from the international project: *Digital Individual Learning Accounts In The Visegrad Countries* (D-ILA in V4) financed within the Erasmus+ framework. By articulating the state and impact of registries and databases

in adult learning policy, we aim to underscore the importance of data in crafting responsive, effective, and inclusive educational policies within the Visegrad context.

The article makes two contributions. Empirically, it maps how the four Visegrád countries collect and register data across the segments of adult learning, giving particular attention to the weakly covered non-formal vocational sector on which the success of Individual Learning Accounts most depends. Analytically, it distils this evidence into a typology of four approaches to registry development: legal obligation, funding-linked registration, voluntary participation, and organic development, which we introduce here as the organising frame of the analysis and develop in a dedicated discussion section preceding the conclusions. The analysis is deliberately empirically led: theory is used to interpret the comparative material rather than to be formally tested. Each approach is assessed against three dimensions: the scope of coverage, the coordination between the bodies that govern different segments, and the mechanisms for quality assurance.

2. Assumptions and theoretical framing

In 2022 unemployment rates in the Visegrad countries were among the lowest in the European Union. At the same time, relatively high economic inactivity and a steady decrease in the working-age population are observed, driven by low economic activity among older people and low fertility rates. Recently all of the V4 countries have experienced a migrant shock due to war in Ukraine which lays extra responsibilities and challenges for the adult education system. As a result, adult training is seen as an important policy area and a relevant element of industrial, migrant and labour market policy. Literature on the importance of data collection for the purpose of adult learning policy is also growing, see Jules and Florin (2022) for a review.

We assume that evidence-based approach improves quality of policies and may foster dialogue. We treat this as a working assumption rather than a settled claim: the evidence-based-policy programme has itself been criticised for underplaying the political and value-laden character of policymaking and for privileging certain forms of evidence (Cairney, 2016; Parkhurst, 2017). Our argument is the narrower one that, whatever weight evidence is given, policymakers cannot act on data they do not have, so the quality of registry infrastructure is a precondition for evidence-informed adult-learning policy. We aim to address this research gap by assessing the conditions for developing knowledge-based tools for adult learning systems. We use individual learning accounts

as an example of a policy that may not be effective in an imperfect market characterised by information asymmetry and/or as a result of a government failure. The risk of government failure here is not merely rhetorical: the non-market-failure literature (Wolf, 1988) and work on quasi-markets in public services (Le Grand, 1991) shows that regulatory intervention can generate its own inefficiencies through information constraints, capture and administrative cost, which is why the design of registry and accreditation regimes matters as much as the decision to intervene. This is to say that policymakers are in need of adequate data at the national level – not just surveys, but good quality registry data. In this context the V4 countries face the challenge of improving data collection and integrating existing data. An expert level policy debate on this topic has been inspired by the European initiatives of which qualifications frameworks, graduate tracking systems and individual learning accounts are most prominent.

In recent years all V4 countries have introduced reforms and new policies in education, registries, data collection and graduate tracking, making them an instructive case of middle- to high-income, growing economies seeking further modernisation.

The V4 countries share a set of institutional similarities to other post-soviet states and can be seen as examples of a successful socio-economic transformation in many aspects. However, the transformation of adult learning has not been successful or has not been subject to formal policy (that is one that is officially communicated, not based on forgoing efforts to implement directed change). Adult learning is also becoming more relevant to the private sector – for recruitment and talent development – and from a macroeconomic and competitiveness standpoint.

The article draws from the varieties of capitalism and skills formation systems theories. The historical perspective shows that the Visegrad countries share a common history: of state led education systems and state industry led skills formation systems, their fall and slow emergence in new economic circumstances a decade (and more) after systemic transformation. Notably, over the last 30 years the V4 countries have slowly changed under similar (yet varied) influences transferred via the strengthening of economic and political ties to Germany and other EU countries, and an openness to foreign capital and investments. The balance of power between the state, the corporations (old and new) and the civic society institutions has changed. Literature provides the model of ‘dependent market capitalism’ and the related impact of foreign capital on institutions such as labour laws and their execution (Drahokoupil & Myant, 2016; Muszyński, 2018; Nölke & Vliegenthart, 2009).

The Visegrad countries institutional frameworks remain open to change and dynamic, hence rarely consistent. The history of repeated critical junctures, often tur-

bulent, shaped the institutional setting and weakened the institutional matrices. These characteristics constitute the phenomena of “patchwork capitalism” described in the varieties of capitalism literature (Gardawski & Rapacki, 2021). The concept describes both, a name for a distinct model of capitalism present in Central and Eastern Europe, and a characteristic that can be observed with various intensity and scale (as in: a more-patchwork and a less-patchwork architecture).

These varieties of capitalism are underpinned by, and expressed through, skills-formation systems. The comparative political economy of skill formation distinguishes collective, statist, liberal and segmentalist regimes according to how firms, the state and associations share responsibility for training (Busemeyer & Trampusch, 2012; Thelen, 2004). This literature has largely been developed for affluent Western economies and for initial VET and higher education; the adult, non-formal segment on which individual learning accounts depend has received far less attention, and the V4 cases show why that matters. The skills formation systems in the V4 countries, i.e. initial VET systems, retained their statist core. The attempts to transit towards more coordinated mechanisms have been unsuccessful or partial, and the internal logic drifts towards market-oriented liberal regimes. These trends can be seen in the limited success in developing dual training schemes and the on-going modularisation and unitisation in VET (see more in: Cedefop, 2020).

Our reading of the evidence is that the variety and incompleteness of registers is itself an institutional expression of the fact that the V4 countries have no settled skills-formation regime for adults. Initial VET and higher education remain visibly path-dependent on communist-era arrangements and are, correspondingly, comprehensively registered; the non-formal adult sector, which was left to the market after 1989, is not embedded in any such regime and is registered only fragmentarily. In this sense all four countries display a patchwork structure – Hungary being the partial exception, having imposed a statist template through a legal registration obligation – and each has produced a different registry form without any of them being anchored in a coherent adult skills-formation system. The four approaches we set out later can thus be read as the institutional forms this patchwork takes, rather than as deliberate design choices within a shared model.

Notably, the shape of each registry tends to follow its funding source. Registers grow up around the money that flows through them – national budgets for formal education, labour-market funds for the unemployed, sectoral schemes, and above all the European Social Fund and related EU instruments – so that the map of registers is also a map of national and European policy priorities. The EU co-financing required

accountability for how funds were spent, so the registers and accreditation followed. If no such funding logic was applied, coverage remained thin. The patchwork is therefore not random but sedimented from successive, differently funded national and European interventions. The shifts in the VET systems observed in EU countries suggest that the skills formation systems are increasingly departing from institutional consistency (Cedefop, 2020). From this perspective, we complement the skills-formation-systems literature. Building on Busemeyer and Trampusch (2012) and Thelen (2004), which focuses largely on affluent countries and on formal VET and higher education, we are extending its questions to the under-studied non-formal adult sector in Central and Eastern Europe.

The focus of this article is the information infrastructure of the adult learning systems. We attempt to show if, how and where it is governed and/or regulated, which reveals the scope of regulation and market mechanisms in the adult learning systems.

3. Methods

The study used mixed research methods, but desk-research was the primary source of data. Its principal evidence comes from the analysis of policy and legal documents and from the direct examination of the public and private registries themselves, complemented by literature analysis. This is supported by 42 in-person interviews with the key stakeholders: training providers, employers, policymakers, trade union representatives, and policy researchers. Each national team within the D-ILA project prepared inputs on functioning of the national registries for the feasibility study¹. Using this as a source material, we compare solutions and practices from the four Visegrad countries. The article uses Eurostat database, particularly Adult Education Survey (2023) as a point of reference.

The interview evidence is drawn from the empirical research conducted within the D-ILA in V4 project. Between April and May 2023, the national teams carried out 42 semi-structured in-depth interviews across the four countries. The purposive sample spanned the principal stakeholder groups in the adult learning field: 18 company representatives (typically HR or training managers), 15 representatives of public and governmental institutions (chiefly public employment services), 7 representatives of providers delivering training for business, and 4 international experts (from

¹ <http://www.nvf.cz/cms/assets/docs/463e4d43b4b2e813ce6214dd85269242/896-1/d-ila-wp2-feasibility-study-a4-final.pdf> [access: 30.03.2024]

the OECD, ETF and Cedefop). Some respondents were active in more than one role and could be classified in more than one category. All interviewees were assured of anonymity, with no link retained to their name or institution.

A common semi-structured guide was used, with a modified version for the international experts, and interviewers were trained in a shared online session to align respondent selection and recording practice. Interviews were conducted in person or online according to respondents' preferences; memos were recorded as structured written notes rather than verbatim transcripts, translated into English, and analysed thematically, with responses categorised by country or by stakeholder group in order to compare perspectives. The interview guide was initially designed to explore skills needs, sources of information on the training offer, learner characteristics and the matching of learners to training. Questions addressing registries and data sources were added to the interview scenario during fieldwork, once their relevance to the ILA data model became clear; the archived version of the guide does not fully reflect this addition. In practice, registries were an explicit subject of the interviews: evidence on their availability, use and perceived reliability is strongest from the policy and provider respondents, complementing the document and registry analysis, with the interviews also providing context on how registry data is actually accessed and used. Given the qualitative design and the sample size, the findings are indicative of stakeholder experience and are not statistically representative.

Richard Desjardins' typology, as outlined in "Political Economy of Adult Learning Systems" (2017), provides a theoretical framework for categorizing adult learning systems based on their structure, governance, and operational dynamics. The typology serves as a lens through which the data collection and registry efficacy can be evaluated, highlighting the interplay between systemic types and the successful integration of data into policy. To guard against reliance on a single classification, we read Desjardins' segmentation alongside other accounts of adult-learning systems the comparative political economy of adult education (Rubenson, 2006) and the system typologies used in European monitoring (Cedefop, 2020; OECD, 2019), which segment provision on similar lines and confirm that the formal / non-formal and vocational / liberal distinctions we use are not idiosyncratic. In what follows, Desjardins' categories function mainly as a segmentation device for organising the coverage evidence; the comparative explanation of why registers take the form they do draws primarily on information economics and the patchwork-capitalism literature introduced above.

Desjardins (2017, pp 18-21) distinguishes the following major structured provisions relating to adult learning:

- Adult Basic and General Education: also referred to as second chance or basic skill education including primary to upper secondary education (EQF 1-4 or ISECD 1-3). This type of education might be provided by formal providers (e.g. schools, adult learning centres) or non-formal providers but is supervised by the state and financed by the state.
- Adult Higher Education: typically considered formal education. This type can be distinguishable or indistinguishable from regular higher education. Adult Higher Education is under state and specialized agencies supervision and leads to HE recognised qualifications (e.g. master degree or post-graduate non-degree diploma).
- Adult Vocational Education (formal and non-formal): also referred to as Continuing Vocational Education and Training (CVET), technical education, work based learning, adult education and training.
- Adult Liberal Education: also referred to as Popular Education, typically includes sport, hobby, cultural education and leisure-oriented provisions. Adult liberal education in V4 countries has rich tradition. *People's Universities* or *Third Age Universities* as well as commercial courses related to the lifestyle category would fall into this category.

For the purpose of this article, Adult Vocational Education has been divided into two categories. The reason for this distinction is that non-formal VET is not fully covered by the policy and state regulations. Therefore, it is justified to analyse these two segments separately in terms of data collection and registries². As a result, the typology of adult education and training system is divided into the following categories:

- adult basic and general education (organised within formal education)
- adult higher education (organised within formal education)³
- adult vocational education organised *within the formal education*
- adult vocational education organised *within non-formal education*
- adult liberal education (e.g. charities, NGOs, training not directed towards labour market)

The analysis is focused on registries, databases and portals, but we do not strictly define them or delineate between them. We acknowledge that most registers have a database and often a portal, not all databases can be called registries etc. However, in all cases data is being gathered and shared. The study is concentrated on the follo-

² Non-formal VET provided by vocational schools is regulated. Non-format VET provided by private providers is also regulated if it leads to qualification as they have to mirror the formal educational path leading to identical learning outcome (qualifications such as cooks, carpenters, electricians, etc).

³ In Slovakia, there is a fair share of non-formal education provided by HEIs apart of liberal education.

wing type of data: education and training programmes; qualifications; training and other development services (e.g. counselling, coaching) and learner data.

4. Adult learning landscape in the Visegrad countries

4.1 Political and historical context

Visegrad countries share a common legacy of communist regime, which played the dominant role in shaping their education-related institutions. Although the initial formation of public schooling back in the nineteenth century took different forms and occurred at different times in each of the countries considered, the experience of belonging to the eastern block between 1945 and 1989 yielded a mutual assimilation of national educational systems with respect to political motivation, management styles and general organisation (Herbst & Wojciuk, 2017).

During the years of transition, the adult education sector in the Visegrad countries was not given political attention. This sector was viewed as market-oriented and consumerist and was essentially left to private providers and voluntarist initiatives of NGOs (see: Dębowski & Stęchły, 2022; Dvorak & Gal, 2022; Laczik & Farkas, 2022; Vantuch & Jelinkova, 2022). Policymakers focussed on compulsory education and HE as strategic to the formation of human capital. In the absence of governmental support, the institutionalization of adult education and the professionalization of adult education providers and adult educators was slow. However, considering the economic difficulties and the enormous challenges of restructuring the states of all CEE countries after 1989, it is perhaps understandable that adult education was not prioritised (Markowitsch & Dębowski, 2022).

Visegrad countries took significant effort to decentralise the education system at the beginning of transformation – governments relaxed the central bureaucratic control and extended the autonomy of schools and local self-governments. New curricula, more liberal regulations on school choice, which allowed the market to exert pressure on schools, and the establishment of parent committees in schools were all means of weakening the state monopoly in education. All the countries examined here started to extend school autonomy at the beginning of the transformation process in the early 1990s: Czechoslovakia in 1990, Poland in 1991 and Hungary in 1993.

These reforms were strictly embedded in the broader context of transformation and the accompanying ideological shifts. Centralisation was earlier an inherent part of the authoritarian institutional setup, therefore decentralisation became a means to bring politics and policy making closer to society. Strengthening the local governance and empowering the citizens was perceived as an effective way of state ‘decommunisation’. Ideologically, liberalism was the main inspiration behind the reforms. However, while in the Czech Republic and Slovakia building of democracy and community on the local level were crucial for the decentralisation, in Poland the effectiveness of service delivery played a larger role. Polish reforms were driven more by the New Public Management concept (Swianiewicz, 2002, 2003).

Taking the above context into consideration, it should be no surprise that the adult education sector was not given political attention, and there was no political will to interfere with the market mechanisms, since liberal economic views in line with the Washington consensus were dominant during this period.

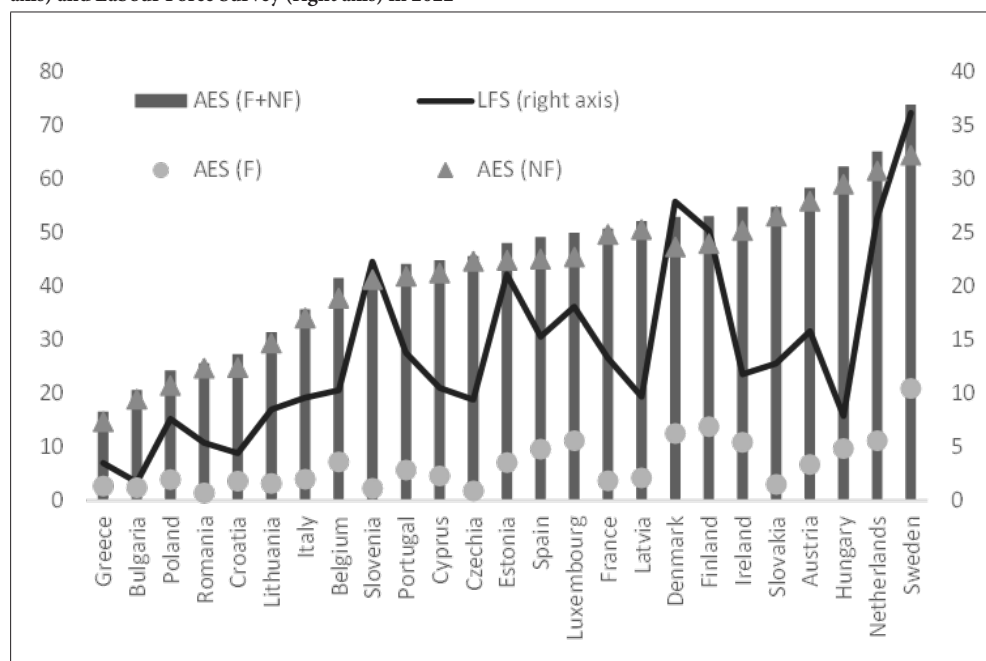
The steady economic growth of the 2000s, the targets set by the Lisbon and Copenhagen processes and, finally, the establishment of the European and national qualifications frameworks, have raised awareness of the non-formal training sector in all CEE countries, including the Visegrad countries (Markowitsch & Dębowski, 2022). New policies and regulations for non-formal adult education were not introduced before 2000. Policies promoting adult learning have gained momentum in all CEE countries in recent years, as evidenced by the development of national lifelong learning and skills strategies (Milana, Klatt & Vatrella, 2020).

4.2 Participation patterns

The participation pattern of adults in education and training in the Visegrad countries resembles European patterns. Slovakia and Hungary note high participation rates, Czechia is slightly below the EU average, and Poland notes low levels of participation, according to the most recent data from an adult education and training survey (Eurostat, AES, 2023). The contrast is striking: Slovakia and Hungary at the top, Poland at the bottom. It is tempting to read it against registry structure: Poland combines the lowest participation with the most fragmented, four-register landscape, while the more centralised or employer-concentrated systems record higher participation. We flag this only as an association, not a causal claim, participation is driven mainly by learner motivation and by employer-provided training (see Table 2), and the direction of any link with registry fragmentation cannot be settled with these

data. This picture is quite similar if Eurostat Labour Force Survey indicators are taken, it should be underlined that Slovakia, Hungary and Poland noted significant increases in the LFS indicators in the last two years. These increases coincided with changes in methodology and inclusion of explicit questions on various forms of learning such as driving license courses and occupational health and safety training. This raises questions about comparability of the indicators year-to-year, but also about the differences in awareness of what constitutes learning.

Figure 1. Participation in adult education and training (age 25-64) according to Adult Education Survey (left axis) and Labour Force Survey (right axis) in 2022



Source: Own calculation based on Eurostat data (AES 2023 and LFS)

In the Visegrad countries, adult education and training takes place mostly in the non-formal education setting, and this sector has been growing over the years, whereas the share of adults participating in formal education is decreasing, see Table 1.

Table 1. Participation in adult education and training (25-64) with respect to Adult Education Survey (AES) and Labour Force Survey (LFS).

	2004	2007	2011	2016	2022
Czechia					
AES: Formal and Non-formal	-	37,6	37,1	46,1	45,7
AES: Formal		3,9	3,7	2,5	1,8
AES: Non-formal		35,4	34,9	44,6	44,7
LFS	6,3	6,0	11,6	8,8	9,4
Hungary					
AES: Formal and Non-formal	-	9,0	41,1	55,7	62,4
AES: Formal	-	2,5	6,5	7,3	9,7
AES: Non-formal	-	6,8	37,6	52,5	59,1
LFS	4,6	3,9	3,0	6,3	7,9
Poland					
AES: Formal and Non-formal	-	21,8	24,2	25,5	24,3
AES: Formal	-	5,5	5,4	4,4	3,9
AES: Non-formal	-	18,6	21,0	22,9	21,5
LFS	5,5	5,1	4,4	3,7	7,6
Slovakia					
AES: Formal and Non-formal	-	44,0	41,6	46,1	54,8
AES: Formal	-	6,1	5,8	1,5	3,0
AES: Non-formal	-	41,2	38,3	45,0	53,1
LFS	4,6	4,1	4,1	2,9	12,8
Sweden					
AES: Formal and Non-formal		73,4	71,8	63,8	73,9
AES: Formal		12,7	13,5	13,8	20,9
AES: Non-formal		69,4	67,0	56,5	64,5
LFS	35,8	19,0	25,3	29,6	36,2

Source: Own calculations based on Eurostat data (AES and LFS).

Non-formal education can be provided by various types of providers, including not just training providers, employers or sectoral organisations, but also formal education and training institutions (e.g. schools, vocational education centres, universities). In the Visegrad countries, formal institutions provide a minority of training to adults. In Poland and to some extent also Czechia non-formal education rests mostly within non-formal providers, whereas in Slovakia and Hungary large share of all non-formal education rests within employers. In Hungary, quite significant part (10%) of non-formal learning is provided within formal education institutions, similarly as in Sweden or other Nordic countries.

Table 2. Distribution of non-formal education and training activities by provider type in 2022.

	Czechia	Hungary	Poland	Slovakia	Sweden
Formal education and training institutions	5,7	1,6	9,8	2,0	5,8
Non-formal education and training institutions and other public or private training institutions	41,7	23,6	62,9	27	46,3
Employers	37,9	59,5	18,7	58,2	31,2
Individuals	12,1	7,5	4,2	12,4	3,2

Source: Own calculations based on Eurostat data (AES).

5. Governance of adult education sector with reference to registries and data collection

The responsibility for the adult learning system in Visegrad countries, similar to many other European countries, is distributed across different ministries, agencies, and local governments (Desjardins, 2017).

In Czechia, Poland and Slovakia, ministries of education are responsible for both formal general and vocational education, including formal general and vocational education of adults. In Poland, higher education lies within the competencies of a separate ministry of higher education and science which was separated from the ministry of education in 2019. In Hungary responsibilities of education are spread across three ministries – the Ministry of Interior which is responsible for primary and secondary education and school-based adult public education, the Ministry of Culture and Innovation is responsible for school-based initial VET and continuing VET, and higher education and the Ministry of Technology and Industry is responsible for non-school based adult training, including vocational and non-vocational courses. In all countries specific elements of professional development and education are also placed in relevant ministries.

Ministries of Labour play an important role across the Visegrad countries, as they are responsible for administering training funds allocated to unemployed or employed individuals wishing to retrain, or to employers aiming to organise training for their employees. Because public spending requires transparency and documented justification, states are unwilling to fund training offers without introducing regulation, accreditation and registries of programmes, courses, training offers, develop-

ment services and qualifications. The influx of European funds for education and training purposes reinforced this logic, as this was an EU requirement to ensure that funds were allocated according to the needs and were used efficiently. The spending co-finances from the European Social Fund (including spending related to lifelong learning and investment in human capital) is supervised by selected institutions, for example in Poland, Ministry of Economic Development and Technology. In this context it should be mentioned that most of the Visegrad countries' ministries delegated the task of running registries to their subordinate institutions, as presented in Table 3.

The system of governance of the adult education sector impacts the way data is collected and the number and the scope of registries. Poland and Hungary are examples of the most extreme cases. In Poland, each ministry supervises its "own" registry, which means that there are four registries, whereas in Hungary the system of data collection has been centralised in the form of one registry. What is also exceptional of the Hungarian solutions is that the registry contains both individual and institutional data. Registering in the area of non-formal education is obliged by law. In Slovakia and Czechia there are two main registries functioning under the auspices of the ministry of education and ministry of Labour. In Slovakia, the ministry of education governs the register of accredited non-formal programmes focusing on "hard skills" or leading to a qualification. The registry was also used by the ministry of labour during implementation of the re-skilling scheme for unemployed people called REPAS. A parallel scheme for soft skills – KOMPAS – was implemented without any backup by a reliable register of training providers with rules for their selection.

In the Visegrad countries a significant part of adult education is organised by private enterprises acting according to *laissez-faire* principles. The range of programmes offered in non-formal education is much larger than in formal education due to the wide diversity of institutions and adult learners' training needs. In this sector of adult education, market mechanisms often decide which training provider stays on the market and which does not. However, in the mid-2010s Hungary entered the path of centralisation and regulation of the adult education sector: to provide adult education or training, each training provider (including private training providers) is obliged by law to register its activities and follow general quality assurance rules. According to Szlamka and Salomvári (2024) 66.8% of the training courses registered in Hungary in 2020 were accredited, i.e. centrally monitored.

In Poland, Slovakia and Czechia, there are no dedicated regulations for institutions providing adult training – unless these offers are to be financed or co-financed

from the public funds⁴. As a result, an unknown part of the non-formal adult education is covered by private registries which distribute data usually for a fee, however one should assume that most training providers operate on a local basis and/or have a narrow field of specialization and advertise directly to the target group via different means (webpage optimisation for search, direct sales, word of mouth etc.). The private registers contribute to accessibility of training, but their primary motivation is business-driven. In Czechia, private registries contain the dominant part of training offer whereas in Poland or Slovakia private initiatives are not so relevant.

In recent years Visegrad countries introduced qualifications registries linked to qualifications frameworks. And currently, all of the countries are considering the introduction of individual learning accounts. The open question is to what extent qualification registries linked with NQFs are and or will be merged with registries of training offers and other databases and how information in these two types of entities is communicated to stakeholders, including learners and employers. This is especially problematic in Poland, where the NQF has been “opened” to qualifications awarded outside formal education, creating overlaps between the Integrated Qualifications Registry and the registries administered by the Ministry of Labour (registry of training institutions) and the Ministry of Development (registry of development services). In the other Visegrad countries this issue is less problematic, as their frameworks are focused mostly on formal education qualifications.

Table 3. Institutions responsible for governance of the public registries in the Visegrad countries

	Key policy actors in adult learning sector with reference to registries and data management
Czech Republic	Ministry of Education, Youth and Sports (MEYS) responsible for formal general, vocational and higher education registries Ministry of Labour and Social Affairs (MLSA) governing the database of accredited retraining programmes
Hungary	Educational Authority (institution supporting Ministry of Education) is responsible for Public Education Information System and Higher Education Information System. The National Office for Vocational Education and Training and Adult Education (NSZFH) manages the register of VET institutions as well as the Educational register for adult education and learning and central register of issued diplomas, professional certificates, qualification certificates and examination sheets. The Office is under supervision of the Ministry of Culture and Innovation.

⁴ Although there are some exceptions to this general rule as for example in Slovakia the Kompas scheme is not regulated, but is financed through European Social Funds.

	Key policy actors in adult learning sector with reference to registries and data management
Poland	Ministry of Education is responsible for Educational Information System (SIO) and Integrated Qualifications Register (IQR). Ministry of Higher Education is responsible for POL-On registry which collects data on science and higher educations and students. Ministry of Development is responsible for Database for Development Services (BUR) Ministry of Labour and Social Policy responsible for the Register of Training Institutions (RIS) [to be withdrawn]
Slovakia	The Ministry of Education, Research, Development, and Youth of the Slovak Republic is responsible for the National Register of Further Education (ISĎV), in which all accredited courses and participants have been registered. The register is run by Slovak Centre for scientific and technical information (CVTI SR). The Ministry of Education, Research, Development, and Youth conducts an annual data collection focusing on entities implementing educational programs for adults (DALV) Ministry of Labour, Social Affairs and Family, governs active labour market measures through the Central Office of Labour, Social Affairs and Family, but no registry of education and training offers nor providers is run by the public employment services or the ministry. The State Institute for Vocational Education is an administrator of the National Register of Qualifications. As of 2025, the Register of Qualifications will be managed by the Alliance of Sectoral Councils.

6. Public and private registries and their key characteristics

6.1 Coverage of the adult education segments and type of data

Referring to the adjusted Desjardins typology, the registries in the Visegrad countries cover entirely or to a large extent the provisions, which are organised within the formal education and/or accredited by the state: the adult basic and general education, adult higher education, adult vocational education. There is limited or no coverage of the adult vocational education organized within the non-formal education (with the exception of state accredited provisions) and the adult liberal education.

In these sectors, the registries collect detailed data on institutions, learners and programmes – which is natural as this data is of crucial importance in managing formal education systems, including the distribution of substantial financial resources. Inclusion of data to these registries is obliged by law. Information from those registries is also available to learners who might navigate through the internet portals

to find adequate offers and additional information, although functionalities differ across the countries. In recent years thanks to European funds there have been significant developments introduced and innovative functionalities.

Followed by a number of years of piloting, tests and preparation, the Visegrad countries developed graduate tracking systems which link educational data with employment data. For example, in Poland the SIO and POL-on registries data are linked with Social Security registries data to allow for reliable student tracking based on the registered data. The process of development, ending in establishment of the systems legally took ca. five years in each case: 2011-2016 for HE and 2016-2021 for VET. Based on this data there is an automated mechanism which generates reports about each field of study at every higher institution in Poland. Similar solution has been developed for general and vocational education that allows to track graduates of upper secondary school learners. In Hungary as well, data from educational registries are linked with administrative data, with VET and AE tracking systems finally established in 2022. For a more detailed overview of using administrative and survey data see the European Commission report related to implementation of the graduate tracking recommendation (EC, 2020) and Cedefop timeline of VET policies webpage.

It should be noted that registries of formal general and vocational education are generally not linked with portals of higher education – so users must be aware to search for information in different places. However, there are some exceptions to this rule. In Slovakia, there is a joint graduate tracking portal for HE and upper-secondary school graduates⁵. In Poland, the SIO and POL-on registries and portals are not linked, however both provide data for graduates tracking, and the Integrated Qualifications Registry contains relevant information on all full qualifications issued in formal education.

With respect to non-formal adult education the picture is more fuzzy, as some public registries cover adult vocational education organised within non-formal education but this coverage is only partial, see Table 4. The extent to which the public registers cover non-formal education providers is difficult to estimate, since the number of such companies is difficult even to estimate. This sector is also covered by private registries and portals, which usually charge fees for access to data or publishing training offers. Information collected in these registries is not accessible to public decision makers. Analysis of the private initiatives leads to a preliminary indication of two main types: (1) portals with training offers, which core business is providing a bridge between consumers (individual, corporate or public) and service providers

⁵ See: <https://www.uplatnenie.sk/> [access: 30.09.2024]

(training companies, coaches, consultants); (2) learning management systems and learning experience platforms, which usually provide a range of services, including access to an on-line courses database, course creator for company-specific needs and tools/platforms for learning management for individuals and company departments. A notable example is Czechia where (according to interviews) the private portals and registries cover the dominant share of this sector of the adult education and training market. This opinion, although difficult to verify, is in line with the distribution of learning activities by provider type presented in table 2.

Inclusion of information about non-formal education to public registries is usually voluntary, and requires financial outlays and/or substantial administrative burdens related to accreditation, verification of information and quality assurance, see section on quality assurance and accreditation.

The non-formal adult education is usually covered by both public and private registries, which usually overlap to some extent. One reason for this is that providers may choose to include their offer in many registers. Ministries of labour govern their registries of accredited courses, but these registries might overlap with the registries of formal education and with private portals, as for example in Poland.

Significant parts of non-formal education are not covered by the registry data. Neither are most registers designed specifically for non-formal education, nor is there a political interest expressed or social partners pressure for creating such a database. Experts' opinions indicate that such a source of information could benefit many parties and, in a way, be a public good. Registry data has the defining features of a public good — non-rival and, once published, non-excludable — so provision is undersupplied by the market and is a candidate for public or collectively organised provision (a point that also frames the collective-action problem discussed below). However, it remains unclear how could the data be collected and how could the quality of the information itself and the training be assured. The interviewees indicated concern of risks related to abuse, sometimes referring to past experiences (for example of pathologies remembered from previous large scale financing of training from European Social Fund) as well as the foreign experience of the UK of implementation of individual learning accounts (referring to the scheme of 1997-2001). The original UK scheme was closed in 2001 after an estimated £97 million of fraud, which post-mortem analyses attribute directly to the absence of any prior register or accreditation of providers and to weak verification of learners and claims (National Audit Office, 2002). This experience is the clearest documented case of the adverse-selection and moral-hazard risks that a credible provider register is designed to contain, and it directly informs the caution expressed by our interviewees.

In the material gathered, we find various possible explanations for low coverage of the non-formal education by public registers. For one, the expected monetary value of company involvement is seen as negative, unless the inclusion of one's offer grants access to public funding or co-funding. The first important disincentive is the need to prepare and update information, expectedly detailed and burdensome. The second, potential source of costs from a possible requirement to undergo audits, external certification (as in ISO) or an accreditation process, and consequently a possible development of additional processes in the companies. Arguments expressing the need for a fair market and developing common standards and or long-term benefits for the sector as a whole are noted, but do not seem to be weighting on overall opinions (and sometimes decisions).

Hungary has taken an outlier position in the Visegrad countries and introduced a national register, making it obligatory by law in the non-formal sector to report training offers.

The adult liberal education was indicated as not covered or examples of accidental coverage were indicated. There are specific registries of qualifications issued in some sectors, most notably sport and tourism, these are related to training programmes and institutional accreditation in specific associations. The delineation between vocational and leisure adult education proved to be difficult in some cases (sports instructors or city guides training may be pursued for different reasons). Similarly, the category of non-formal basic and general seems to overlap with the adult liberal education (e.g. civic education, media literacy).

Table 4. Coverage of adult learning sectors offer by the public registry data – data regarding individuals

Czech Republic	Hungary	Poland	Slovakia
<i>Adult Basic and General Education (organised within formal education)</i>			
Full coverage Courses for obtaining basic education courses within formal education: in school year 2022/23 attended these courses 93 persons. Courses for obtaining secondary general education certificate (gymnazium): year 2022/23 – 200 persons Ministry of Education, Youth and Sports publishes school statistics online:⁶ It includes basic statistical information about basic and secondary schools, also higher vocational schools and conservatories, higher education institutions, such as number of students, certificates obtained, gender and age of students.	Full coverage Central education register (FAR) covers public education, vocational education and training, higher education, as well as adult education and learning sectors. These registries contain personal data as well as institutional data.	Full coverage The public registers, i.e., SIO and RSPO, fully cover this segment of adult education. Learners might find educational offers easily. Decision makers have broad and detailed information about each learner, school, teacher, infrastructure, etc. across the country in the real time.	Little coverage The Ministry of Education lists the primary schools which offer exams for achieving lower secondary education⁷ and study programmes which include completion of lower secondary education and lower secondary vocational education⁸ In second-chance education there is information provided via a web-site (not a register).
<i>Adult Higher Education (organised within formal education)</i>			

⁶ <https://statis.msmt.cz/rocenka/rocenka.asp>.

⁷ <https://www.minedu.sk/data/att/.pdf>

⁸ <https://www.minedu.sk/ziskanie-nizsieho-stredneho-vzdelania-uspesnym-absolvovanim-komisionalnej-skusky-na-ziskanie-nizsieho-stredneho-vzdelania-v-ramci-vzdelavacieho-programu-nizsieho-stredneho-odborneho-vzdelavania/>

Czech Republic	Hungary	Poland	Slovakia
Full coverage Ministry of Education, Youth and Sports (MŠMT) publishes school statistics online: It includes basic statistical information about higher education institutions, such as number of students, certificates obtained. MŠMT also publishes Complete statistic of students in education on HEI, incl. information about form of education (full-time, part-time and distant education) in “performance indicators of HEI in the Czech Republic:	Full coverage Central education register (FAR) see above	Partial coverage The public register, POLon, partially covers this segment of adult education (part-time studies, specialist studies, doctoral schools). Key information about post-graduate non-degree studies offer is not available. Learners might find educational offers on HEI webpages or unofficial websites aggregating information on Adult Higher Education offer. Decision makers have broad and detailed information about each learner, school, teacher, infrastructure, etc. across the country in the real time	Partial coverage? The Ministry of Education, Research, Development, and Youth of the Slovak Republic with partnering institutions and HEIs run the portal www.portalvs.sk containing detailed information on higher education institutions in Slovakia. There are several registry functionalities, e.g. a register of accredited study programmes. In addition, the full list of HEIs in Slovakia is available on the Ministry’s website.

Czech Republic	Hungary	Poland	Slovakia
<i>Adult Vocational Education organised within formal education</i>			
Full coverage The logic of data collection in this sector resembles the logic of data collection within the <i>Adult Basic General Education</i>	Full coverage The logic of data collection in this sector resembles the logic of data collection within the <i>Adult Basic General Education</i>	Full coverage The logic of data collection in this sector resembles the logic of data collection within the <i>Adult Basic General Education</i>	Partial coverage The Ministry of Education governs the public register of accredited courses of further adult education – the Information System of Further Education (ISDV). The register contains: - a list of accredited courses, - a list of providers offering the accredited courses, - a list of qualifications of professional competence - a list of providers of qualifications - a list of authorised institutions to verify the qualification The providers have to record information about the active courses, learners and teachers Since 2025, a new one-stop-shop portal with several integrated registries will be available as a platform for the provision of Individual Learning Accounts as well as other training schemes (esp. for reskilling and upskilling).

Czech Republic	Hungary	Poland	Slovakia
<i>Adult Vocational Education organised within non-formal education</i>			
The database of accredited retraining programmes administered by the Ministry of Labour partially covers this segment of adult education. A significant part of the segment is covered by private portals and registries (...), which provide information for a fee. And they give only information about scope of education offer. They usually do not collect personal data. The only way to learn more about this segment of adult education it must be used sample surveys, such as AES. Further state guaranteed course databases contain courses for concrete profession groups, such as teaching staff (Ministry of Education, Youth and Sport), social workers (Ministry of Labour and Social Affairs) and healthcare workers (Ministry of Health, in this case the database is not yet fully prepared).	Partial coverage see above	Partial coverage This segment is covered, but only partially by the three main public registries (IQR, RIS, and BUR), many registers led by official institutions (e.g. Office of Technical Inspection) and some private ones. Apart from the IQR registry there is limited transparency on institutional quality assurance mechanisms. Public registries overlap in the segment.	Partial coverage As above
<i>Adult Liberal Education</i>			
No coverage	No coverage One of the characteristics of Liberal adult education is that it is not regulated by law. In Hungary, there is a statutory obligation to notify adult education courses. In other words, there is no data available at all on adult education courses – if any – that are not covered by legislation.	Accidental coverage This sector is not covered in any large scale or specialized registry. To some extent, this sector is covered by the BUR and IQR.	No coverage

6.2 Mechanisms for quality assurance and accreditation

Public registries informing stakeholders about the available training offers are assumed to provide reliable data. This is closely linked to the issue of funding. Public administration is held accountable for spending funds efficiently and for that reason, decision-makers want to ensure that funds are allocated to good quality training and introduce mechanisms for accreditation and quality control.

Since the provision of adult training is organised mostly by private providers without direct state control (with exception of Hungary), the generalised logic is as follows: in order to be eligible for state refunds or funds, a training provider must go through a path of registration and external oversight from state agencies. Upon successfully aligning to the quality standards the provider might submit a training offer to a register or portal, so that this offer can be chosen by the learner or can be offered to learner by national agency, e.g. employment office or counsellor (Czechia, Slovakia, to lesser extent Poland). Only those training opportunities that are in line with state-quality assurance standards may be financed by the state. The scope of the accreditation varies among the Visegrad countries – depending on the adult education and training segment this may be a programme accreditation (e.g. provided by an international sectoral organisation or a national HE QA agency), organisational accreditation (e.g. of procedural standards such as ISO 21001:2018) and/or refer to selected aspects of credential/qualification design (e.g. obligatory learning outcomes assessment in Poland).

The adult education sector has been developing within the private market with little state intervention during the first decades of political transformation in the 1990s, which led to a complex and difficult-to-navigate landscape of offers. The following practical and political dilemma emerges for the state: Should the state intervene only in those adult education segments that are subsidised by the state and/or when the training provision is state financed? Or, should the state intervene in the adult education and training market irrespective of funds provision?

The parts of adult education and training which are not subsidised by the state are left out to market forces and market failures / inefficiency. If the state decides to intervene, numerous questions emerge and the risks of government failure arise. How should the state impose the quality assurance mechanisms? Imposing regulatory obligations by law on the whole adult education sector seems to be a political impossibility – as the large part of society and voters oppose state centralisation and control. This would also be difficult to introduce from the organisational and financial reasons.

The first scenario is the default scenario. In this case, the state leaves most of adult education to the market which is problematic, because it leaves large groups of society exposed to risks of market failures and may lead to a failure in achieving various strategic goals linked to human capital development, economic resilience and social cohesion. Labour market and education and training asymmetries are well documented by empirical studies and cause significant market inefficiencies (Acemoglu & Pischke, 1998; Finkelstein & Grubb, 2000; Leuven, 2005). Learners due to insufficient information are not able to find a good training offer for them, and training providers overall do not find incentives to provide good quality offer to learners and employers. As a result, good quality offer (which costs more) is being pushed out by the poor quality offer (which costs less) from the market. This mirrors Akerlof's (1970) 'market for lemons': because quality is hidden at the point of purchase, buyers discount all offers towards the expected quality, poorer provision is over-supplied and better provision withdraws. A credible public register is, in these terms, the certification mechanism that restores a separating equilibrium, letting higher-quality providers signal their type (Spence, 1973) and reducing the adverse selection that the unregulated market cannot solve on its own. In absence of state regulation, the market actors may cooperate and self-impose limitations and requirements to achieve collective benefits, yet due to the collective action problem the conflicting interests may effectively discourage joint action (Olson, 1971) and limited social trust may further increase transaction costs for solving this problem without the state. Poland's Integrated Qualifications Registry offers a clean illustration: even with an NQF level and a state quality label available, providers have largely declined to register their qualifications voluntarily, because the individual cost of accreditation is certain while the benefits are diffuse and shared across the sector, exactly the logic by which Olson (1971) predicts that rational actors under-provide a collective good.

The second scenario means different problems on the other hand. The most significant is the scope of the quality assurance mechanisms and incentives for the non-formal education and training providers to submit their offer to state quality assurance procedures voluntarily. This kind of regulation, to be effective, requires significant organisational involvement (as a specialised agency for example) and competence – both costly. It may also prove difficult to take stock of publicly funded adult learning, because of a wide variety of uncoordinated actions (on various government levels from central to local and by various types of actors and through different programmes).

In some European countries, e.g. Scotland, the Netherlands, or Poland national qualifications framework provide additional incentive for the non-formal education

training providers to submit their qualifications. There are costs and benefits related to following the state procedures, but there may be an additional benefit in presenting an additional accredited credential/qualification on the training market (here with the NQF and EQF level and the quality label issued by the state). However, the case of Poland shows that even if acquiring the NQF level on qualifications offered by the non-formal providers, this is not a sufficient incentive. One of the major obstacles to the populating of the Integrated Qualifications Registry in Poland with qualifications is the lengthy process of accreditation and the burden to externally assure quality not balanced with relatively better access to public funding. As a result, this mechanism of accreditation is not commonly used.

Irrespective of the quality assurance and accreditation model adopted in a country it is important to investigate what is the scope and character of accreditation of adult education and training sectors. We distinguish ex-ante accreditation at the moment of submission of the training offer and ex-post (or on-going) evaluation.

6.3 Poland

First case. Quality Assurance in BUR is provided ex-ante and on a basis of ongoing evaluation. However the ongoing evaluation is not transparent, interviews have provided examples of non-compliance with declared quality standard and inefficiency of the BUR operators in effecting positive change. The ex-ante quality assurance in BUR main elements are:

- Registration as a service provider which requires BUR Administrator confirmation after filling information in a service provider card: a declaration of necessary technical, economic, experimental and qualifications requirements as well as presentation of external certificates / accreditations⁹;
- Registering development services, with requirements of indication of learning outcomes, training materials, assessment potential as well as credentials issued;
- Publicly available feedback on development services in the registry by users (e.g. after completing training a person can rate the training in an on-line survey and post comments on the quality of the training);
- Monitoring visits, which can take place at any moment if the training is publicly funded.

⁹ A list of accepted accreditations is published see: https://www.parp.gov.pl/images/BUR_serwis_info/pliki/Aktualna_lista_certyfikatow_akredytacji_-_stan_na_dzien_10082023_r.pdf [access: 30.03.2024]

The interviews and documents analysis indicate that the quality assurance in BUR is organised in a logical way, however it has limitations related to institutional capacities for performing monitoring visits and relatively high providers turnover (e.g. one of the interviewees indicated that there are predatory organisations which regularly change their legal status to re-enter the BUR with a clear account). Moreover, there have been difficulties in assuring the alignment of provider accreditations with the types of development services provided.

Second case. The Integrated Qualifications System includes various types of qualifications, not training programmes and/or training offers. In the adult education sector there is a specific class of qualifications called market qualifications, which are quality assured in the following way:

- Entering a market qualification into the Integrated Qualifications Registry requires filling a motion with information such as: learning outcomes with assessment criteria, validation methods and requirements, target groups and description of the need for a qualification. The motion is subject to public consultation and expert assessment by a relevant ministry.
- In order to have the right to award a market qualification a separate motion for becoming a certifying institution needs to be filed, with information about capacity for meeting the requirements defined in the market qualification description and system standards (such as division between training and assessment processes).
- In order to award certificates a separate external quality assurance body needs to be assigned to the certifying institution. This external body supports the institution in evaluation of processes and improvement of quality.
- In case of violations, an additional evaluation or inspection by the relevant ministry can take place, with the possible revocation of the right to certify.
- After entering a market qualification in the IQR further entities can apply for the certifying institution status, however there is a substantial fee related to this.
- Qualifications are being reviewed periodically (a period is indicated at the moment of entry to the register).

The IQS case has been designed with an intent to avoid the pitfalls of quality assurance, but this has been achieved at the expense of relatively high cost of implementation and maintenance as well as a much more formalised character – as critics indicate. Proponents indicate however, that the main deficit of the system is lack of direct funding for these qualifications and little political backing (contrary to BUR). The result is a limited use of these qualifications – both in terms of qualifications included in the IQS and qualifications issued.

6.4 Czechia

Quality assurance of adult education in the Czech Republic is handled differently in different types of educational institutions :

- 1) Education provided in the official network of state-registered schools (primary schools, secondary schools, short tertiary vocational schools (VOŠ); in primary art schools, language schools with the right of state language examination and in institutions for further education of pedagogical staff) is managed and controlled by state institutions, in particular the Ministry of Education, Youth and Sports and the Czech School Inspectorate (CSI, www.csicr.cz). The CSI regularly inspects the activities of schools and the quality of teaching, and deals with various types of complaints lodged by citizens against schools and their practices.
- 2) Education in higher education institutions (universities etc.): Higher education institutions are obliged to have accreditation for their study programmes (bachelor, magister and PhD. degree), which could be studied also by adults. Furthermore, the quality assurance and internal evaluation of quality in higher education institutions are obligatory for every HEI (according to the Higher Education Act). System of quality assurance and internal evaluation of quality is one of the conditions for granting institutional accreditation, which enables to accredit own HEI's educational programs. Accreditation is used only for study programmes, not for lifelong learning programmes.
- 3) Education in adult education courses provided by private subjects (commercial educators, professional associations, NGOs and other) is not formally controlled. This type of adult education provisions are not centrally monitored. Quality assurance of those courses is given by quality management standards of educating institutions.

The topic of adult education quality assurance is discussed in the educators' community, the Association of Adult Education Institutions of the Czech Republic (AIVD) cooperates currently on an Erasmus+ project QUALTRACK aimed to design a new quality rating system to verify the criteria of educational institutions and subsequently enable development of quality elements in educational institution, promote the educational institution and provide customers with information about the price-quality ratio.

Outside of the formal educational system, the accreditations are fragmented and refer to certain sub-areas. The Ministry of Education, Youth and Sport maintains an

important database of retraining programmes and courses aimed at unemployed and those wishing to retrain (see the following paragraph). These courses are aimed at all types of occupations that are applicable in the labour market. Further state guaranteed course databases contain courses for concrete profession groups, such as teaching staff (Ministry of Education, Youth and Sport), social workers (Ministry of Labour and Social Affairs) and healthcare workers (Ministry of Health, in this case the database is not yet fully prepared).

A Database of accreditations granted for retraining programmes is published on the website of the Ministry of Education, Youth and Sports. These programmes are intended for persons registered within the Labour Office and participation in them is free of charge. The choice of a particular course is the result of a discussion between the person interested in the course and a member of the Labour Office staff. If there is a professional qualification in the national qualification framework (www.narodnikvalifikace.cz), the course has to be prepared according to this qualification definition. All retraining programmes have to be prepared to reach a profession existing on the labour market.

All programmes receive accreditation for three years after meeting the relevant requirements. After the expiration of the three year accreditation period, the institution can apply for the renewal of accreditation.

Only a minority of the programmes accredited in 2022 allow for the award of a Certificate of Vocational Qualification upon successful completion. Out of a total of 436 programmes, only 189, i.e. 44 % leads to obtaining the Certificate.

Ministry of Education, Youth and Sports offers on its website a Database of accreditations granted in the system of further education of teaching staff. In the case of teaching staff the number of accredited further education courses was limited. As of September 2023, only programmes leading to gaining qualifications or specialisation can be accredited, while education courses and programmes, through which teaching staff renew, maintain and supplement their qualifications, are no longer accredited.

Ministry of Labour and Social Affairs decides about accreditation of courses for social workers (with the goal of gaining profession or to develop further professional skills), the courses accredited by the Ministry are published in an electronic system under akris.mpsv.cz. Currently, more than 5 thousands courses could be found in this database.

6.5 Slovakia

The Act on Lifelong Learning (568/2009) defines the legal framework for lifelong learning, including accreditation of training providers. Accreditation ensures that training providers meet specific standards of quality and can offer recognised programmes.

Accreditation of training providers is a formal procedure that validates whether a provider meets the required standards to deliver training and education programs. The training provider submits an application to the ministry of education, which includes details about the training programs, the provider's resources, qualifications of instructors, and other relevant documentation. To receive accreditation, training providers must meet several conditions defined by the law, such as qualified staff, quality of the programme guaranteed by an expert of the field (guarantor), adequate facilities and equipment and financial stability. Accredited training providers are authorized to issue certificates recognised by the Ministry.

The Act also obliges educational institutions to provide statistical data through the DALV survey, however, implementation of this obligation is disputable. For the year 2021, educational entities reported a total of 2,578 educational activities in the DALV statistics, of which 453 (46.7%) had some form of accreditation. Pursuant to LLL Act, educational entities are required to deliver data on their activities by 15 February according to the status as of 31 December of the previous calendar year. In this respect, the DALV statistics should be exhaustive, but this obligation is not enforced in any way. Within the DALV statistics, as many as one fifth of the courses are in the 'unknown' group, while only 17% (88) of these courses are explicitly included in this category directly by their provider. In the remaining cases, this is missing data that has not been supplied by the training provider.

The quality of data on courses that have some type of accreditation is guaranteed to be on a certain level, however the quality and scope of data on courses that do not have any form of state accreditation is problematic. This is not only the case of non-formal and informal education courses, but mainly courses implemented by physical persons at local level, as well as courses implemented within the framework of various internationally recognised certification systems (within IT, languages, management skills, etc.).

The introduction of ILAs in Slovakia goes hand-in-hand with drafting a new act on adult education (planned to be adopted in the 2nd half 2024). The act introduces a new procedure of certification of adult-learning providers which examines the provider's internal quality assurance system. The certification is compulsory for all

organisations that want to offer training subsidised by public funding. In addition, training programmes leading to a qualification need to be accredited. There is also a shift in the division of responsibilities for certification and accreditation of training providers. While certification remains the responsibility of the ministry of education, accreditation of training programmes will be carried out by the Alliance of Sector Councils¹⁰ under the new law.

The planned model of ILAs is based on the existing Information System of Further Education with extended functionalities which will enable its interconnection with other national electronic systems, such as the Social Insurance Office. Registration of providers under ILAs should be subject to institutional certification, in which the institution must demonstrate an internal quality assurance system. Considering the legislative prerequisites for the provision of individual databases, these databases contain almost exclusively courses implemented on the territory of the Slovak Republic by predominantly Slovak educational institutions, whether state, public or private.

In addition to information about the individual, the training courses and their providers, information that will constitute a form of career guidance (information on the applicability of newly acquired skills, on the possibilities of career changes, on the enhancement of digital skills, etc.) are discussed to be a part of the ILAs' offer.

6.6 Hungary

According to Act LXXVII of 2013 on Adult Education, adult education is education and training outside the school system aimed at targeted competence development or competence development, which can be divided into four categories: (1) vocational training preparing for a vocational qualification; (2) vocational training preparing for a sub-specialisation; (3) education and training organised on the basis of legislation (4) other training. Adult education and training activities may be carried out by organisations which have been registered by the state adult education administrative body on the basis of a declaration of their intention to do so.

The functioning of the AEL system in Hungary is regulated in detail by various laws and regulations. In recent years, there has been an expansion and tightening of data collection; therefore, the applicability of a wide range of data for the project needs to be examined. Data in the registers are basically related to the following entities, describing their characteristics:

¹⁰ <https://www.alianciasr.sk/en/homepage/>

- persons participating in AEL
- training courses available in the framework of AEL
- data related to the organisation of examinations
- organisations providing AEL trainings.

In the Hungarian system, there is a clear distinction between training and training organisation in terms of the data domain, and data describing training can be interpreted without the implementation of the training. The government's ambition is to replace the previous statistical data collections in such a way that the sectoral central administration systems are capable of producing statistical databases. It is believed that Covid has led to an acceleration of digitisation across the AEL sector, which, in addition to administration, has led to an increase in the number of fully online courses.

The scope of the legislation covers almost all types of training. Every provider must be registered. In the context of the Adult Education Act, quality assurance can be understood in two dimensions: (1) quality assurance of content, i.e. of training programmes; (2) quality management of providers, i.e. of training institutions.

These include: commercial economic activity; non-commercial economic activity; training for a fee or free of charge; internal training organised by the employer. Hungarian legislation sets detailed conditions for which organisations can provide adult learning.

In Hungary, the labour market forecasting system, the career tracking system and the adult education system can be linked at data level.

Number of training courses registered in Hungary in 2020 (65.535), the number of accredited training courses (43.777) and the proportion of accredited training courses in relation to the total number of training courses. Accredited training is monitored and approved by various public bodies or rejected in case of non-compliance with legal requirements. 66.8% of the training courses registered in Hungary in 2020 were accredited, i.e. centrally monitored.

However, there are significant differences according to the type of training; the main difference from the average is in the case of remedial training for disadvantaged people: on the one hand, the number of such training courses was relatively low (687), and on the other hand, the proportion of training courses subject to central control was the highest (99.9%). In practice, this means that this type of training is subject to strong central control, while the proportion of training courses subject to central control was below average at 54.4% for language training, which is also important. It is important to highlight adult education courses in IT, where, contrary to expectations, the proportion of accredited courses was also high, at 87.3% of the total number of IT courses.

Among other things, the high proportion of accredited – i.e. centrally supervised – training courses shows the centralised nature of the Hungarian system. The centralisation of administration in Hungary seems to be positive in terms of the variety and quantity of data available.

Taken together, the Hungarian case illustrates the first of the four approaches developed in the article: a legal-obligation model in which near-universal registration and a high rate of central accreditation deliver comprehensive and comparable data, at the cost of substantial administrative capacity and a reliance on effective and trusted public administration.

7. Discussion: four approaches to registry development

Drawing the country evidence together, we distinguish four approaches to developing registries for the non-formal adult learning sector. The typology is inductive: it was derived from the comparative material rather than deduced from prior theory, and we therefore describe the four approaches as empirically grounded strategy types rather than Weberian ideal types, since they do not carry the methodological commitments of the latter. They are not mutually exclusive, most countries combine several, and each carries a characteristic profile across the three dimensions: scope, coordination and quality assurance introduced at the outset. The four types also carry different evidentiary weight: the legal-obligation and funding-linked types are attested across several countries, whereas the voluntary-register type rests mainly on a single case (Poland) and the organic type is, by construction, a residual category rather than a deliberate strategy.

What distinguishes our typology from existing classifications is its organising principle. Desjardins' (2017) typology segments provision, and governance-mode typologies sort coordination into hierarchy, market and network (Powell, 1990); skills-formation typologies (Busemeyer & Trampusch, 2012) sort regimes by who controls training. Our four approaches instead classify registers by their policy goal and institutional origin. The historical-institutionalist lens raises questions about why – and out of what funding or regulatory impulse – a register came into being, rather than grouping them by the scope of what they cover or by their mode of content governance. The contribution of the typology is on the focus on the purpose and provenance of registers.

In terms of developing registers for non-formal adult learning, the following types of approaches can be analytically deduced from the Visegrad countries' experience:

- 1) Legal obligation. An introduction of a new legal obligation of registering offered training and development services and education and training providers.
- 2) Introducing funding conditional on registration. Creating registration requirement for public funding and linking a register with various funding sources (such as group- or theme-aimed funding schemes for skills development, individual learning accounts) and policies (e.g. technology, industry or regional development programmes)
- 3) Developing an open and voluntary register. Enabling voluntary registering of one's offer and/or inclusion of one's qualifications in a public register.
- 4). No interest in upscaling registries. No overarching government action, continuing sector- and industry-specific interventions, organic development of existing databases and registers. Allowing the providers to improve gradually and cost-effectively.

The first approach is best exemplified by Hungary. The argument for this approach can be summarized as "control is necessary because of the strategic character of learning or a large scale of pathologies and striving for consumer protection", while the arguments against are the "ineffective public administration" and "control and the influence of the crony state". For a successful implementation, this approach requires significant financial and organisational involvement of the public government and inevitable costs increase in the market. In practice this legal obligation operates alongside strong funding-linked incentives, so Hungary also illustrates, in a more centralised form, the funding-linked logic of the second approach.

The second approach has been used in all countries in the past and currently, however on different scales. On one hand, it provides a more balanced perception of costs and benefits and allows for aligning registry development with various policy goals. On the other hand, difficulties lie in coordinating many initiatives on various levels of government (state, regional, local), scaling data collection and unification, and assuring quality of state-funded provisions.

The third approach can be exemplified by the case of market qualifications subsystems in the Integrated Qualifications System in Poland. Proponents of this approach indicate an opportunity for creating a solution designed specifically for the sector of non-formal education and a compatibility with introducing conditional funding schemes (but no automatic funding). Opponents indicate that this approach does not provide tangible incentives (positive or negative) and will require continued costly implementation.

The fourth approach can also be observed in all countries in the past and currently. It remains a default non-approach and describes all the situations in which no government interventions or schemes have been used. The arguments for are in line with the narrative of economic efficiency, while the arguments against concentrate on externalities and market failures.

These approaches are accompanied by various degrees of quality assurance schemes. The declared rigidity of the registration procedures and quality assurance requirements seem to correlate with two key characteristics: the amount of public funding, and the stake associated with a given type of activity (e.g. health and safety related, financial safety or other regulated fields of social lives). However, the actual strength of the quality assurance is difficult to assess, for example it depends on sufficient funding for work of QA bodies / agencies and the related effectiveness of mechanisms of control as well as on informal factors such as corruption or diploma mills, which often remain hidden in their scope.

Table 5. Four approaches to registry development mapped against scope, coordination and quality assurance, with exemplar countries.

Approach (policy goal / origin)	Scope of coverage	Coordination	Quality assurance	Exemplar
1. Legal obligation -statist control of a strategic sector	Near-universal; formal and non-formal captured	Centralised in one register / authority	High: mandatory ex-ante accreditation and central monitoring	Hungary
2. Funding-linked registration – accountability for public / EU money	Follows the funding stream; strong where money flows, thin elsewhere	Multiple bodies aligned to funding schemes; coordination-intensive	Conditional: accreditation required to access funds	All V4 (e.g. BUR/ RIS, REPAS)
3. Voluntary register – open inclusion tied to an NQF/ quality label	Potentially broad but realised coverage low without incentives	Single register, self-selection by providers	Ex-ante quality assurance via NQF standards; uptake weak	Poland (IQR market qualifications)
4. Organic / no upscaling – default non-intervention	Sector- and profession-specific islands; large gaps	None overarching; sectoral bodies act independently	Fragmented, where it exists at all	All V4 (residual)

8. Conclusions and recommendations

The adult education and training sector poses substantial challenges for national policy: it is dynamic, diverse and fragmented, which makes it difficult to govern, and the same features generate information asymmetries and market failures. Policy intervention accordingly carries significant costs – in data collection and verification, organisational and technical innovation, and quality assurance.

Therefore, the key question for implementation of policy tools, including individual learning accounts, is the scope of coverage of intervention – which sector of the adult education sector will be covered by particular intervention and the quality assurance mechanisms and mechanisms for integration of these sectors.

The adult education organised within formal education, encompassing: basic, general, higher, vocational and liberal education is almost by definition represented in various registries. The institutional logic embedded in formal education institutions imply quality assurance, transparency and strive at achieving open access. In these sectors a gradual improvement in data collection and aggregation is a general trend (although the dynamics of these actions remain a subject of critique).

In institutionalising knowledge of non-formal adult learning, or in regulating it or introducing governance structures, limited developments have been observed. Apart from the learning and development platforms organised within the corporate sector (with multinational companies), most of the adult learning market remains unstructured and unknown. And, as other research suggests, it is experienced as such by parts of the society, especially by learners of low education status and members of socially disadvantaged groups. However, it is the learner motivations that remain the key factor for determining participation, not information access (see: Desjardins et al., 2006; Gola et al., 2022; Kalenda & Kočvarová, 2022).

Reading the four approaches back against the framing of this article yields three implications. First, because each register tends to be built around a particular funding or regulatory purpose, no single approach delivers both broad scope and dependable quality assurance at once: legal obligation buys comprehensiveness at a high administrative and political price, funding-linked registration buys quality where money flows but leaves gaps elsewhere, and voluntary registers achieve neither scope nor uptake without additional incentives. For individual learning accounts, whose success depends precisely on the weakly covered non-formal sector, this trade-off is the central design problem.

Second, the patchwork we describe is not a transitional stage that will resolve

itself. Since the registers are often artifacts of successive national and European interventions rather than planned within a shared skills-formation regime, incremental funding-linked registration is the most realistic path for most of the V4. This means, extending coverage where public or EU money already creates a registration logic, while a full legal-obligation model remains politically and administratively demanding outside Hungary's statist template.

Third, treating registry infrastructure as a signalling and certification device re-frames the policy choice: the question is less whether to regulate the whole adult-learning market than how to build credible, interoperable registers that let good providers signal quality and let public funds be steered towards them. Investing in that infrastructure – and in the interoperability of existing registers – is therefore a precondition for effective individual learning accounts.

The adjusted Desjardins typology proved useful throughout the analysis: distinguishing formal from non-formal provision helped highlight the specific character of non-formal education, enabled assessment of non-formal training delivered by formal institutions, and extends naturally to the liberal-education sector. The latter may be especially useful for example in assessing policies aimed at developing specific types of skills (e.g. key competences, digital skills or civic competences).

These conclusions need to be read with its limitations in mind. The extent of the non-formal sector that lies outside any public register is, by definition, difficult to quantify, so statements about coverage gaps are necessarily approximate. The interview evidence is qualitative and purposive, was gathered primarily to inform the design of an ILA data model rather than to audit registries, and is therefore illustrative rather than representative. Finally, several of the systems described are in active reform (notably in Slovakia and Poland), so the picture presented is a snapshot of a moving target.

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