

More practical vocational training may ease skills shortage in Central-Eastern Europe

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Central-Eastern European (CEE) EU countries have become much more competitive in recent years. But they all appear to share a common weakness – a notorious skills shortage and, with it, a vocational training system that often lacks practical relevance. There is a clear need for action in this area, also in order to meet the challenge of digitalisation and quickly converge even more closely with the average EU productivity level. Some countries already have good, far-reaching approaches to more needs-oriented and generally more effective vocational education and training but these should be implemented more broadly and consistently. Germany should provide advice and support for these processes in the future as well. After all, the region has recently grown in importance for Germany's economy.

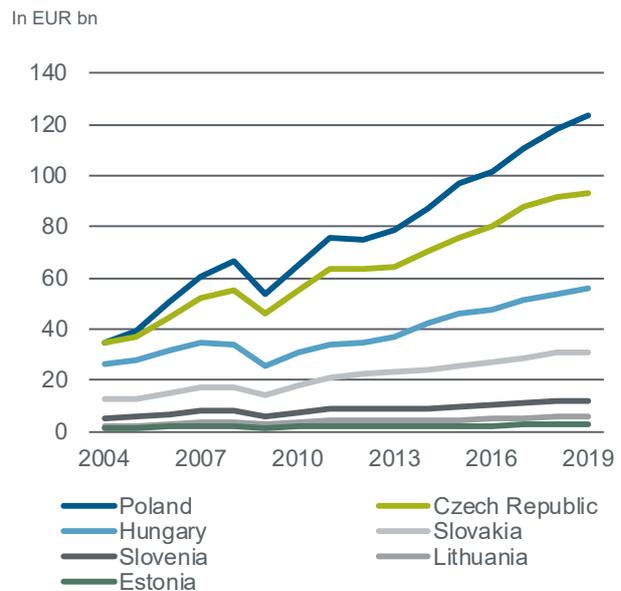
CEE countries have made great progress towards convergence but there clearly is room for improvement in the education sector

In the past decade, Central and Eastern European countries have further converged with other countries of the European Union in their economic performance and social living conditions have undeniably improved as well. The EU's enlargement to the east promoted this momentum in a particular way with the integration into the EU internal market from 2004, leading to strong growth in trade and direct investment in the new member states. German companies invested EUR 27.5 billion and EUR 18.6 billion, respectively, in neighbouring Poland and the Czech Republic in 2018, which was more capital than they invested in the more populous Russia or large emerging countries such as India and Brazil.¹

As a leading direct investor in CEE countries with many production locations, Germany has a very pronounced interest in a well-functioning local vocational education and training system. Whereas universities in many places already apply considerable standards, the vocational training system is trailing far behind, suffering in part from neglect, largely insufficient practical relevance and a poor reputation.

What can be done – including with Germany's support – to bring about swift changes? We will take a particularly close look at the EU's neighbours Czech Republic, Poland and Slovak Republic, which have also been the main destination of German direct investment in the Central and Eastern European region in recent years.

Figure 1: Volume of trade of selected EU countries with Germany (after EU enlargement in 2004)



Source: Federal Statistical Office.

What defines good vocational training and education and why is it so important?

Vocational training and education can generally be said to be successful if it enables the graduate to directly perform work as a qualified skilled worker.

An effective vocational training and education system has the essential constitutive elements of being consistently aligned with the requirements of professional practice and geared towards broadly defined skills profiles – thereby facilitating professional mobility –, as well as enabling the graduate to respond flexibly to new challenges (e.g. to the rapid technological transformation of the world of work) and ultimately acquire work experience.² Involving employers is also indispensable for modern high-quality vocational education and training.

From the perspective of the economy as a whole, the contribution of vocational education and training consists in helping businesses meet their skilled worker needs. When businesses do not have a sufficient number of skilled workers, not only are they forced to postpone or decline orders but their competitiveness and innovative strength also suffer, meaning the economy cannot exploit its growth potential.

International organisations with expertise in the analysis of vocational education and training systems (such as the OECD and UNESCO) regard dual vocational education and training systems – such as the ones that exist in their purest form in Germany and Switzerland – as particularly suitable for limiting youth unemployment. They are regarded as exemplary the world over. At the heart of this successful model lies the interplay of classroom lessons and practical training with its strong on-the-job learning component.

Excursus: Vocational training in CEE countries undergoing change since 1990 – different focal areas than in eastern Germany

The year 1990 marked a completely new beginning for vocational education and training, as well as for all other areas of education. Besides ideological detoxification, the most pressing task was now to make the top-down learning structures more flexible and adapt them to the market-economy environment.

That meant, first of all, installing vocational education and training structures for the many newly formed small and medium-sized enterprises, expanding vocational education and training in the predictably fast-growing tertiary sector (focal area: commercial occupations) and developing corresponding new occupations (as well as reintroducing old ones from the stunted handicrafts sector).³

However, this was also linked to the fundamental question of how to design the new vocational education and training systems in the CEE countries. What was to be taken over from the old system and where should fundamental changes be made going forward? While there was broad consensus on changes towards more pluralism, openness and participation in the vocational education and training area, the discussion about structural aspects was quite open-ended. Thus, especially in the period of transition to a market economy, which was associated with the introduction of many new technologies, businesses were keen to gain quick access to suitably skilled workers. From that perspective, it would definitely have made sense to evolve the apprenticeship trade model, which was practised in large firms and characterised by the tight dovetailing of theoretical and practical vocational training into a dual system, for example. In neighbouring eastern Germany, that is exactly what was done – with public support.⁴ However, most educational policymakers in the other post-socialist societies were convinced that more comprehensive, broader education programmes with a strong general component would be more effective in integrating workers into the labour market.⁵ The resources allocated to vocational education and training were therefore mainly invested in expanding secondary schools founded on the full-time classroom learning model (with the option of obtaining university entrance qualifications). The more practice-oriented basic vocational schools were preserved and remained primarily dedicated to manual trade and less complex industrial occupations. But because of their

shorter, less in-depth education and their often neglected facilities, they were primarily regarded as establishments for less able students that offered few career prospects, especially in Poland, the Czech Republic and Slovakia.

The value of vocational education is being reassessed amid the present skills shortage

This rather negative perception of practical education and training in commercial-technical occupations is gradually changing amid the chronic shortage of skilled workers and the associated improved income opportunities for these occupational groups. Furthermore, the predominant training courses in full-time classroom learning formats have come under criticism among local businesses and especially among foreign investors.⁶ The criticism is that graduates on average have low practical skills and the employers are ultimately forced to provide large portions of the training themselves.

The findings of the EU project ‘Transfer of experiences in designing business-related, practice-oriented training in the structures of school-oriented educational systems’ (*“Transfer von Erfahrungen bei der Gestaltung einer wirtschaftsnahen berufspraktischen Ausbildung in den Strukturen schulisch orientierter Ausbildungssysteme”*) in Poland and the Czech Republic (2014) illustrate this in an exemplary way. The surveys of Polish and Czech companies of the chemicals industry revealed considerable deficits in full-time classroom-based education (cf. Table 1).

Table: Survey of companies of the chemicals industry in Poland and the Czech Republic (2014)

	Polish companies agree	Czech companies agree
It is hard for us to find qualified workers.	83%	69%
The training courses are not in line with the real demands of the labour market.	67%	41%
The graduates have insufficient practical skills.	58%	69%

Source: Friedrich-Ebert Foundation Poland (EU project ‘Transfer of experiences in designing business-related, practice-oriented training in the structures of school-oriented educational systems’)

These findings, including the diagnosis of a severe skills shortage amid high youth unemployment in some CEE countries is now driving a trend of varying intensity towards training courses that involve more relevant practical work experience. A number of CEE countries are considering the introduction of dual training programmes and some have already done so. It must be noted, however, that changing the structures of vocational education and training is usually a time-consuming process that sometimes meets with considerable resistance.

Towards modern vocational education and training: the examples of the Slovak Republic, Poland and the Czech Republic

The Slovak Republic

Slovakia assumed a pioneer role in establishing dual training structures. The introduction of dual training programmes in the year 2015⁷ as a supplement to the existing, classroom-based vocational training model was justified by the strong growth in demand for skilled workers in the country, which has prospered economically since joining the EU in 2004 and has since attracted much foreign direct investment, some of which is technology-intensive (particularly in the automotive industry). As vocational college with its often obsolete curricula was usually the only training centre, the traditional, excessively theoretical vocational education and training system was unable to meet this demand. Furthermore, the high youth unemployment rate, which was nearly 30% in 2014, called for rapid, substantial change. Advancing more effective training and education strategies is now regarded as a priority national project and is being supported by the European Social Fund (ESF). From 2015, the first structures of a dual vocational education and training system were established and it is to be gradually expanded to broader occupational areas and all regions. Some 8,000 dual training contracts have already been completed with 800 businesses that actively offer dual training arrangements. The government's original target of enabling around 12,000 young people to start a dual vocational training programme with 1,400 employers by the year 2020 has not yet been fully achieved but this was also because the coronavirus crisis led to lower growth than planned in 2020.⁸

From this we can draw the following brief conclusion: The reform process is continuing. After the introduction of the dual training segment, practically all further reform steps have been based directly and indirectly on this training model, which is seen as the solution to the skills shortage. This refers to the qualification of company instructors, the significantly strengthened strategic vocational orientation at schools and in businesses, the financial incentives created for apprentices and businesses, as well as simplifications of relevant bureaucratic procedures. The committees and boards installed at all levels nationwide to organise and update vocational training are important for better aligning supply with demand. Nevertheless, training numbers have remained slightly below expectations, which shows that the reputational problems of vocational education and training have not vanished with the introduction of 'western' training models.

The director of the State Vocational Education Institute ŠIOV, Branislav Hadár, recently reaffirmed his commitment to further implementing the dual training and education strategy, although practical training arrangements have had to be severely curtailed due to the current coronavirus crisis. All efforts should be undertaken to encourage employers to continue supporting dual education because it means investing in the future.⁹ At the beginning of the year 2021, only few dual apprentices were in companies doing distance learning.

What will matter in the coming years is even more effectively communicating nationwide the benefits of the 'imported innovation' of dual (skilled worker) education – which usually leads to immediate employment in the company providing training. The State Vocational Education Institute ŠIOV has postulated accompanying measures aimed at strengthening the attractiveness and social status of technical occupations including manual trades. Slovakia is well positioned with its concepts and strategies. The cooperation with the Federal Ministry of Education and Research (BMBF) in the field of vocational education and training, which was stepped up from 2015 in particular and incorporates further developing the Slovakian model of dual vocational education and training as a key measure, was renewed in 2019 with a declaration of intent signed between the BMBF and the Ministry of Education of the Slovak Republic.¹⁰ Switzerland, with its very efficient dual education system, is also supporting Slovakian vocational education and training projects to a considerable extent.

Poland

Since the 2010s Poland has again attached great importance to vocational education and training after tertiary education expanded and the number of students grew very significantly in the first two decades from 1990 (from 13 to 53% of an age cohort in the period from 1990 to 2010).¹¹

The loss of importance of skilled worker training for industrial occupations was particularly pronounced in Poland, where Soviet-style polytechnic classroom teaching had already remained on the sidelines for lack of acceptance by teachers. Already in the year 2000, three in four young people were attending secondary schools that prepared them for university entrance. This trend towards full-time classroom-based training solidified and was only rarely critically questioned. Fully in line with employer associations, Poland's educational policy rather assumed that broader occupational profiles based on sound general education were best suited to enable occupational flexibility and mobility – especially during the transition to the market economy, which was fraught with much uncertainty.

It is clear that educational policymakers are prepared to make fundamental corrections to this hitherto preferred vocational education and training model that is relatively decoupled from the labour market. This willingness results from the high unmet demand from businesses – particularly the heavily represented manufacturing sector – for qualified skilled labour as well as workers willing to undertake training. According to an economic survey conducted by the Polish Statistical Office GUS, immediately prior to the coronavirus crisis some 40% of industrial firms reported problems finding qualified workers. Even in August 2020 that rate was still at 30%.¹² The OECD (2018) had also recommended that Poland should invest in more efficient and business-related vocational education and training as a way to improve the relatively low productivity of many small businesses.¹³

Substantive structural reforms, including the introduction of dual education elements, were initiated by the Ministry of Education in Warsaw particularly from 2018/2019. Modified in 2019, the framework education plan, which forms the basis for the content and procedure of courses, focuses on the acquisition of specific technical skills and knowledge and the concept of 'occupational qualification' is being brought more to the fore than previously.

A key approach to putting an end to the stagnation of Poland's vocational education and training system is being seen in the requirement of vocational colleges to cooperate with the business sector, which was decided by lawmakers in 2019 and is already in force. The cooperation is to include designing the practical training, defining examination requirements and continuous in-service training for vocational teaching staff.¹⁴

Explicit emphasis is being placed on the option of completing the practical component of occupational training under real-world working conditions in companies, although the vocational colleges are not being completely relieved of these tasks.¹⁵ In addition, the vocational training centres have been instructed to support apprentices in acquiring additional occupational skills and market qualifications. Furthermore, the Ministry of Education is providing explicit guidance to vocational training providers on integrating forward-looking techniques and technologies into their courses in a further effort to improve sustained employability.¹⁶

The central education platform *epodreczniki.pl* has been expanded to become the centrepiece of a more efficient career guidance structure. This platform is richly endowed with educational information partly developed in the framework of EU projects¹⁷ and informs interested readers all over the country about careers, courses and training locations.

The Ministry of Education has recently been successful in its effort to gradually dispel employers' reservations towards greater participation in the vocational training process.¹⁸ Business associations are now getting more involved in creative tasks such as designing vocational training programmes.

Sector conferences ('Sector Councils') are the format that advises on adapting vocational training to the needs of the labour market.

Poland's pathway to change can basically be described as the interplay between an institutionally reformed and reasonably financed vocational training system and a business sector that is more motivated to participate in the training processes. If the individual measures mentioned above, which cannot be listed here in their entirety, are implemented as an interlinked approach and pursued with priority once the coronavirus crisis is over, Poland should be able to gradually eliminate its skills deficit.

Czech Republic

The Czech Republic is also planning to transition away from its also largely full-time classroom-based vocational training system. The technical and higher vocational colleges, which were significantly expanded after 1990, are generally held in high regard for their high general education and theoretical occupational teaching standards. High-quality practice-oriented vocational training with teaching methods that integrate new technologies, however, is rather the exception. Similarly to Poland, this was hardly scrutinised at first, since unemployment always remained at a moderate level below 10% and thus did not signal a need for changes in the educational sector. But with continuous economic growth and growing skills requirements from 2014, shortages of skilled labour became undeniable. In 2016 a survey by the German-Czech Chamber of Commerce and Industry (DTIHK) revealed that nine in ten enterprises had serious problems in staffing positions with graduates from vocational colleges.¹⁹ The vocational education system has been under pressure to reform ever since.

The Czech Republic has accepted the challenge to initiate reforms. The gradual introduction of dual training structures is intended to rectify the main deficit that characterises a large portion of vocational colleges in the Czech Republic, namely the fact that they provide graduates with only patchy occupational skills in the commercial-technical area (cf. Table, p. 2). The 'Strategy 2030+' recently adopted by the government in Prague for educational policy (October 2020) is a government document that for the first time explicitly sets the goal of establishing a dual education system in a modified form that is adapted to the conditions in the country.²⁰ Closer integration of employers into the vocational education processes has long been a declared priority (e.g. in the revised Education Act of 2017 and through the long-term educational system development plan 2019–2023). Encouragingly, individual and sometimes 'difficult' partnerships currently exist with the not-always-flexible vocational colleges. For the time being, the Ministry of Education in Prague (MŠMT) is mainly working towards involving more practitioners in vocational school teaching and arranging internships for teachers in companies.²¹

The efficiency of the vocational education and training system was recently improved through structural measures in further core areas. The national qualifications framework (which is designed to comprehensively reflect the available occupational qualifications in the EU countries) has been completed (2020). This enables vocational colleges to optimise their training programmes with the aim of more strongly expanding qualifications of learners to other related disciplines (e.g. electrical engineering and information technology).

The vocational education framework programmes that were updated with effect from 1 September 2020 now explicitly direct vocational colleges to adapt their training programmes to the changing labour market requirements resulting from

the digitalisation, robotisation and modernisation of technological processes (in line with the principle of 'forward-looking' vocational training).²²

The conditions for attractive vocational training have now been improved as a result of stable and predictable funding, but also through the influx of expertise from educational cooperation within the EU. The EU co-financed three-year project 'Modernisation of Vocational Education' (IOC) („Modernisierung der Berufsbildung“), which was completed in spring 2020, has significantly improved quality standards.²³

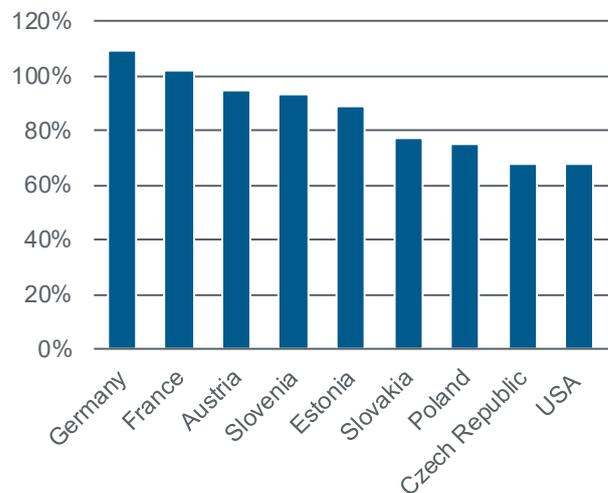
However, the most important structural objective, the establishment of dual education structures postulated in the 'Education Strategy 2030+' (supplementing the existing education model) is hardly making any progress. A working group tasked with preparing the necessary legislation was put together in autumn of 2018 (with the participation of the Ministry of Education, the Ministry for Industry and Commerce, employer associations and secondary vocational colleges, among others). In line with the model adopted in Slovakia, this new law should create the basis for dual education and training. However, preparations have stalled because of the escalating coronavirus situation of the past months. This might be clarified after the parliamentary elections of October 2021.

Conclusion

The CEE countries reviewed here have made impressive progress in reforming their vocational education systems. They have made important adjustments to transition towards a more needs-oriented vocational education system. Curricula have been aligned with technological advancements, the profile of career advice services has been lifted and institutional capacities have been created in many places to enable dialogue among relevant vocational education actors. Much has been invested in technical equipment for vocational colleges. But more efficient vocational education systems are only one side of the coin, the 'material' aspect in addressing the skills shortage. In order to motivate more young people to train for an occupation, there is also a need to directly improve the mediocre and sometimes poor image of trade and industrial occupations. The only way to achieve improvements in this area is together with policymakers (beyond educational policy) and the business community.

Local implementation requires motivated teaching staff who convincingly communicate the career prospects made possible by reformed secondary school education. It would be important to finally make the teaching profession (Figure 2), which is still being underpaid across Eastern Europe, more attractive. There are clear signs of a political will to pay more commensurate salaries to teachers in vocational education, who are having to meet considerable upskilling requirements associated with digitalisation.

Figure 2: Real salaries of teachers (upper secondary level) relative to incomes earned by employees with tertiary degrees (2019)



Source: OECD, Education at a Glance 2020.

In the transition to a more practice-oriented, essentially dual vocational education system, the cooperation with Germany that began with the TRANSFORM Project in 1992 is of considerable benefit to the CEE countries – and very much appreciated there (see footnote 10). A very useful aid specifically for the development of Poland's vocational education system, which could be provided by Germany, for example, would be a 'lighthouse' vocational education project specifically for small and medium-sized enterprises in which teaching samples, tools and templates could be created for replication.²⁴

For the German side it will be important to be even more mindful than before of the fact that projects can be realised all the better the more they take the 'local component' into account. Even outstanding technical solutions are practicable only if they are in tune with the situation, circumstances and mentality of the local partners. In Germany the combination of work experience and specialist vocational training continues to be a successful and efficient model. It is also regarded as exemplary around the world as it helps to limit youth unemployment with relative independence from the business cycle. However, the declining trend in training contracts concluded despite considerable demand even in Germany is a sign of insufficient attractiveness. On the other hand, there is the controversially debated issue of the insufficient vocational training maturity of young people whom the dual training system is unable to integrate. Nonetheless, the OECD Country Report on Germany (2020) assigns vocational training a pivotal role in making a new start after the end of the COVID-19 pandemic.²⁵

- ¹ Deutsche Bundesbank, Direct Investment Statistics, German foreign direct investments with direct and indirect control (consolidated), Frankfurt a.M. 2020, p. 46, 47 (in German)
- ² Cf. Euler, Dieter, Das duale System in Deutschland – Vorbild für einen Transfer in Ausland? (*The dual system in Germany – a model to apply to other countries?* – our title translation, in German only) Bertelsmann Foundation, Gütersloh 2013, p. 24ff. European Commission (2016): Developing skills for the labour market, the Riga conclusions: European cooperation in vocational education and training 2015-2020, and Vocational Training Act (Berufsbildungsgesetz – BBiG), Part 1, General Provisions, sections 1–3
- ³ Cf. Kunzmann, Margret, Berufsbildung osteuropäischer Länder im Umbruch (*Vocational education and training in Central-Eastern European countries in transition* – our title translation, in German only), BWP 21/1992/1, p. 26–31
- ⁴ Cf. Grünert, Holle: Berufsausbildung Ost unter neuem Vorzeichen (*New outlook for vocational training in the East* – our title translation, in German only), BWP 5/2015, p. 25–29.
- ⁵ This approach definitely reflected a basic consensus among educational policymakers in the CEE transition societies: The previously predominant technically-centred and tightly clocked skilled workforce training courses that were unilaterally geared towards the economic strategy of the state were supposed to more or less expire. They were to be replaced by a foundation of intermediate (and longer) education on a higher level designed to optimise the qualification potential of society. This strategy was also in tune with recommendations of the OECD, for example, which at the time proposed a significant expansion of the mainstream further education system in the CEE transformation countries.
- ⁶ Thus, even in the leading countries of the region, the vocational education and training systems are listed as weaknesses in the annual investment attractiveness rankings conducted in the CEE countries by the German Chambers of Commerce Abroad (AHK).
- ⁷ The reformed vocational education and training act of 2015 was preceded by a government decision on the 'National Employment Strategy' in December 2014. It formulated the task of securing a sufficient number and appropriate structure of qualified workers in all sectors of the economy.
- ⁸ Telephone interview with Eva Holubek, Senior Manager of Vocational Training at the German-Slovak Chamber of Industry and Commerce, 1 Oct. 2020 (including figures) and information from Milan Kuzma (State Vocational Education Institute ŠIOV), email dated 14 Jan. 2021
- ⁹ ŠIOV: TRENDY V ODBORNOM VZDELÁVANÍ 10/2020, 7.10.2020
- ¹⁰ 'The expertise which Germany has been able to develop with its long tradition in dual vocational education and training is of particular value for Slovakia. The country will benefit in the long term from the knowledge transfer that was initiated through the joint projects (...). The BMBF is supporting us in strategic areas in particular.' (Interview von Eva Holubek).
- ¹¹ Cf. Mazik-Gorzelańczyk, Magdalena, Die Berufsausbildung in Polen in der Perspektive des Wandels und der Anforderungen der Wirtschaft (*Vocational training in Poland in the perspective of change and business requirements* – our title translation, in German only), Foundation Poland, Warsaw 2016, p. 12
- ¹² Becker, Niklas (GTAI): Arbeitsmarkt (Polen) (*Labour market (Poland)* – in German only), 29 Sept. 2020
- ¹³ Cf. Brandt, Nicola, Strengthening innovation in Poland, OECD Economics Department Working Papers No. 1479 (2018)
- ¹⁴ Directive from the Ministry of National Education (MEN) dated 15 February 2019 on the general objectives and purposes of occupational training courses and on the classification of occupations, <https://www.infor.pl/akt-prawny/DZU.2019.035.0000316.rozporzadzenie-ministra-edukacji-narodowej-w-sprawie-ogolnych-celow-i-zadan-kształcenia-w-zawodach-szkolnictwa-branzowego-oraz-klassyfikacji-zawodow-szkolnictwa-branzowego.html>
- ¹⁵ Dito.
- ¹⁶ Dito.
- ¹⁷ In recent years, contributions from EU structural funds turned out to be major drivers and pillars for the modernisation of Poland's vocational education. In addition to enhancing what has previously been a little coordinated career guidance system, funds were invested mainly in educational materials for vocational colleges, teacher training and, importantly, projects aimed at upgrading vocational schools' reputation. Surely this is money well spent. The often inadequate facilities of the vocational training centres are seen as a major reason young people find them unattractive (cf. Markus Körbel: Berufsausbildung für Europas Jugend, Länderbericht Polen (*Vocational training for Europe's youth, Country Report Poland* – our title translation, in German only), Cologne Institute for Economic Research, 2015.
- ¹⁸ There is still a widespread view among Polish companies that most of the responsibility for vocational training should lie with the state and that has long been an obstacle to this cooperation. The Cologne Institute for Economic Research attributes this reservation to the company size structure. At the beginning of the 2010s, more than 95% of Polish businesses had fewer than ten employees (cf. Körbel, footnote 17). Their closer integration, however, is rightly seen as key to a profound improvement in the quality of education.
- ¹⁹ Cf. Plus, Magazine of the German-Czech Chamber of Commerce and Industry, December 2016 edition
- ²⁰ Cf. Czech Ministry for Education, Youth and Sport (MŠMT): Strategie vzdělávací politiky ČR do roku 2030+, Prag 2020, p. 35
- ²¹ Aneta Lednová, Spokesperson of the Czech Ministry for Education, Youth and Sport (MŠMT), email dated 23 September 2020, on request
- ²² Cf. <https://www.msmt.cz/vzdelavani/stredni-vzdelavani/vydani-aktualizovanych-rvp-pro-stredni-odborne-vzdelavani>
- ²³ For more details, see: <http://www.nuv.cz/projekty/mov?lang=1>
- ²⁴ Information from Joanna Wierzbicka-Grajek, Manager for Vocational Education and Training, German-Polish Chamber of Industry and Commerce, Warsaw, telephone conversation on 14 January 2021
- ²⁵ OECD, Education at a Glance 2020, Country Note Germany.