

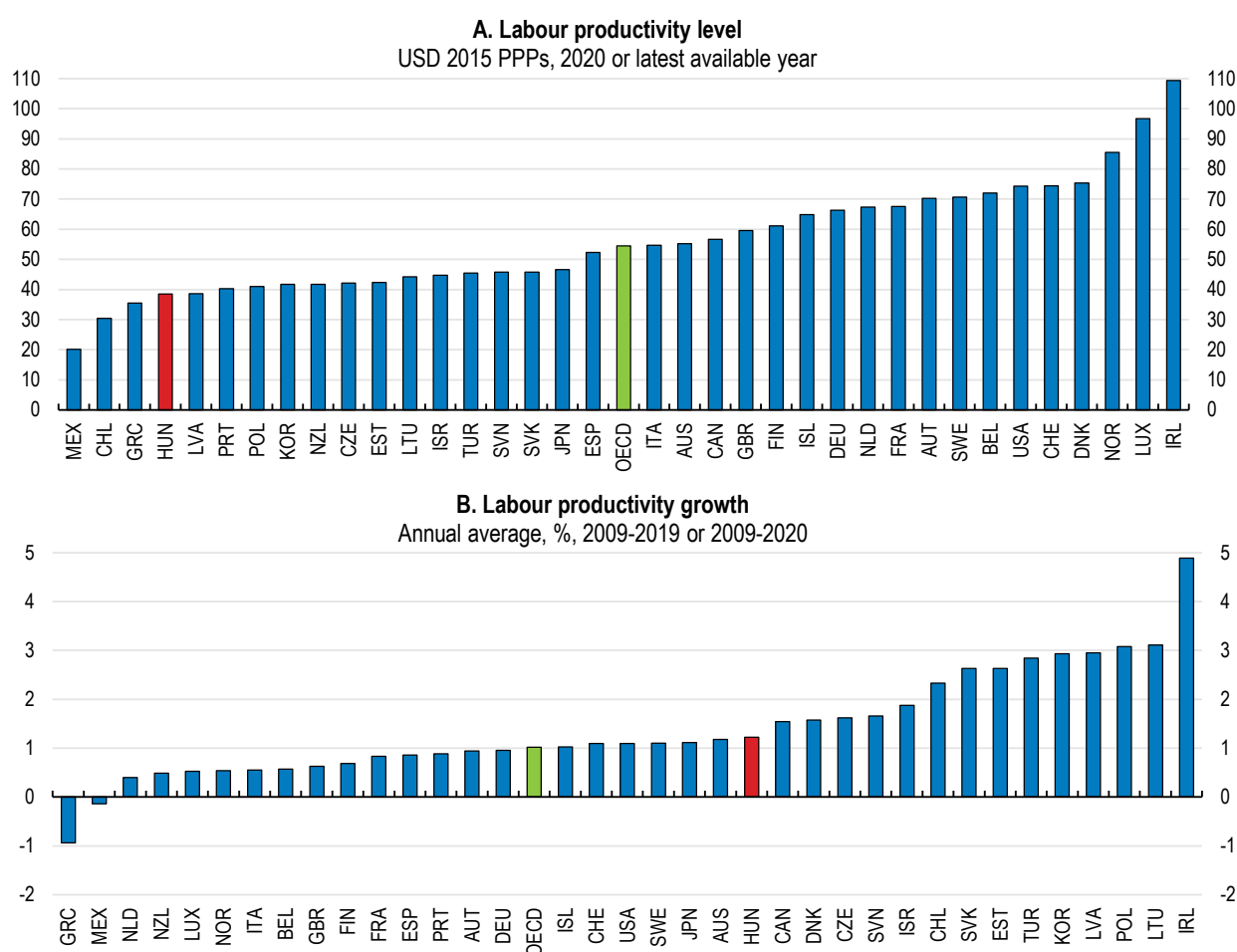
2 Fostering productivity for a stronger and sustained recovery

Weak productivity growth raises concerns for future living standards. Low productivity reflects educational outcomes that are poorly matched to the labour market, and insufficient geographical mobility of low-skilled workers that has created pockets of unemployment in poorer regions while prosperous regions continue facing labour shortages. Moreover, there is a large productivity gap between foreign-owned firms and less productive domestic-owned firms. To improve productivity and ensure a speedy post COVID-19 recovery, education and training policies need to ensure that all workers are equipped with the skills demanded in the labour market. Better functioning housing and transport infrastructures are key to promote labour mobility. Importantly, domestic firms must move up the value chain. To this end, better roads, digital infrastructure and digital adoption would help facilitate integration into regional and national value chains. A more pro-competitive business environment would allow more productive firms to grow and invest in new technologies. This entails a more efficient implementation of existing competition regulation, the withdrawal of distortive government support to less productive incumbents, and streamlining the insolvency regime to accelerate market exit. A stronger digital public administration could support this process.

Low productivity undermines income convergence and future living standards

Labour productivity levels remain among the lowest in the OECD, and productivity growth has been sluggish when compared to other emerging economies since the financial crisis (Figure 2.1). Part of the productivity underperformance reflects higher labour force participation of low-skilled workers. Also, skills shortages constrain firms' ability to increase productivity and move up the value chain. Skills shortages reflect weak vocational training outcomes and skills of graduates that are poorly matched to labour market needs. In addition, insufficient geographical mobility of low-skilled workers has led to pockets of unemployment in poorer regions, while prosperous regions face labour shortages as discussed in the last *Survey* (OECD, 2019^[1]). Looking ahead, the working age population is set to decline and labour demand will continue to shift towards higher-skilled workers with the integration of manufacturing into global value chains. Productivity increases require making the most of the existing workforce by raising skills and mobility.

Figure 2.1. Labour productivity remains low



Note: Labour productivity is measured as real GDP per hour worked.

Source: OECD Productivity database; and OECD calculations.

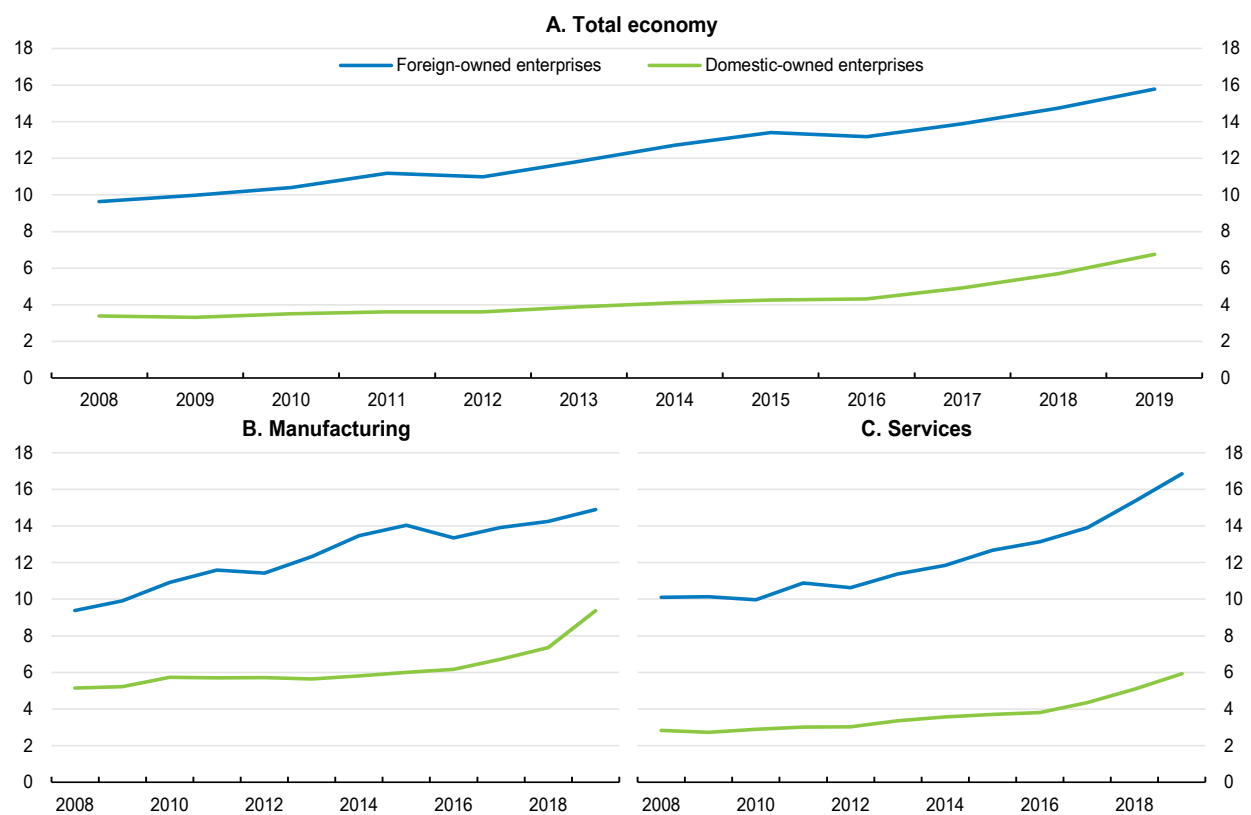
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A major concern are the large differences in productivity performance across the economy with a persistent productivity gap between foreign-owned firms and less productive domestic-owned firms. Only between 2017 and 2019 did the gap somehow narrow on the back of stronger productivity growth of medium-sized domestic enterprises (Figure 2.2). Nonetheless, few domestic-owned firms are exporters and most are poorly integrated into national and regional supply chains. Frequent changes in regulation discourage entry

of productive enterprises, especially in service sectors. As a result, market entry in the important service sector has been declining in Hungary more than in most other EU countries over the last decade (Bauer et al., 2020^[2]). More recently, entry fell sharply during the first phase of COVID-19 in spring 2020 and does not seem to have recovered much (OECD, 2021^[3]). This is mirrored by disproportionately high market shares of low-productivity firms, which points to low competition (Muraközy, Bisztray and Reizer, 2019^[4]). In fact, entry barriers in service and network sectors are higher than the OECD average (OECD, 2018^[5]). Furthermore, the adoption of digital technologies has been concentrated among the largest firms with slow diffusion to the rest of the economy. Smaller firms lack the incentives and skills to seize the productive potential of digital transformation. A stronger pro-competitive regulatory framework is needed to support market entry and growth of more productive firms that can enter regional and national value chains.

Figure 2.2. The productivity gap between foreign and domestic enterprises is large

Labour productivity, million Hungarian Forint



Note: Labour productivity is measured as value added per employee.

Source: OECD calculations based on business balance sheet and business survey data from the Hungarian Central Statistical Office.

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Over the past half-decade, wage increases have outpaced labour productivity growth. This reflects very tight labour market conditions before the COVID-19 crisis. Labour costs that increase faster than productivity reduce profits and investment incentives (European Investment Bank, 2020^[6]). In response, the government compensated employers by lowering their social security contribution rate from 27% to 15.5% between 2016 and 2020 to avoid excessive labour cost increases, and it announced a further cut to 15% in 2022 along with the elimination of the vocational training contribution of 1.5% of gross wages. Restoring investment incentives requires wage increases that are in line with productivity developments as fiscal concerns make it more difficult to implement further offsetting reductions in social security contributions in the future. Faster investment growth will also allow continued income convergence while preserving cost competitiveness.

More recently, the COVID-19 shock and resulting drops in foreign demand and supply-chain disruptions have hit the export-oriented economy hard (OECD, 2020^[7]). Moreover, national containment measures have particularly affected some domestic sectors, such as hospitality. State-backed loan schemes have helped businesses to stay afloat during the crisis. However, such schemes risk keeping unviable firms alive, hindering business dynamics and effective reallocation of resources to the most productive firms. In addition, job losses in some sectors may become permanent due to changed consumer demand and accelerated digitalisation (e.g. e-commerce and food delivery). These developments may have a lasting impact on productivity. Looking ahead, policies will have to support efficient reallocation of capital and labour to allow sustained productivity growth.

This chapter presents policy recommendations to boost productivity and ensure a strong and sustained recovery in Hungary. These include: supporting skills and labour mobility to raise labour productivity and facilitate structural change (Section 2.1); promoting dynamic and competitive product markets to boost entry and growth of productive enterprises (Section 2.2); strengthening equity-based funding (Section 2.3); improving road infrastructure to ease firms' integration in national and international value chains (Section 2.4); and promoting digital adoption (Section 2.5). The main findings and recommendations are summarised in a table at the end of the chapter.

Support skills and mobility to raise labour productivity and facilitate structural change

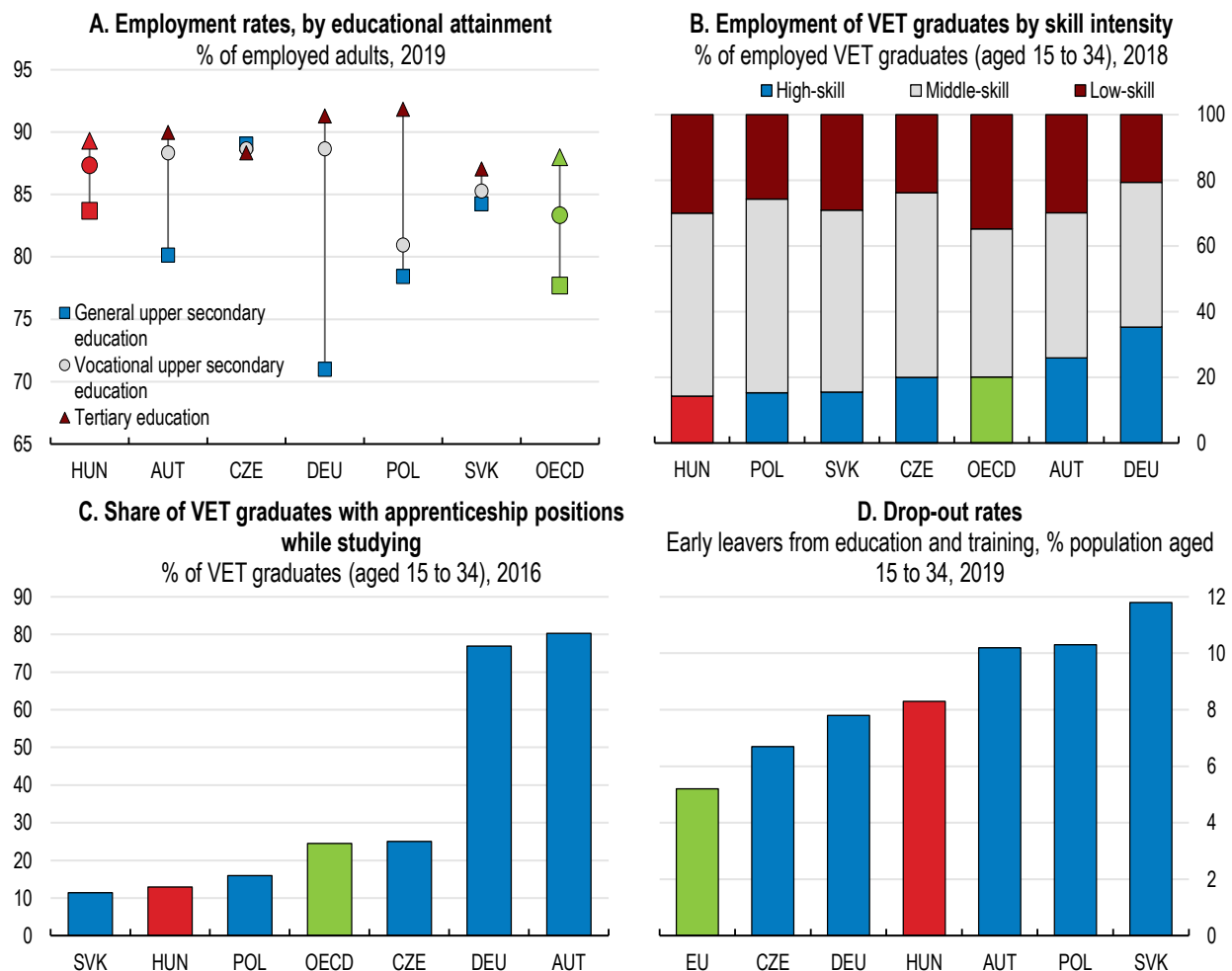
Among other determinants, productivity depends on workers having (i) advanced technical skills or specialised content knowledge, and (ii) complementary generic skills, such as problem-solving and teamwork skills (Grundke et al., 2018^[8]; OECD, 2019^[9]). In Hungary, university graduates have in general high technical skills and a significant wage premium. However, the education system pays less attention to complementary generic skills, which are increasingly in high demand (Hermann, Horn and Todai, 2018^[10]). Higher education institutions (HEI) can cultivate problem-solving skills and teamwork skills and support lifelong learning of adults. Moreover, outcomes of vocational education and training (VET) are weak and poorly matched to labour market needs. Continued emphasis on basic and generic skills and work-based learning in vocational education will be crucial to secure students' capacity to adapt to changing skills needs and align educational outcomes with labour market needs.

Equip students with the skills demanded in the labour market

Strengthen skills and work experience in vocational education and training

Employment rates of VET graduates are high in international comparison (Figure 2.3, Panel A). However, only 47% of VET graduates work in the occupation targeted by their programme. Unsurprisingly, those working outside their field typically hold unskilled jobs (Hórich, 2015^[11]). Such a skill mismatch reflects that programmes delivered by vocational schools are heavily concentrated in low- to medium-skill crafts and trades, while labour demand is shifting towards high-skilled jobs. In fact, only 14% of VET graduates work in high-skill occupations, while this share is twice as high in countries with stronger VET traditions such as Germany and Switzerland (Figure 2.3, Panel B). A factor behind the skill mismatch may be students' choice of low- and medium-skill occupational tracks at the beginning of their VET education. In order to avoid too early tracking, reforms in 2020 saw the introduction of basic sectoral training during the first year of the secondary VET school (two years in the case of the upper secondary VET school), during which students receive training in basic and generic skills before they select a specific occupational track. To improve the responsiveness of the VET system to changing labour market needs, the government could forecast future skill needs. In Estonia, for example, the System of Labour Market Monitoring and Future Skills Forecasting provides quantitative skill forecasts based on yearly analysis of labour market and skill needs. Similarly, Canada set up the Future Skills initiative to collect information on emerging skill trends (OECD, 2019^[12]).

Figure 2.3. Employment rates of VET graduates are high but few work in high-skill jobs



Source: OECD (2020), Education at a Glance 2020: OECD Indicators, OECD Publishing, Paris; OECD (2020), OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis, OECD Publishing, Paris; and Eurostat.

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The 2019 VET reform Strategy VET 4.0 simplified and updated qualifications, reducing the number of occupations from 760 to 175. Sectoral Skills Councils, introduced in 2018, advise on learning outcomes and content (Ministry of Innovation and Technology, 2019^[13]). Moreover, the previous focus on crafts and trades has shifted towards higher-skill occupations, as 99 out of 175 occupations require a higher-level secondary education exit exam (Matura). To continue adjusting the number of students in specific programmes to labour market needs, mandatory work placements in companies can help, as done in several OECD countries (Box 2.1). For example, the number of work placements in school workshops should be reduced as work placements in companies are gradually expanded (see below). A softer form would be to use data on the expected availability of work placements to guide the choices of prospective students.

Box 2.1. The use of work placements to align VET programmes to labour market needs

Several OECD countries use mandatory work placements of VET students to adjust study programmes to labour market needs.

- In Sweden, for example, a mandatory 15-week work placement is required in all upper secondary programmes. While a relatively small part of the overall programme (about 15%), this measure helps adjust programme sizes in the light of the availability of work placements (Skolverket and ReferNet Sweden, 2019^[11]).
- In Denmark students must secure an apprenticeship contract with an approved training company before starting the second half of the basic programme. Exceptionally, and within a pre-defined quota, students who are unable to find a placement may pursue practical training in school workshops. The quota ensures that the number of students is aligned with labour market needs (Andersen and Helms, 2019^[14]).

Despite progress, few VET students have apprenticeship positions, and, despite growing dual training, access to high-quality work-based learning is a concern (Figure 2.3, Panel C). In 2018, 53% of vocational school (szakközépiskola) students had an apprenticeship contract, up from 40% in 2015. For vocational grammar schools (szakgimnázium) the same figure was 21% (up from 8%). Other students pursue practical training in school workshops, sometimes complemented by work placements over the summer holiday. Nonetheless, 13% of VET graduates report having had no work experience during their studies, despite this being in principle mandatory. The lack of work-based training reflects that the choice of a VET programme does not coincide with search for a work placement. Thus, student choice does not reflect the availability of work placements. One way of aligning student choices with labour market needs is to allow apprenticeships to start only once a placement with a company for the work-based part of the programme is secured, as done, for example, in Denmark, Germany and Switzerland. At the same time, efforts to encourage companies to provide apprenticeship contracts should be continued (see below).

VET schools receive funding based on the number of students, giving them few incentives to reduce programmes with poor labour market outcomes, especially if those are popular among applicants, and few possibilities for opening up new programmes in response to changing skills needs in the labour market (Ministry of Innovation and Technology, 2019^[13]). Moreover, the funding system gives VET schools few incentives to bring students into work-based training (see above). To better match VET education and training to labour market needs, funding for vocational schools should be linked to the number of students in work placements. For instance, failing to find work placements for VET students should have negative financial implications for the school, which would avoid channelling students into programmes with few work-based learning opportunities.

VET graduates also need sound basic skills (such as in literacy and numeracy) and generic skills (such as in communication, ICT, and problem-solving) to secure their capacity to learn and adapt to changing skills needs and thus their long-term labour market success. However, employers surveys show dissatisfaction with the basic and generic skills of VET graduates (Gablini, 2018^[15]). A 2013 reform of the VET system made parts of teaching hours dedicated to general education and theoretical vocational content optional, which effectively reduced these teaching hours and weakened the literacy and numeracy skills of students in vocational schools (Hermann, Horn and Todai, 2018^[10]). As a result, for example, the VET system dedicates less attention to basic and general skills than the German system (Hajdu et al., 2015^[16]). Moreover, the system has little capacity to help the considerable share of entrants into VET that have weak literacy and numeracy skills, increasing drop out risks (Belinszki et al., 2020^[17]). To strengthen generic skills, VET curricula were changed in 2020, allocating more teaching hours to generic skill development. As part of the reforms, VET teachers receive Continuing Professional Development courses in order to develop their own training and teaching skills. In addition, programmes in vocational schools include since 2018 systematic screening for weaknesses at the point of entry and dedicate more time to literacy and

numeracy for weaker students. To bolster basic and generic skills of VET students, efforts to dedicate more time to ICT, literacy, numeracy and problem-solving in vocational schools should continue.

One of the challenges, as for other OECD countries, is to engage employers in the provision of work-based learning. Small- and medium-sized enterprises often reap few benefits by retaining apprentices upon completion, which discourages them to take on apprentices in the first place (Muehlemann and Wolter, 2019^[18]). Furthermore, many smaller firms lack the capacity to deliver high-quality training and deal with administrative requirements. In response, the government has recently introduced Sectoral Training Centres (STCs) to help firms with providing practical training and dealing with administrative tasks (Box 2.2). Looking ahead, it is important that STCs complement, rather than replace, work-based learning in companies. To this end, the activities in STCs should focus on strengthening links between VET centres and companies. In particular, the government should ensure that STC activities focus on measures that facilitate training provision in companies, for example, by offering training programmes for in-company trainers, and providing companies with administrative support or matching prospective apprentices to companies.

Box 2.2. Initiatives to develop apprenticeship capacity at smaller companies across the OECD

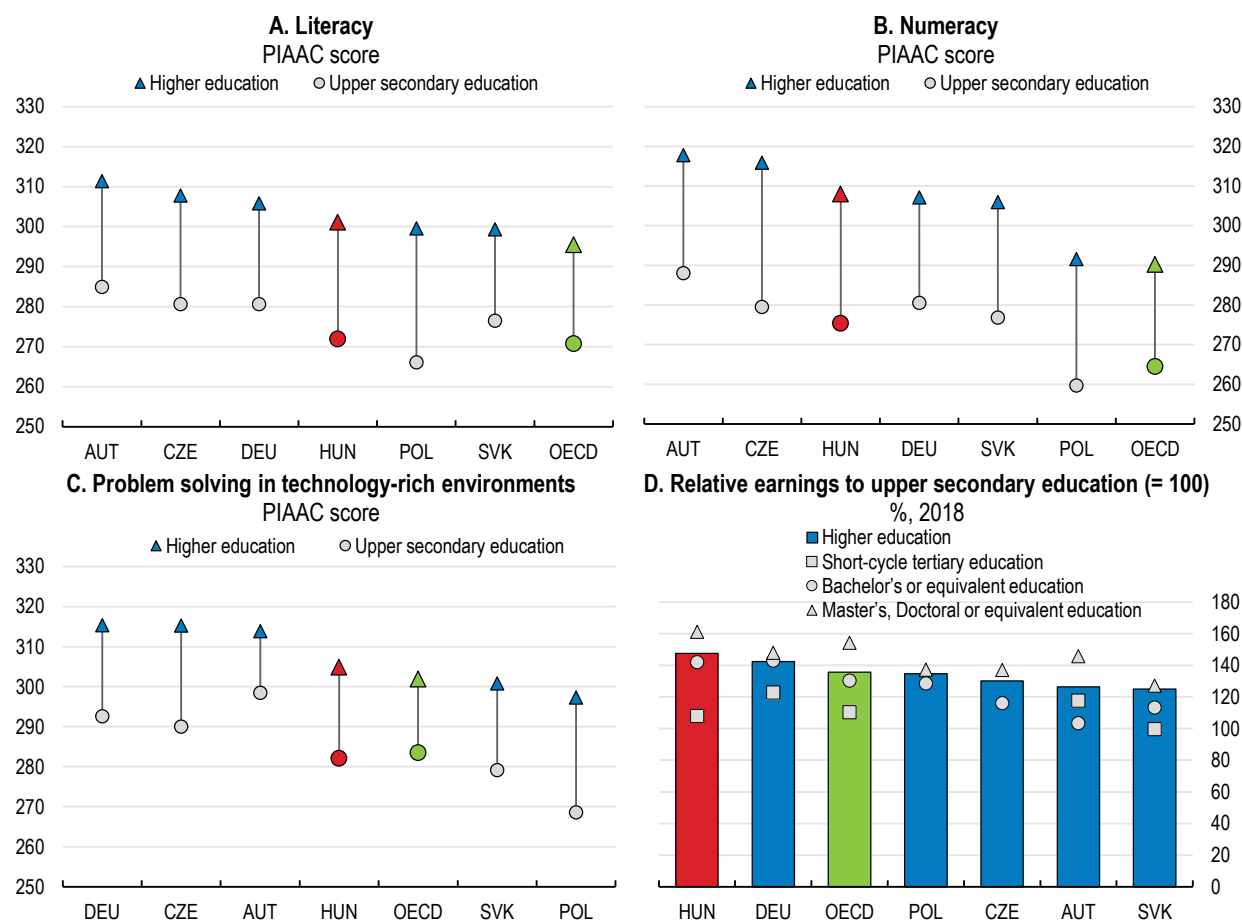
To help companies, and in particular SMEs, provide training, several OECD countries have established external bodies that take over some of the tasks generated by apprenticeships. This may include facilitating the matching process, and helping companies deal with the administrative burden and deliver high-quality training:

- In Germany, training centres are governed by Chambers of Commerce and offer training that complements learning in schools and within individual companies. One of their key roles is to enable SMEs to remain key providers of apprenticeships. Being increasingly specialised, SMEs often cannot cover the entire VET curriculum on their own. The centres have contributed to maintain a high training capacity of SMEs: 26% of firms with 5-9 employees provided apprenticeships in 2018, 38% of firms with 10-19 employees and 49% of firms with 20-49 employees (BIBB, 2020^[19]).
- In Norway training offices are collectively owned by companies and facilitate the delivery of apprenticeships by connecting companies with prospective apprentices, training apprentice supervisors and organising theoretical training for apprentices (Høst, 2015^[20]).
- Under a different model, Group Training Organisations in Australia hire apprentices and place them with host employers. They also deal with administrative tasks and rotate apprentices between employers (Australian Apprenticeships, 2021^[21]).

Improve generic skills in higher education

Higher education graduates perform above the OECD average in assessments of literacy, numeracy and problem-solving skills, and have higher employment rates than graduates of upper secondary education (see above) (Figure 2.4, Panel A to C). In addition, relative large wage premia give students strong incentives to invest in their skills (Figure 2.4, Panel D). A problem, though, is that higher education programmes focus principally on the development of specialised content knowledge, achieved through extensive instructional contact hours and teacher-led pedagogical methods. This comes at the cost of complementary cognitive and socio-emotional skills, including teamwork and communication skills, which are important for success in labour markets (Deming, 2017^[22]). Work-based and problem-based learning are still not commonplace in higher education (OECD/European Union, 2017^[23]). A stronger use of modern teaching methods can improve generic skills among higher education graduates.

Figure 2.4. Higher education graduates have relatively high skills and wages



Source: OECD Survey of Adult Skills (PIAAC) database (2012, 2015, 2018); OECD Education and Earnings database.

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Incentives and support for teachers to update their pedagogical knowledge and teaching skills are less extensive than in other OECD countries. The academic career advancement system incentivises teaching staff to obtain a doctoral degree and produce quality scientific work, but it does not recognise their efforts to improve their teaching knowledge and skills (Eurydice, 2020^[24]). Nor does Hungary possess a system of widely disseminated teaching and learning quality measures found in some higher education systems, such as Australia. Similarly, pedagogical support is more limited than that found in other higher education systems. The Educational Authority organises training sessions on the implementation of outcome-based education (Educational Authority, 2021^[25]). However, there is no national quality assurance body that provides pedagogical support, as in the United Kingdom, or an independent national body that focuses on supporting the enhancement of teaching and learning, such as that found in Ireland. Moreover, only few Hungarian HEI have dedicated centres on teaching (e.g. Teacher Training and Digital Learning Centre at Corvinus University).

To enhance the quality of teaching at higher education institutions, the Ministry of Innovation and Technology, jointly with the Tempus Public Foundation and the non-profit organisation Digital Success Ltd., are currently developing a set of criteria and an assessment tool for teachers' performance within an EU programme (Tempus Public Foundation, 2020^[26]). The programme also aims to provide recommendations on an incentive system to encourage the development of teaching skills. Further support and incentives should be provided to teaching staff to update their teaching knowledge and skills, as done in other OECD countries (Box 2.3).

Box 2.3. International practice to improve pedagogical knowledge and teaching skills of teachers

- Some countries have a national body responsible for the support of teaching and learning in HEI. In Ireland, for example, the National Forum for the Enhancement of Teaching and Learning in Higher Education offers professional development opportunities to teachers. It also encourages teachers and HEI to exchange information on teaching; and during the pandemic, online teaching resources have been shared through its network (National Forum for the Enhancement of Teaching and Learning in Higher Education, 2021^[27]).
- Other national initiatives focus on acknowledging the efforts of exemplary teachers. With the aim of incentivising teachers to focus on the quality of teaching, the Netherlands started the Comenius Fellowship scheme in 2017, which awards competitive grants for teachers and HEI stimulating innovation in teaching (Dutch Ministry of Education Culture and Science, 2015^[28]).
- Alternatively, heightened attention to teaching and learning outcomes could be encouraged through a system of quality indicators, such as the Australian Quality Indicators for Learning and Teaching (Australian Department of Education, Skills and Employment, 2021^[29]).

A better alignment of programme offerings with labour market demands would improve labour market outcomes of higher education. There is important variation in employment rates of higher education graduates among fields of study, ranging from 78% for social sciences to 95% for information and communications technology (ICT) (OECD, 2021^[30]). Also, only around half of arts and humanities graduates have found employment in jobs requiring a degree in the first three years after graduation, although this share rises to 76% after 5 years (Educational Authority, 2021^[31]).

In 2021, the accreditation of new study programmes was streamlined, so that new study programme authorisation is governed by a ministerial decree rather than previous lengthy authorisation procedures. In addition, a newly developed graduate tracking system allows students to access information on labour market outcomes of different study programmes. The system integrates different administrative databases containing information on enrolment, employment rates, earnings, and occupations. Moreover, graduate survey data complement the administrative data with more qualitative information, including graduate self-reports of skills use at work and job satisfaction (Educational Authority, 2021^[31]). The graduate tracking system should be complemented by a system that systematically collects feedback from employers, as done in Australia and the United Kingdom. Employer surveys at a national level can inform the design of study programmes about labour market needs, thereby improving their labour market relevance. For example, in the United Kingdom, stakeholders reported that the Employer Skills survey was particularly helpful to obtain evidence on skills shortages, gaps and mismatches at national, regional and local levels (London Economics, 2017^[32]) (OECD, 2016^[33]) (Box 2.4).

Box 2.4. International experience with Employer Skill surveys

Employer surveys can provide important insights into the planning of education and skills policies and programmes.

- The United Kingdom, for example, has conducted the nation-wide Employer Skills Survey every two years since 2011. The survey includes questions related to skills mismatches and hard-to-fill vacancies (UK Department for Education, 2020^[34]).
- Australia, on the other hand, uses a combined approach to collect feedback from graduates and employers. The annual Graduate Outcomes Survey includes a question on skills utilisation at work, and is linked to an Employer Satisfaction Survey, which is sent to the employers of the graduate respondents to ask their satisfaction with graduate skills (Australian Department of Education, Skills and Employment, 2020^[35]).
- At the European level, several surveys collect information on skill gaps as perceived by employers, including Eurostat's forthcoming 2020 Continuing Vocational Training Survey (Eurostat, 2020^[36]), which includes an employer survey on skill gaps developed by the OECD and in which Hungary participates, and the 4th wave of the EU Company Survey (Eurofund, 2020^[37]).

Most students gain work experience through internships as many study programmes require them, while dual education programmes are less common. In 2015, work-based learning was strengthened with the introduction of dual education bachelor's programmes, which combine academic components offered by HEI and practical components provided by firms. The dual tertiary education programmes, first introduced at the master degree level in 2017, were extended to the doctoral level in 2020 (Cooperative Doctoral Programme for Doctoral Scholarships). However, participation is low, with only around 2 000 students in the academic year 2019/20. This reflects that students have been overloaded with a combination of extensive classroom studies and additional work-based learning responsibilities. In addition, HEI sometimes have trouble finding business partners after accepting students, ending up unable to offer the dual form of education (Dual Training Council, 2019^[38]). In response to the COVID-19 pandemic, students have been granted more flexibility to decide when to commence the practical component. To strengthen dual education, programmes should preserve this flexibility as to when a student can start the practical component in order to ease workload pressures.

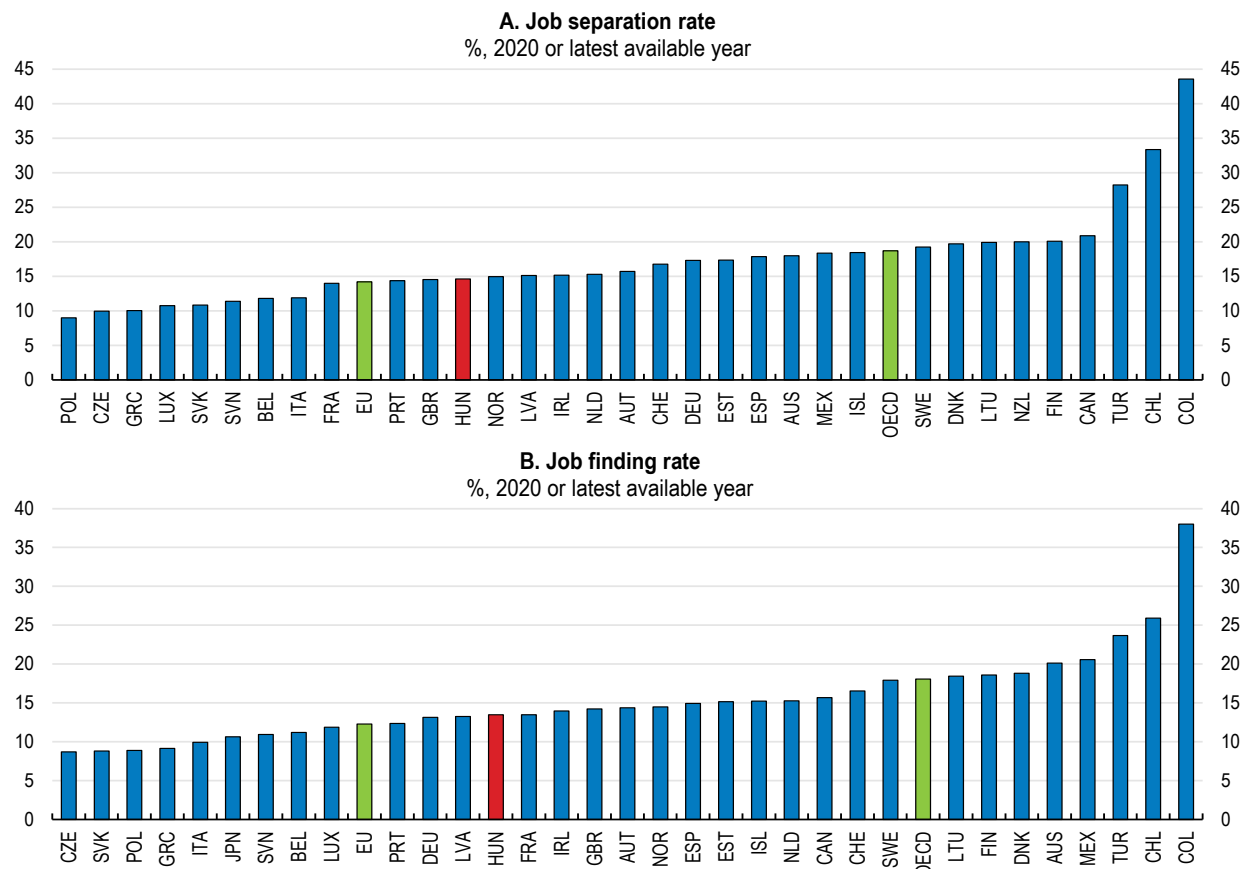
Staff mobility between academia and industries is often limited to the involvement of external speakers in teaching activities, reducing the opportunities for knowledge exchange. Over half of HEI do not recognise experience in the business sector in the recruitment of their academic staff. In addition, it is uncommon for instructional staff to obtain institutional support, such as sabbatical leave for professional practice, to augment or renew their knowledge in a professional setting outside of higher education (OECD/European Union, 2017^[23]). In Finland, some HEI hire "professors of practice" who have experiences in industries and are responsible for bringing practical expertise to the higher education sector (Frølich et al., 2018^[39]). Similarly, in Austria, teachers at Universities of Applied Sciences are often recruited from industries and remain employed by their employers on a part-time basis, in order to keep their practical knowledge up to date (Eurydice, 2020^[40]). In addition, several Dutch HEI loan their staff temporarily to firms to promote knowledge exchange (OECD/European Union, 2018^[41]). The government should encourage HEI to employ individuals with professional experience as teachers, and increase opportunities for teaching staff to deepen or refresh their knowledge of the professional practice. In addition, current collaboration efforts, such as the Széchenyi István University and Audi collaboration that involves staff mobility, could be boosted.

HEI are not widely involved in adult learning. For example, there was no HEI involvement in a 2020 initiative to address the shortage of IT professionals by providing rapid training that led to industry-recognised certifications for approximately 37 000 people (Hungarian Ministry for Innovation and Technology, 2020^[42]). The few HEI initiatives include the development by 22 HEI of Massive Open Online Courses (MOOCs) (Óbuda University, 2021^[43]). In contrast, HEI in other OECD countries are often a source of innovation in targeted “alternative credentials” (Kato, Galán-Muros and Weko, 2020^[44]). To stimulate such a development, funding and deregulation measures should support such initiatives across the entire higher education system, including incorporating shorter learning programmes into the existing higher education framework.

Improve labour mobility

Labour mobility is insufficient to prevent high unemployment in poorer regions (Figure 2.5) (Chapter 1). A particular concern is the low geographical mobility of low-skilled people, which feeds into persistent pockets of underemployed workers in poorer parts of the country (Figure 2.6, Panel A). Mobility is concentrated among better-educated workers with strong incentives to move to prosperous regions with higher wages, as discussed in the previous *Survey* (OECD, 2019^[1]). Despite strong movements of higher-skilled workers to more prosperous regions in recent years, firms in these regions cannot easily fill vacant positions with workers from poorer regions (Panel B). The resulting labour shortages hinder the expansion of the most productive enterprises. As the working age population is set to decline, productivity increases require raising labour mobility.

Figure 2.5. Labour turnover is low

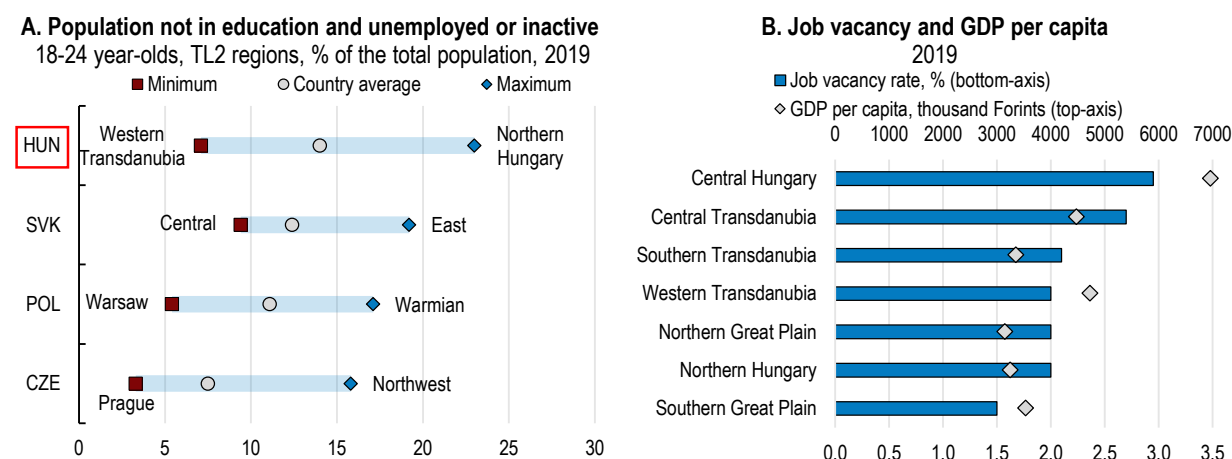


Note: In Panel A, data shown refer to the difference between the hiring rate and the net employment change. In Panel B, data refer to the share of employed in the latest 12 months in total employment.

Source: OECD Labour Force Statistics database; and OECD calculations.

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Figure 2.6. High unemployment in poorer regions contrasts with labour shortages in richer regions



Note: Panel A shows population not in employment, education or training (NEET).

Source: OECD Regional Statistics database; Hungarian Central Statistical Office; and OECD calculations.

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Government incentives have not significantly increased geographic mobility. The government provides grants to municipalities and companies for the construction and renovation of workers' hostels (Foster, Masso and Osila, 2020^[45]). In addition, geographical mobility of workers is encouraged with a commuting allowance for employees. However, only about 0.1% of employees received the commuting allowance in 2019, and another 0.1% of workers benefited from affordable housing under the workers' accommodation scheme. Workers' accommodations cater mostly to single men rather than families. Moreover, the commuting allowance is at the discretion of employers, who often refrain from applying for such support due to administrative costs.

To support mobility, the government provides a transportation subsidy for jobseekers. Jobseekers receive a subsidy of up to 30% of the minimum wage for a period of up to a year. However, the subsidy is distance-based and covers only transportation of up to 60 km between the place of residence and the place of work. Extending transportation subsidies independently of the travel distance, for instance for the commute to job interviews, could boost mobility. A distance-independent, time-limited transportation allowance for all jobseekers can facilitate the reallocation of labour from regions with high unemployment to more prosperous regions with labour shortages.

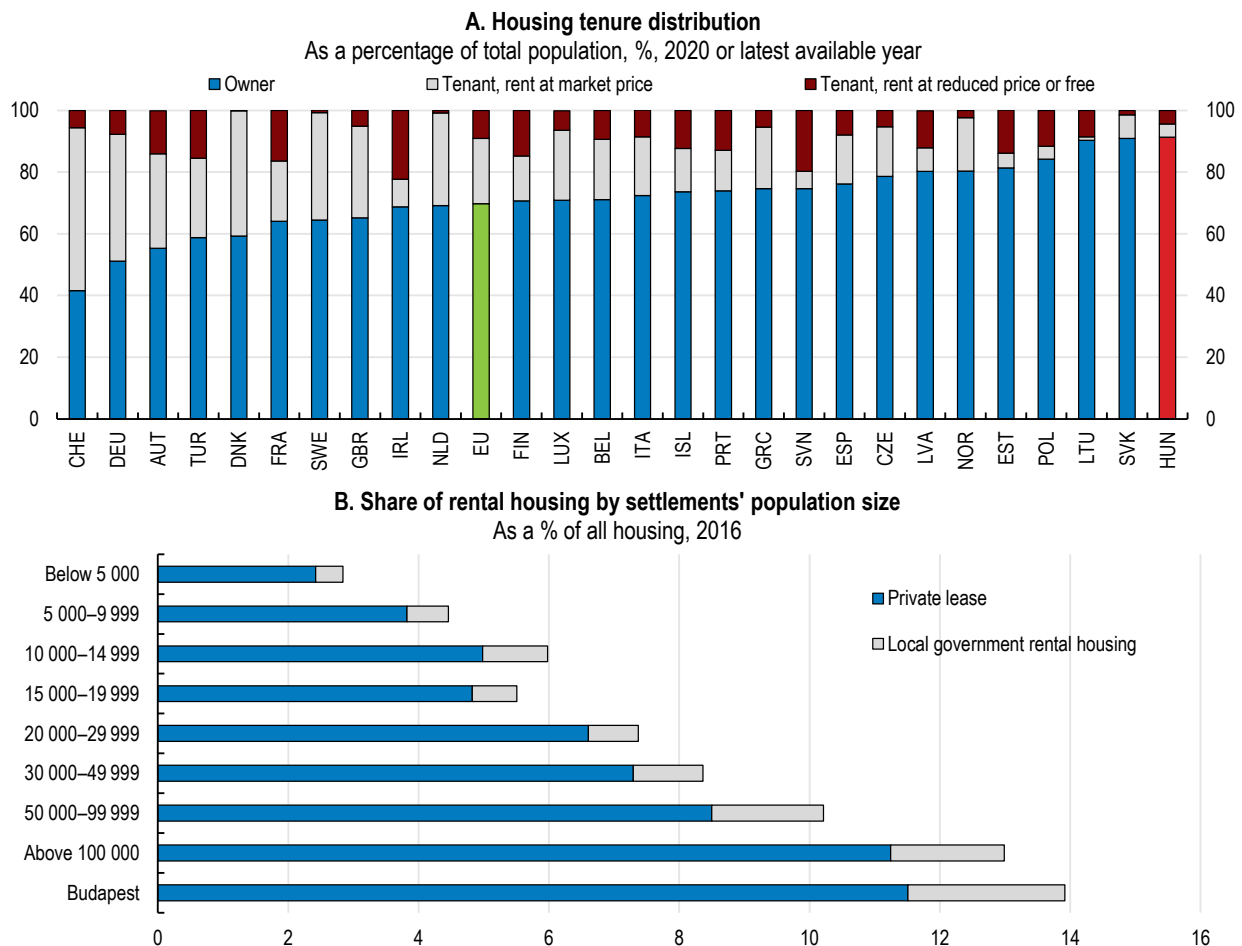
Geographical mobility is restricted by a rigid housing market. Generous mortgage subsidies support a high degree of home ownership. The Home Purchase Subsidy Scheme for Families and single parents has provided mortgage subsidies since 2015. In 2019, the government introduced another mortgage subsidy scheme for credit-worthy married couples (so-called prenatal baby support loans) that can be turned into a grant if a child is born. Subsidies mortgages account for about one third of new bank lending since mid-2019, contributing to strong housing demand and fuelling rapid increases in housing prices (MNB, 2019^[46]). However, these schemes cater mostly high-income families that can afford a house, as they are better placed to access the mortgage market, while they do not provide short-term mobility incentives for low-income households with highest mobility needs (MNB, 2020^[47]) (Plouin et al., 2020^[48]). The withdrawal of mortgage subsidies, such as zero interest loans, would help limit price increases in the housing market and improve labour mobility (Cournède, Ziemann and De Pace, 2020^[49]).

A small formal rental market limits residential mobility to cities with better employment prospect (Figure 2.7). The tax regime discourages investment in the rental market, as owner-occupied housing enjoys a significant tax subsidy compared to alternative investments and rental housing as discussed in the previous *Survey* (OECD, 2019^[1]). Individuals who live in their own house do not pay property tax, while

rental income of people renting out their apartment is taxed considerably higher with a personal income tax of 15%. It is at the discretion of municipalities to levy a land or building tax, although only about a quarter of municipalities levy such a tax. In addition, homeowners are exempted from a tax on imputed rents and from the capital gains tax of 15%, while home buyers benefit from a reduced VAT of 5% since 2021. The associated underinvestment in the rental housing market has led to rental housing shortages and high rental prices. In Budapest, for instance, rental housing shortages have led to a rapid increase in rental prices since 2016, leading to one of the highest rent-to-income ratios among European capitals (MNB, 2020_[50]). The relatively high renting costs discourage mobility of low-income workers.

To support residential mobility, jobseekers that move more than 60 km away to find new employment are eligible for a housing allowance of up to 70% of the minimum wage starting in 2021, replacing the previous tax-exempt lump-sum rental subsidy of 60% of the minimum wage. The housing allowance may help raise geographical mobility, especially to cities with higher rental prices. However, the scheme does not tackle the underlying issue of low rental housing supply. A neutral taxation of investments in private rental housing and owner-occupied housing would help develop a bigger rental market. Taxing owner-occupied housing in line with other saving vehicles, such as equity, can also help creating a neutral tax framework for investments.

Figure 2.7. The rental market is small



Note: In Panel A, EU aggregate does not include the United Kingdom.

Source: Eurostat Housing Statistics database; and Hungarian Central Statistical Office (Microcensus 2016).

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The small private rental market is largely unregulated and based on short-term contracts, which renders it unattractive as a longer-term solution, although the actual size of the rental market is probably much bigger than what official tenure statistics suggest (MNB, 2019^[51]). A lack of clear rules for the renewal of fixed-term contracts creates uncertainty for tenants regarding the renewal of their contract. To terminate a lease agreement, a short 1-month notice period is required, which makes rental housing an unpredictable option for many people. The absence of clear rules on maintenance responsibilities and deposits to cover potential claims after contract termination creates legal uncertainty for landlords, discouraging renting. Lengthy court proceedings for dispute resolution between landlords and tenants raise costs. In addition, a large share of the private rental market in Budapest is used for short-term tourist accommodation, which is more attractive in terms of rental income (MNB, 2019^[51]). As a result, 13% of all rental contracts are informal (so-called “*black leases*”) and the majority of leases are short one-year contracts, while incentives to rent out apartments longer-term are limited (Hungarian Central Statistical Office, 2019^[52]).

There is a need to modernise the outdated rental regulations stemming from 1993, adapting them to the needs of the modern housing market. Regulation of tenancy that better balances the interest of tenants and landlords could strengthen incentives for long-term rentals as an alternative to home-ownership. This could entail effective dispute resolution, a longer notice period for terminating long-term contracts as well as clear rules for deposits and maintenance obligations (Habitat, 2000^[53]). Ireland, for instance, has set up the independent Residential Tenancy Board to promote out-of-court dispute resolution between tenants and landlords, considerably reducing the costs of litigation (Habitat, 2017^[54]). In order to mitigate the negative impacts of online accommodation platforms on long-term rental housing supply in Budapest, municipalities should consider adequate regulation of private lodgings such as licenses for short-term vacation rentals that exceed a certain time limit, as done, for example, in Amsterdam, Copenhagen and Paris. The supply of rental housing increased considerably after the introduction of a limit of 60 days for short-term rentals in Amsterdam in 2017, and a limit of 120 days in Paris in 2019 (Cournède, Ziemann and De Pace, 2020^[49]).

The subsidised rental market is small and a considerable share of social housing apartments are in poor condition, which discourages low-income households to find appropriate social housing in more prosperous regions. Above all, it is a barrier for poor households accessing decent, affordable housing. The share of poor households living in deprived social housing is among the highest in the OECD (OECD, 2020^[55]). For instance, 16% of poor households live in social housing that is overcrowded, has a leaking roof, lacks a bath/shower and/or has no indoor toilet. Furthermore, many municipalities have introduced strict minimum-income levels that exclude poorer tenants from social housing in order to increase the profitability of their social housing operations. Minimum-income levels should be phased out as they limit the options for low-income households wishing to relocate. In general, minimum income levels reduce access of low-income households to social housing. As recommended in the previous *Survey* (OECD, 2019^[11]), the provision of social housing for those willing to relocate, irrespective of minimum-income levels, could increase labour mobility of workers.

In order to raise investment in the quality of social housing, the government should reallocate spending on mortgage subsidies to the subsidised rental market. For instance, the government could provide subsidised loans or tax credits to non- or limited-profit housing associations (Habitat, 2000^[53]; Habitat, 2017^[54]). In Austria, for instance, limited-profit housing associations are tax-exempted under the condition that they reinvest profits into social housing (OECD, 2020^[56]). In addition, co-financing measures could incentivise counties with largest housing shortages to invest in housing projects.

Reforms to social benefits could also improve labour mobility. The short 3-month duration of unemployment benefits discourages geographical mobility. Jobseekers do not have sufficient time to search for new employment in other regions and employment that matches their skills. Although a short duration raises search incentives, the 3 months of unemployment benefit are shorter than the average time needed to find a job, creating income insecurity and poverty risks even for the short-time unemployed (Hungarian National Employment Service, 2021^[57]). Furthermore, people losing their benefits tend to stay in their region and

enrol in the Public Work Scheme, where they can qualify for renewed benefits (see below). This further reduces geographical mobility as job search in other regions is discouraged. Extending the benefit duration to 6 months could improve labour mobility, especially from poor regions into growing labour markets, as recommended in the previous *Survey* (OECD, 2019_[1]). With the COVID-19 crisis, longer support for jobseekers becomes even more pertinent as job separations have increased. This is consistent with maintaining job search incentives, as the current net replacement rate for average wage earners in unemployment, at 43% for single persons and 54% for couples with children, is below the OECD average.

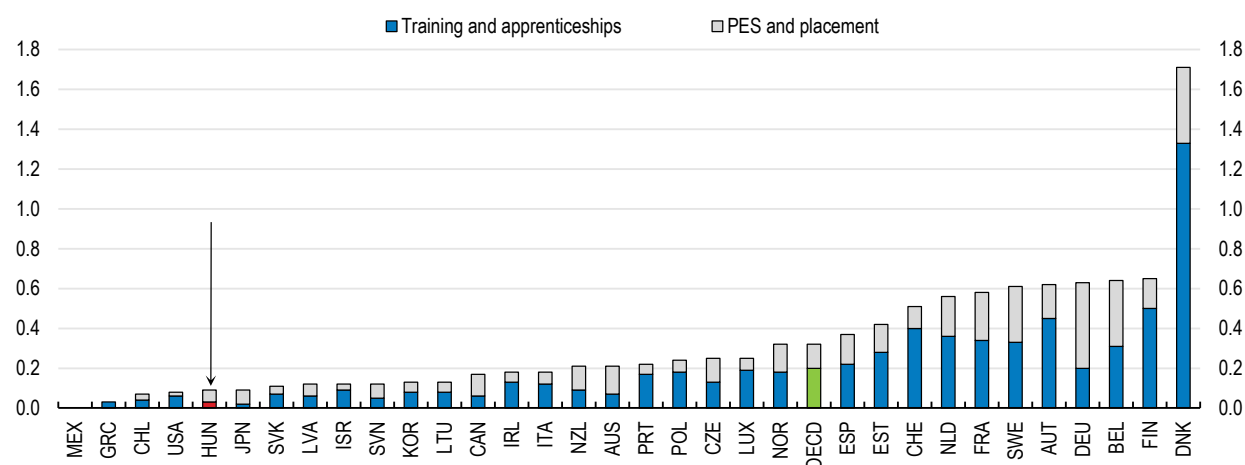
Active labour market policies provide insufficient support for mobility and upskilling. The Public Works Scheme has been reduced in scope but remains the main active labour market policy. As described in the previous *Survey*, the scheme has successfully reduced poverty in lagging regions (OECD, 2019_[1]). However, its impact on the mobility and the employability of enrolees remains low. According to the latest available data (2019), only 17% of enrolees found employment in the primary labour market and only 7% took part in training. Also, the interplay of short duration of unemployment benefits and public works scheme has some negative impacts on employability as some people do not get out of unemployment and public work schemes. Hence, there should be a transition towards more effective active labour market policies, such as training and targeted job search assistance (OECD, 2018_[58]; Card, Kluve and Weber, 2017_[59]). In line with previous recommendations, the government has reduced the Public Works Scheme by introducing stricter eligibility criteria. Further reforms to the Public Works Scheme are necessary to facilitate transitions to the primary labour market. The government should continue downsizing the Public Works Scheme and enhance the training content of the scheme by incentivising collaboration with the private sector and non-government organisations (NGOs) to strengthen labour market experience. Widening access to Public Works schemes outside an enrolee's municipality would promote mobility. At the same time, the Public Works Scheme should continue to target the most disadvantaged groups in poorer regions, notably older long-term unemployed persons with low skills.

Compared with other countries, active labour market policies have little focus on training and job search assistance, leaving new jobseekers with insufficient support (Figure 2.8). As highlighted in the latest *Survey*, public employment services (PES) suffer from insufficient funding, a high caseload and limited outreach. In addition, job counselling is not tailored to the needs of most disadvantaged groups, including the Roma (OECD, 2019_[1]). In response, the government launched a reform of PES in 2018 to improve the number of job placements of unemployed persons. NGOs cooperating with PES provide counselling and mentoring services for disadvantaged jobseekers. In addition, PES have created individual action plans for all registered jobseekers based on their risk categories. European funding will be used to hire additional staff for PES, co-financed by national funds. The government has also stepped up spending on training, including spending on online distance education, by 0.16% of GDP for the period 2020-2022.

However, more should be done to improve targeting as the additional resources do not reach the most disadvantaged groups with the highest training needs. With the COVID-19 crisis, stronger support for training and job search becomes even more important as job separations have increased, often affecting low-skilled workers in service sectors. To strengthen targeting of policies, staffing and efficiency of the PES should be scaled up following the recommendation from previous *Surveys* (OECD, 2016_[60]; OECD, 2019_[1]). The rebalancing of active labour market policy spending away from Public Works scheme towards training and job assistance at the PES should continue as it will improve the employability of long-term and low-skilled jobseekers.

Figure 2.8. Labour market policy spending on training and job placements is low

Labour market policy spending by policy type, % of GDP, 2018



Note: Spending on public employment services (PES) includes funding for authorities that connect jobseekers with employers through information, placement and active support services.

Source: OECD Labour Market Programmes database.

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Ensure a prudent minimum wage policy to support mobility

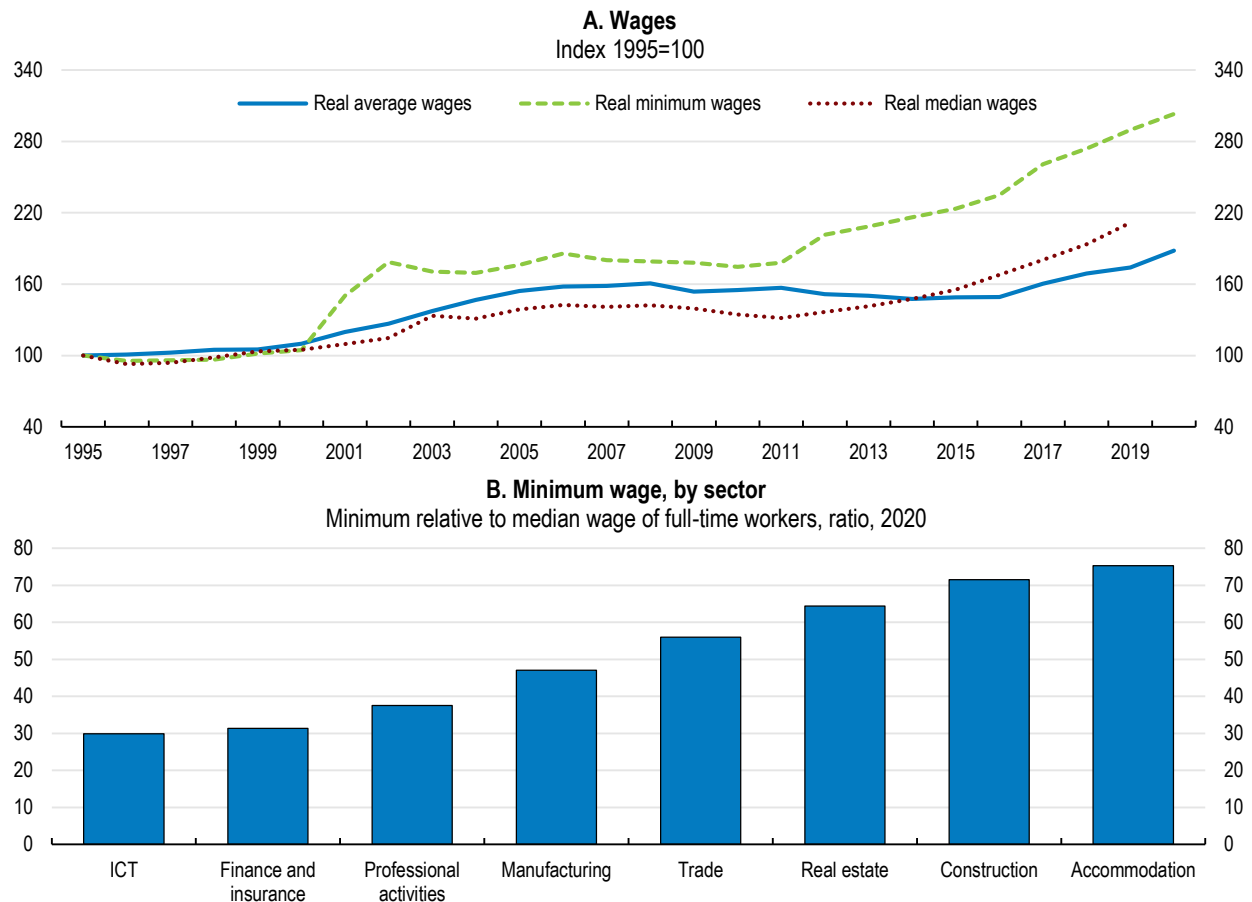
The main wage policy is the minimum wage, which is set by the government after consultations with the social partners. In absolute terms, the minimum wage is among the lowest in Europe, although it is comparable to those of neighbouring countries such as the Czech Republic and the Slovak Republic (OECD, 2021^[61]). Increasing minimum wages are important to secure living standards for all. However, the pace of minimum wage growth should be smaller than the growth of other wages to enhance employment prospects of low-skilled and unemployed workers. The minimum wage has increased, in real terms, by about 30% since 2015, which is nearly double the growth rate of the average real wage of 17% (Figure 2.9, Panel A). This comes despite the fact that changes to the minimum wage are in principle subject to annual reviews by the tripartite body for social dialogue, which amongst other things assesses whether minimum wage increases will harm productivity and employment. The fast growth in the minimum wage has kept the ratio of the minimum wage to median wage ratio above those in most other European countries, although the ratio has fallen recently due to strong median wage growth (OECD, 2021^[62]). Evidence from the early 2000s shows that strong minimum wage increases reduced job prospects of low-skilled and long-term unemployed persons (Kertesi and Kollo, 2003^[63]; Manning, 2021^[64]).

Moreover, the minimum wage is relatively high compared to the median wage in poorer regions. About 5% of employees receive the minimum wage nationwide, but this share is about 40% higher in the least developed regions, where the average income is hardly above the minimum wage (Hungarian Central Statistical Office, 2019^[65]). Furthermore, the share of wages affected by the minimum wage is considerably higher since the minimum wage has a signalling effect on most private sector wages in wage negotiations. For instance, the minimum wage is high compared to the median wage in labour-intensive sectors such as hospitality and construction (Panel B). Compressed wages discourage low-skilled workers in poorer regions, and especially in labour-intensive sectors, to search for better-paid jobs elsewhere as slightly higher wages would not offset moving costs.

In order to mitigate the effects of a high minimum wage on labour market entry, the government is supporting job opportunities for young adults and low-skilled workers through wage subsidies. In 2020, it introduced a wage subsidy for under 25-year old people and low-skilled jobseekers that covers up to 50% of their wage costs, capped at 60% of the minimum wage. In 2021, the wage subsidy was made available

for all jobseekers registered for at least one month at the PES. The government further announced a capping of the income tax for under 25-year olds at the level of the gross average wage starting in 2022. The government should ensure that the minimum wage grows at a slower pace than the median wage to support mobility incentives of low-skilled workers from poorer regions into more prosperous labour markets.

Figure 2.9. The minimum wage has grown more strongly than the average wage



Note: In Panel A, real average wages refers to the national-accounts-based total wage bill divided by the number of hours worked in the total economy, deflated by a price deflator for private final consumption expenditures in 2019 prices. Real minimum wages refers to the hourly minimum wage deflated by the consumer price index taking 2019 as the base year. Real median wages are calculated by dividing the real minimum wages by the minimum-to-median-wage-ratio.

Source: OECD National Accounts database; OECD Labour database; Hungarian Central Statistical Office; and OECD calculations.

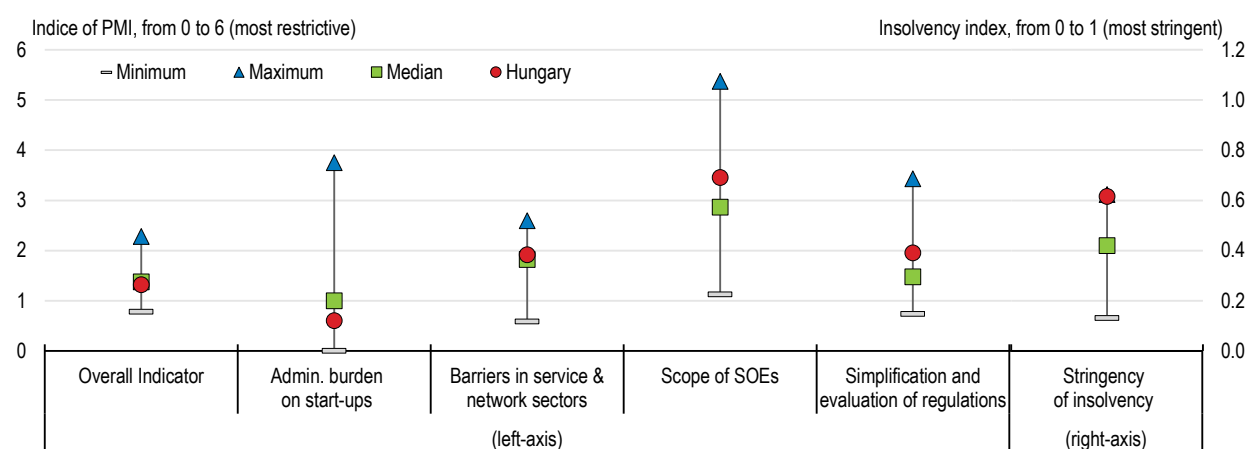
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Promote dynamic and competitive product markets

Bolstering productivity growth requires competitive product markets that support the introduction of new technologies and efficient allocation of capital and labour to the most productive firms. Hungary has in general a favourable business environment with lean regulations and low barriers to trade and investment, according to the OECD's PMR indicators. Despite the overall favourable product market regulations, there is room for improvement. A concern is state intervention and regulatory barriers that hamper market entry and efficient reallocation of resources in service and network sectors. Moreover, streamlined insolvency procedures could ease market exit of unproductive firms, while a more predictable regulatory framework could stimulate investment and thereby boost productivity (Figure 2.10).

Figure 2.10. There is scope to ease market entry and exit

Product market regulation indices (PMR) and insolvency index, 2018



Note: Administrative burden on start-ups includes licenses and permits. Barriers in service and network sectors capture entry barriers and conduct regulations. Simplification and evaluation of regulations covers impact assessment of competition regulations, stakeholder involvement in the formulation of regulations, and the complexity of regulatory procedures. Stringency of insolvency includes time to discharge, pre-insolvency regimes and the possibility of new financing and cram-down on dissenting creditors (data refer to 2016).

Source: OECD Product Market Regulation database; and Adalet-McGowan et al. (2017), "Insolvency regimes, zombie firms and capital reallocation", OECD Economics Department Working Papers, No. 1399.

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Ease market entry and exit in service and network industries

Low productivity firms have disproportionately large market shares in network industries, which could be a sign of weak competition (Muraközy, Bisztray and Reizer, 2019^[41]). In the telecommunications sector, high market concentration and low competition pressures dampen investment, including in newest 5G networks (see below). In the energy sector, the government has entrusted the provision of public services to state-owned quasi monopolies. Furthermore, government regulated prices of electricity, gas and heating for households are lower than market prices that apply for industrial customers, further reducing profitability and discouraging entry in the sector (OECD, 2020^[66]). The government should ensure that state-owned enterprises do not benefit from undue competitive advantages. As recommended in the previous *Survey* (OECD, 2016^[60]), the government could open, at least, parts of the energy sector to competition. Stronger competition in the energy sector could help raise market entry and improve resource allocation to most productive firms. To raise profitability and ensure cost recovery in the regulated energy sector, the sectoral regulator should receive powers to set market-based prices. At the same time, the government could explicitly compensate providers for the costs associated with public service obligations.

Business dynamism in the service sector has decreased considerably since the financial crisis, which may be related to exemptions from competition policy in the service sector (Bauer et al., 2020^[2]; Calvino, Criscuolo and Verlhac, 2020^[67]). Since 2015, about two dozen government decrees have exempted mergers from competition scrutiny in sectors such as finance and media on the grounds of national strategic interest (European Commission, 2020^[68]). In 2020, for instance, the government exempted the merger of the state-owned Budapest Bank, the previously state-owned MKB Bank and the Takarékbank from competition oversight based on national strategic grounds. In the European Union, competition authorities usually grant merger exemptions only after a full merger review. These reviews are based on clear and explicit rules laying out public interest grounds. As recommended in the previous *Survey* (OECD, 2016^[60]), Hungary should increase antitrust scrutiny by subjecting all mergers that fulfil the merger threshold to full merger reviews. The authorities should also establish limited and explicit public interest grounds for interfering in markets, so as to reduce concentration in the service sector and elsewhere.

Sectoral taxes based on turnover in energy, finance and retail reduce the profitability of enterprises and discourage their expansion. In the energy sector, a utility tax is in place and energy suppliers are subject to a higher corporate income tax rate of 31%, against a standard corporate tax rate of 9%. During the COVID-19 crisis, the government re-introduced a bank levy and a sectoral tax on retailers as a revenue-raising measure to finance government spending for households and businesses during the COVID-19 crisis. In addition to the corporate tax, banks were subject to a levy of 0.19% of their tax base that exceeds HUF 50 billion in 2020, although they can deduct the amount of the levy from their tax liabilities over the next five years. Retailers have to pay 0.1% of their annual revenues that exceed HUF 500 million, 0.4% of annual revenues if they exceed HUF 30 billion, and 2.5% in case of annual revenues above HUF 100 billion. Apart from hurting all retailers, the tax on retailers may also prevent the expansion of online retailers, which have grown in importance during the COVID-19 crisis. Sector taxes distort activity as they discourage efficiency gains by limiting investment incentives for expansion and new entry, particularly as they increase with the tax base. As recommended in the previous *Survey* (OECD, 2016^[60]), a more growth-conducive tax system requires phasing out distortionary sector taxes. A broader and less distortionary VAT system could compensate for revenue shortfalls.

Moreover, relatively high entry barriers in professional services hamper occupational mobility. Hungary has the highest number of regulated professions in the European Union (European Commission, 2020^[69]). About a third of regulated professions are in business services, tourism and entertainment sectors. The high number of regulated professions is not justified by the vocational education and training, which is less developed than in other countries with a high number of regulated professions such as Germany. The government has reduced some requirements for professional services since 2015, including in manufacturing, catering and trade. Nonetheless, scope remains to reduce further certification and licensing requirements in service sectors without compromising quality. This would help reduce entry barriers for entrepreneurs and support employment transitions for unemployed and jobseekers from other sectors, ensuring a more efficient allocation of labour from low to high productivity firms (Bambalaite, Nicoletti and von Rueden, 2020^[70]) (see Chapter 1).

Restrictions on large retail units have slowed overall productivity growth in the retail sector since 2010 (Muraközy, Bisztray and Reizer, 2019^[4]). There is a surface threshold for large retail outlets in place, which effectively bans the construction of new shopping centres above 400 square metres (so-called “Plaza Ban”). In addition, large retail outfits require additional government approval for alteration works since 2018. Permission-granting powers lie within the Ministry for Innovation and Technology and it can grant derogations at its own discretion. Clarifying the rules for derogations in the retail sector could increase regulatory certainty. In addition, increasing the ceiling on the surface area of retail outlets could support further productivity gains in the retail sector.

Lengthy and slow insolvency procedures delay market exit, which is necessary for efficient allocation of resources to the most productive firms (OECD, 2019^[71]). Barriers to exit, like barriers to entry, decrease the market disciplining mechanisms of the competitive process, which can lead to less efficient firms staying in the market. The insolvency regime is stringent compared to other countries, according to the OECD indicator on stringency of insolvency regimes (Adalet McGowan, Andrews and Millot, 2017^[72]). Proceedings take longer and are more expensive than the OECD average. Furthermore, the long discharge period from pre-bankruptcy debts (up to seven years) increases the costs for a new start for failed entrepreneurs, which may deter entry dynamics.

The government is currently preparing changes to the bankruptcy law that would entail a three-year bankruptcy discharge period for failed entrepreneurs, in line with European regulations and, as recently introduced in Germany. Shortening insolvency proceedings is a priority to accelerate market exit. In addition, preventive restructuring mechanisms such as pre-insolvency and out of court proceedings could ease the restructuring of solvent businesses (Demmou et al., 2021^[73]). To ease corporate debt-restructuring, the government reduced in 2020 the share of creditors needed for approval of a restructuring plan from a two-third majority to a simple majority, and introduced the possibility of participation in debt-

restructuring meetings via electronic means. Reforms in several OECD countries have introduced similar preventive restructuring procedures (Box 2.5). Ensuring that bankruptcies and restructuring are handled quickly and as efficient as possible can accelerate the recovery after COVID-19.

Box 2.5. Insolvency reforms to ease corporate restructuring

Several countries have introduced preventive restructuring regimes in order to ease corporate restructuring of solvent but financially distressed companies. Below are some selected examples of OECD countries.

- **Netherlands** – In 2020, the Dutch government passed a reform to the bankruptcy law that aims to ease corporate restructuring. The reform foresees a new court-ordered debt-restructuring plan. A court can impose such a plan on dissenting creditors. A majority of creditors (representing three quarter in debt value) would be required for approval.
- **United Kingdom** – Recent reforms under the Corporate Insolvency and Governance Act of 2020 introduced a court-supervised restructuring process. A novelty is that a debt-restructuring plan can be imposed by the court on dissenting creditors as long as the court deems that they would not be in a worse position than without debt restructuring. The approval of creditors representing 75% of the value of outstanding debt is required.
- **United States** – Under Chapter 11, the US bankruptcy code allows debtor companies to restructure their business debts and assets under court supervision while they remain operating. The business filing bankruptcy proposes a reorganisation plan to the court. Chapter 11 foresees the possibility of overruling dissenting creditor classes: a restructuring plan requires the approval of the majority of creditor classes that represent two thirds of the value of outstanding debt.

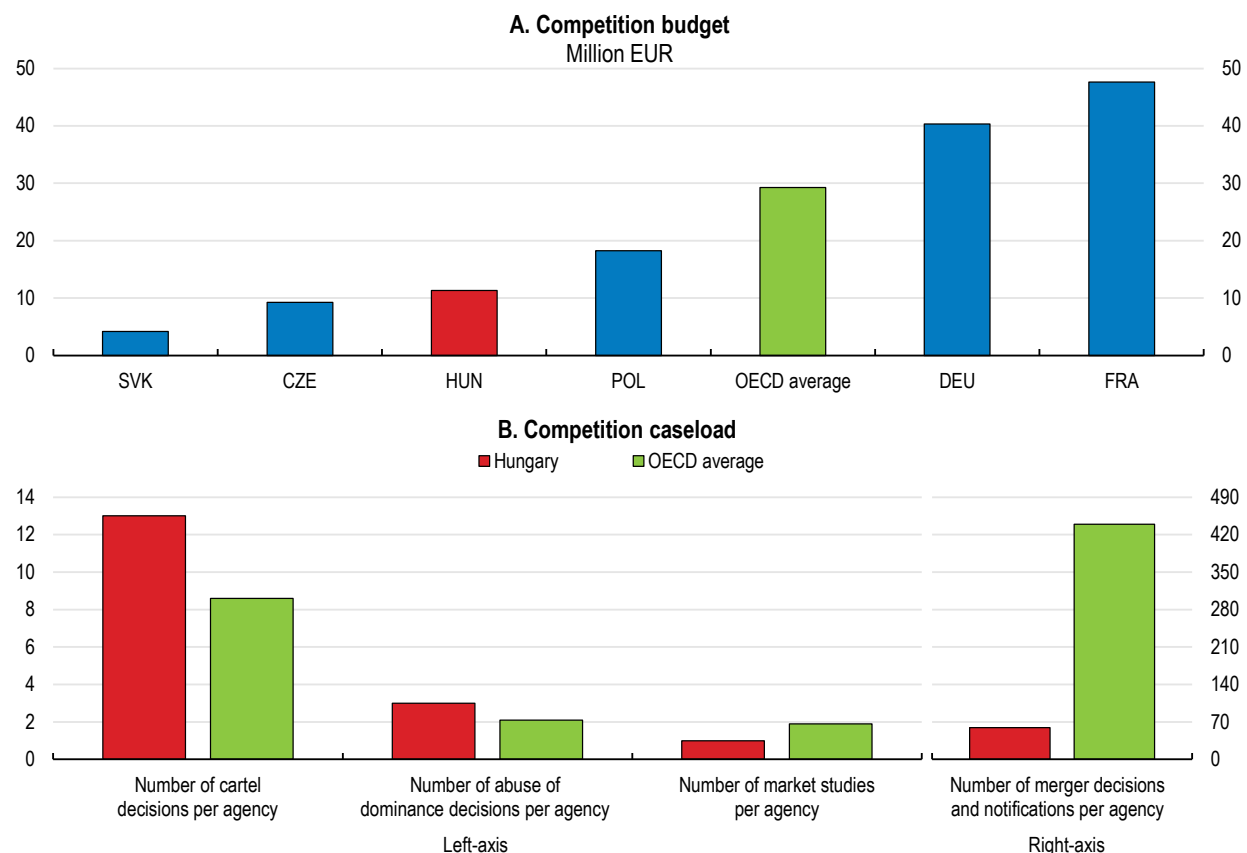
Source: Dutch Senate (2020^[74]), UK Department for Business (2020^[75]) and US Office of the Law Revision Council (2021^[76]).

Strengthen the competition framework

The competition framework is based on EU norms. The competition authority has some of the right tools, including leniency and whistle-blower programmes, to tackle competition infringements such as cartels. However, compared to top ranked competition authorities in the OECD, the competition authority is relatively underfunded, particularly considering its dual function as competition and consumer protection authority (Global Competition Review, 2021^[77]) (Figure 2.11, Panel A). Moreover, high staff turnover prevents the building up of expertise, especially at the middle management level where salaries in the private sector are more competitive (OECD, 2019^[78]; OECD, 2020^[79]). To address the salary gap with the private sector and stem the outflow of experts, salaries at the competition authority were raised by 34% in 2020, although the impact on staff turnover was limited. Competitive markets are essential for catch-up economies to promote efficiency and productivity gains to achieve income convergence. Thus, the competition authority should have its resources bolstered, including the ability to use competitive employment and remuneration schemes to retain key staff.

Figure 2.11. The competition authority's budget is low and its caseload is high

2019



Note: The OECD aggregate includes 36 OECD countries and the European Union. Data for CZE refer to 2018.

Source: OECD CompStat database; and calculations based on the OECD Annual Report on Competition Policy Developments of CZE, FRA, DEU, HUN, POL and SVK; and Hungarian Competition Authority (2021) Sectoral inquiries – market analyses database.

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The competition authority is very active, as reflected in a high caseload in international comparison (Figure 2.11, Panel B). However, only 3 out of 13 cartel decisions concerned public procurement procedures in 2019, although the share of public procurement contracts awarded to a single bidder remains high and the European Commission's Anti-Fraud Investigation Office continues to report irregularities around the use of EU funds (see below) (OECD, 2020^[79]). In addition, infringement decisions in public procurement were not taken in sectors with a high risk of collusion in 2019, such as construction and telecommunication, although there are two ongoing cartel proceedings affecting the telecommunication sector (OECD, 2020^[79]). Nevertheless, the competition authority's adoption of significant cartel decisions is welcome. To increase its effectiveness in detecting public procurement cartels, the competition authority concluded cooperation agreements with the Public Procurement Authority of Hungary and with the Prime Minister's Office.

Furthermore, there is scope to raise the number of market studies carried out by the competition authority (Hungarian Competition Authority, 2021^[80]) (Figure 2.11, Panel B). Market studies are a tool used to assess how competition in a sector is functioning, detect the source of any competition problems, and identify potential solutions. The competition authority can in general instigate infringement procedures based on findings from market studies, but has done so rarely in the last decade. Hence, the authority should have its resources to carry out market studies in key sectors strengthened, and instigate infringement procedures based on such findings.

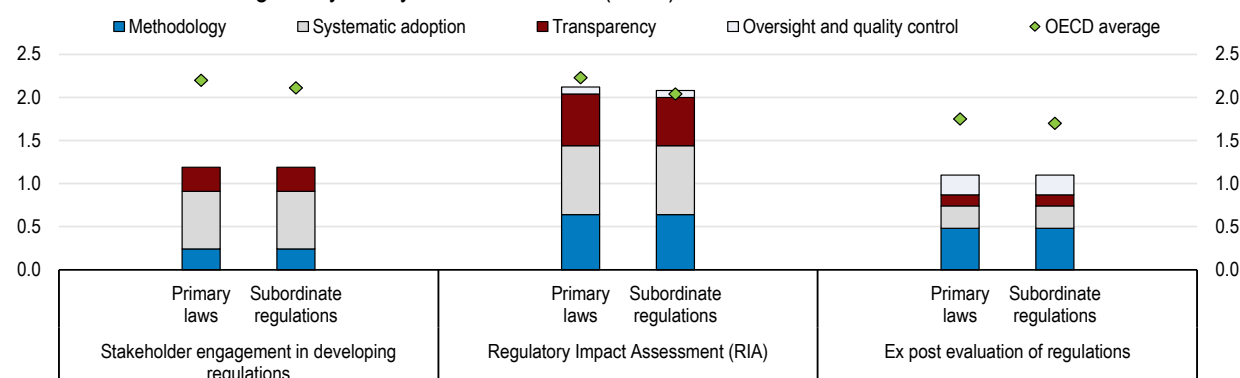
Another concern is that merger decisions are rare (Figure 2.11, Panel B). Since 2015, several government decrees have exempted major mergers from competition oversight based on national security grounds (see above). The resulting loss in oversight powers for the competition authority risks increasing market concentration at the cost of dynamic and competitive markets. To strengthen the oversight powers of the authority, the government should publish its reasoning with a mandatory opinion from the competition authority on how to minimise anti-competitive risks resulting from the merger (OECD, 2020^[81]).

The authority pro-actively reviews the press and legislative proposals to monitor market developments and comments on draft laws as part of its competition advocacy activities. The competition authority also plays an important role in forming a pro-competition regulatory framework through its obligation to comment on competition aspects of new laws and regulations proposed by the government. However, the obligation to comment on new legislation refers only to new bills proposed by the government, and excludes legislation initiated by the parliament. A way forward would be for the competition authority to systematically review all new legislation and provide comments on competition aspects, as recommended in the previous *Survey* (OECD, 2016^[60]). The OECD 2019 Recommendation on Competition Assessment calls for governments to identify existing or proposed public policies that unduly restrict competition and to revise them by adopting more pro-competitive alternatives (OECD, 2019^[82]). The Recommendation calls for governments to establish institutional mechanisms for undertaking such reviews (OECD, 2021^[83]).

Reforming regulatory oversight could improve the quality and stability of regulations (Figure 2.12). Contrary to most other OECD countries, there is no stakeholder consultation in the early phases of the design of general legislation. There is also ample room to strengthen oversight and quality of Regulatory Impact Assessments (RIAs). For example, the body responsible for regulatory oversight does not conduct quality checks on RIAs. Furthermore, RIAs that are presented to the government are not published, which reduces the transparency of the process. Publishing the annual RIA report would enhance the transparency of regulatory processes. New oversight mechanisms can ensure sufficient quality of RIAs, ex post evaluations and consultations. For instance, the establishment of a dedicated RIA agency responsible for quality and control of impact assessments could enhance RIA processes. Such an agency could be responsible for the evaluation of all draft bills and regulations, including those initiated by parliament. In the United States, for example, the regulatory review authority has an effective veto power over the regulatory process of public agencies (OECD, 2018^[84]). In addition, mandatory consultations of experts and stakeholders in the early phases of developing draft legislation could enhance quality of regulations, as recommended in the previous *Survey* (OECD, 2016^[60]).

Figure 2.12. Stakeholder consultation in formulating regulations could be improved

OECD Indicators of Regulatory Policy and Governance (iREG), score, 2018



Note: The more regulatory practices as advocated in the OECD Recommendation on Regulatory Policy and Governance a country has implemented, the higher its iREG score. The indicators on stakeholder engagement and RIA for primary laws only cover those initiated by the executive (76% of all primary laws in Hungary).

Source: Indicators of Regulatory Policy and Governance Surveys, <http://oecd/ireg>.

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Embrace e-government solutions for business and public procurement

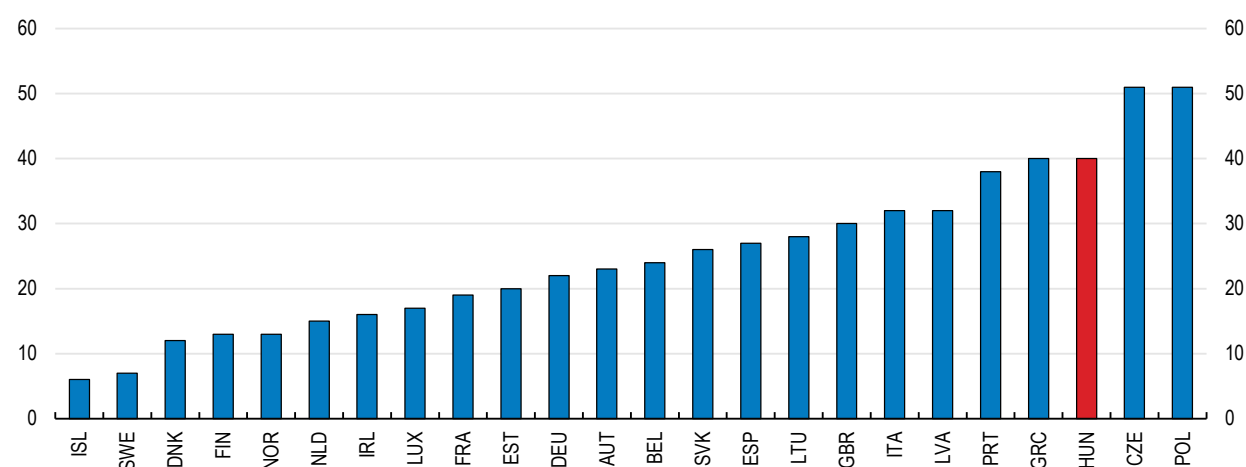
In addition to better competition policies, the government could bolster competition through indirect measures, such as embracing e-government solutions to ease market entry. Entrepreneurs currently need to contact six separate public bodies in order to register a new business, which is higher than the average in the region and higher than the 3 to 4 procedures needed in the best-performing Baltic countries (World Bank, 2020^[85]). Contrary to peer countries, it is still necessary to hire a lawyer who represents the company to start a business. In order to ease administrative procedures, the government launched a new online service portal in 2020 for businesses that serves as a “one-stop shop” to access e-government services (https://magyarorszag.hu/szuf_home). Individuals can apply online to register a company at the Registration Court using their social security number. Despite these simplifications, some services have not been integrated in the online portal, such as registration at the Chamber of Commerce and Industry. Continued efforts to cut red tape and reduce administrative barriers to entry will help raise productivity, especially since new firms are a significant source of productivity growth (Muraközy, Bisztray and Reizer, 2019^[86]). For instance, opening a business should be possible entirely online and without the need to hire a lawyer.

The public procurement system is in several aspects well positioned in international comparison: The value of national public procurement advertised to businesses is high, which reflects that the threshold for mandatory publication of public procurement procedures is lower than required by EU rules. The participation of small and medium-sized enterprises (SMEs) in public procurement is encouraged by a relatively high share of tenders that have been divided into lots, leading to a relatively high share of bids submitted by SMEs compared to the EU average (European Commission, 2020^[87]). However, competition in public procurement remains weak as the share of contracts awarded to a single bidder remains high. In addition, the share of public procurement subject to competitive tendering could be further raised (European Commission, 2020^[87]) (Figure 2.13). The fee to challenge the results of public procurement tenders amounts to 0.5% of the procurement value, which can be high in case of high value procurements and might discourage appeals of procurement decisions. Moreover, a number of irregularities around the use of EU funds have hampered the efficiency of public procurement according to the European Commission's Anti-Fraud Investigation Office (European Commission, 2019^[88]). Cases investigated have, for example, included the fraudulent use of European funds for the deployment of broadband networks in rural regions in 2019. This may have contributed to the fact that more than half of businesses perceive corruption in public procurement to be very or fairly widespread (European Commission, 2019^[89]). More recently, the government amended the constitution by introducing a new notion of public trust funds and rules on public trust funds that are subject to specific financial scrutiny (Hungarian Government, 2020^[90]; Hungarian Government, 2021^[91]).

To improve competition in public procurement, the government is currently planning reforms as part of its Recovery and Resilience Plan, including further developing the electronic public procurement system and supporting a stronger participation of SMEs in public procurement (Hungarian Government, 2021^[92]). In 2021, it also set the objective of reducing the proportion of single bidder procurements to less than 15%. The government is currently discussing the specific date for the achievement of the objective with the European Commission. Furthermore, to strengthen the efficiency of public procurement, the government was among the first in Europe to introduce a central electronic public procurement system with simplified procedures (OECD, 2019^[1]). Wider use of e-invoicing through the electronic public procurement system could increase the efficiency of public procurement by ensuring the timely and automatic processing of companies' e-invoices and payments. The reduction of the relatively high fee to challenge the result of procurement tenders could increase transparency. Overall, as much as possible, all public procurement, including those of public trust funds, should be subject to competitive tendering to secure transparency and improve cost efficiency.

Figure 2.13. Competition in public procurement is low

Share of procurements with only one bidder, %, 2019



Note: The Figure measures the proportion of contracts awarded where there was just a single bidder (excluding framework agreements, as they have different reporting patterns).

Source: European Commission Single Market Scoreboard.

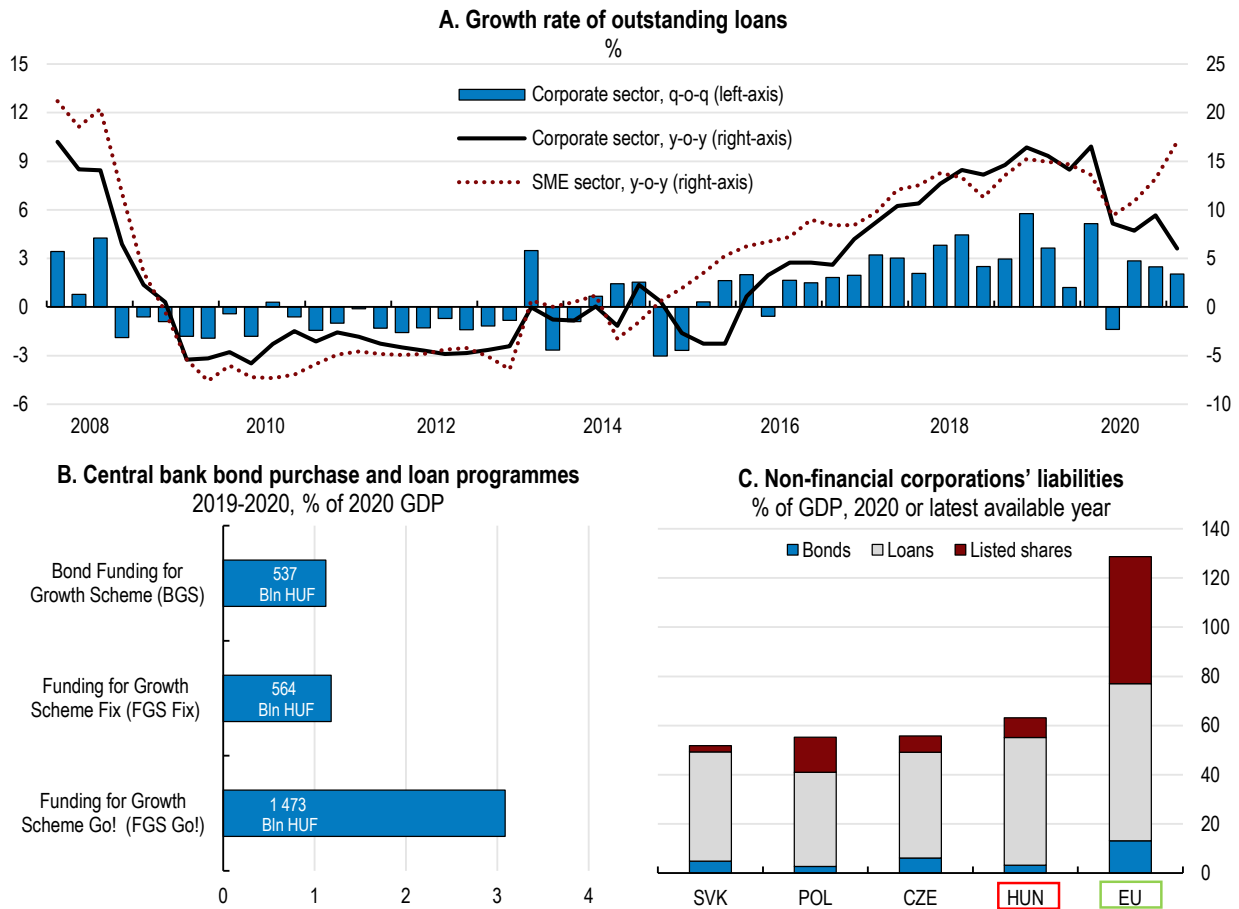
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Strengthen equity-based funding

Businesses rely on bank credit as their main financing source. Bank loans have expanded strongly since 2015 driven by strong investment demand in the corporate sector and by government funding schemes (Figure 2.14, Panel A) (see Chapter 1). The COVID-19 outbreak briefly halted the strong credit dynamics in early 2020, but corporate credit picked up again in summer 2020. In addition to the abundance of bank credit, the central bank operates corporate bond purchase and loan programmes in the order of 8½ of GDP (Panel B). The central bank launched in 2019 the Funding for Growth Scheme Fix (FGS Fix) for small firms and the Bond Funding for Growth Scheme (BGS) for large corporations. Since spring 2020, the Funding for Growth scheme Go! (FGS Go!) provides liquidity at a subsidised interest rate to credit institutions on the condition that they lend to SMEs (OECD, 2020^[93]). The funding schemes provide liquidity at low rates and at looser conditions than comparable bank loans. For instance, the Funding for Growth schemes do not require collateral or a predetermined loan purpose. The FGS Go! was successful in raising new investment by smaller firms in the half-decade after the financial crisis (Endresz, Harasztosi and Lieli, 2015^[94]).

Looking forward, generous funding without strings attached may keep unproductive firms alive and hamper efficient reallocation of capital to most productive firms (Andrews and Petroulakis, 2017^[95]). Once the recovery is firmly underway, the central bank should gradually withdraw subsidised loan programmes to help the banking sector to resume its traditional role as the main provider of credit for businesses based on individual risk assessments.

Figure 2.14. Government loan schemes remain abundant



Note: In Panel B, data refer to the Central bank (MNB) support in 2019 and 2020, more specifically: from April 2020 to 31 December 2020 for the FGS Go! programme; from the beginning of 2019 to 29 May 2020 for the FGS Fix programme; from 1 July 2019 to 31 December 2020 for the BGS programme (for bond purchases in both the primary and secondary market). In Panel C, data are consolidated.

Source: Magyar Nemzeti Bank (Hungarian Central Bank); Eurostat Financial Balance Sheets database; and OECD calculations.

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The profitability of the banking sector is low and operating costs are among the highest in the region (MNB, 2020_[96]). Profitability may decline further as a result of the government's COVID-19 measures in 2020, including the loan repayment moratorium for all households and corporate loans and a new bank levy of 0.19% of banks' 2020 tax base. In addition, state-backed lending schemes may reduce competition in the banking sector, as banks have to offer conditions similar to those of the subsidised loans. In 2020, about one third of new bank lending and two thirds of bank lending to SME were financed under the FGS schemes (MNB, 2020_[96]). The government could spur competition in the sector through the gradual withdrawal of subsidised loan programmes (see above). A more competitive banking sector is key to ensure profitability and efficient allocation of capital to foster productivity growth.

Other funding sources such as equity and bonds play a minor role (Figure 2.14, Panel C). The capital market is under-developed and the number of listed firms is relatively low. In addition, the central bank has majority ownership of the Budapest Stock Exchange, which it supervises, leading to a potential conflict of interest between its ownership and oversight functions. As recommended in the previous *Survey* (OECD, 2016_[60]), the stock exchange should return to private ownership over the medium-term to strengthen investors' confidence. At the same time, the integration of Hungarian stock markets into regional stock markets could help attract international equity investment. A closer alignment of capital market regulations with Central European countries could foster capital market integration in the region. An example of

successful harmonisation of capital market regulations is the Baltic area, which saw the creation of a legal framework for a pan-Baltic capital market for covered bonds and commercial papers (EBRD, 2020^[97]) (Box 2.6).

Box 2.6. The Pan-Baltic capital market

In 2017, the three Baltic OECD member states Estonia, Lithuania and Latvia signed a Memorandum of Understanding, in which they commit to harmonise capital market regulations in order to support the development of a common capital market. The initiative is articulated as part of a wider EU plan to create a Capital Markets Union. The three states agreed to co-operate on the following:

- Alignment of existing regulations and establishment of new joint regulations for covered bonds, commercial papers and securitisation. In 2020, the largest Estonian banking group issued the first pan-Baltic covered bonds.
- The development of new capital market instruments such as equity, derivatives and other listed vehicles as an alternative to the banking sector.
- Promoting access to equity finance for SMEs by providing listing support.
- Facilitating capital market investment by local pension funds by changing existing investment rules.
- Creation of a joint steering committee to oversee progress in the implementation of the measures.
- The three countries further agreed to harmonise their regulations regarding FinTech products and technologies to facilitate market entry of new financial players and to develop alternative financial instruments.

Cross-border flows of equity investments increased markedly by 80% after the establishment of the Pan-Baltic capital market between 2017 and 2019 (OECD, 2020^[98]). The combined pan-Baltic covered bond market for securitised mortgages is estimated at around EUR 18 billion, which makes it equal in size to that of Hungary (Scope Ratings, 2018^[99]).

Source: (Ministry of Finance of the Republic of Estonia, Ministry of Finance of the Republic of Latvia and Ministry of Finance of the Republic of Lithuania, 2017^[100])

The tax system favours debt finance over equity finance, as interest payments are deductible from the personal and corporate income tax base while there is no equivalent deduction for the return on equity. This discourages investment in equity. Given the currently low interest rates, the value of interest rate deductions is low, which somehow reduces the bias towards debt finance. However, the debt bias would rise with higher interest rates, potentially discouraging equity-financed investment and weakening the firm's financial structure. An over-reliance on debt could weaken businesses financial stability and create a drag on investment in particular during downturns or a severe crisis. In Hungary, businesses can deduct their investments from their pre-tax profits, which reduces the debt bias. In addition, the Small Business Tax (KIVA), which is calculated using profits on cash-flow basis, effectively provides a neutral taxation of debt and equity investment, but it is only available for smaller firms. Several OECD countries have recently introduced a corporate income tax allowance, a so-called Allowance for Corporate Equity with the aim to reduce the debt-bias by taxing the return on debt and equity more alike. This allowance is calculated by imputing a set return on the value of the business' corporate equity. This includes Belgium, Italy, Latvia and Portugal (OECD, 2019^[101]). Reducing the debt-bias of the tax system could spur stronger equity financing.

The OECD recommends countries that contemplate introducing allowances for equity to consider potential challenges in terms of lost revenue, tax avoidance, and the interaction of personal and corporate taxation. To prevent tax avoidance, clear anti-abuse provisions should apply, as is already the case for interest

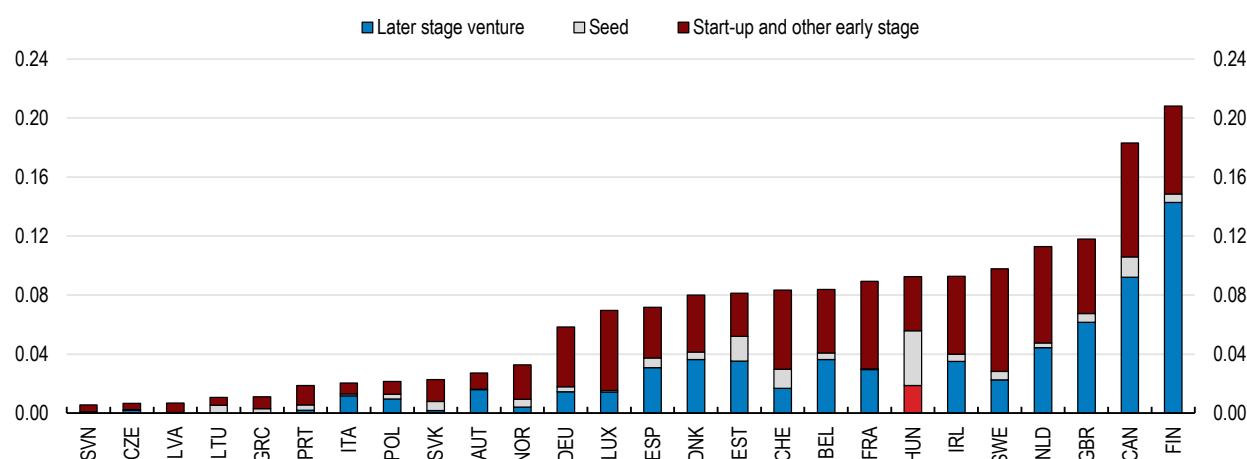
expenses. Ideally, the tax base should cover only new equity to avoid windfall profits from current investment (Reynolds and Neubig, 2016_[102]). Moreover, the interaction between corporate and personal taxation should be considered when setting the tax rates on returns to equity (dividends and capital gains) to avoid an equity bias (Harding and Marten, 2018_[103]).

Innovative start-ups have better access to venture capital than in many other countries, although venture capital funds for company expansion remain low (Figure 2.15). New FinTech solutions could help bridge the funding gap for innovative firms (UNSGSA FinTech Working Group and CCAF, 2019_[104]). However, the FinTech sector is still in an early stage of development. Market entry is low, which may reflect the generally high regulatory burden in the financial sector. At the same time, financial innovation can pose new financial stability and regulatory challenges. The central bank has established an Innovation Hub (<https://www.mnb.hu/en/innovation-hub/>) and a regulatory sandbox (<https://www.mnb.hu/en/innovation-hub/regulatory-sandbox>) to help understand FinTech companies' specific needs and emerging risks for financial stability. It can provide temporary regulatory waivers for financial institutions to facilitate the introduction of new financial products on a case-by-case basis (MNB, 2018_[105]). However, uptake has been limited. Young firms without licence for financial activities cannot apply because they fall outside the supervision of the central bank.

The central bank as the regulatory authority has no mandate to reduce unnecessary restrictions to competition, which dampens market entry. A mandate to promote competition in the financial sector, as is for example the case in the United Kingdom, could help spur market entry of new FinTech providers. This could be done by extending financial market regulations to FinTech companies. An impact assessment by the UK's Financial Conduct Authority (2019_[106]) shows that the number of start-ups in the FinTech sector has increased. At the same time, a closer alignment of FinTech regulations with those in European countries could support the regional integration of FinTech markets (MNB, 2019_[107]). Easier access to non-bank finance will be important to support the growth of young, productive companies.

Figure 2.15. Venture capital funds for company expansion remain low

Venture capital investments, % of GDP, 2020



Note: Venture capital (VC) is private equity capital provided to young enterprises not quoted on a stock market. VC stages are defined according to the OECD VC Harmonised Stages Definition and include support for pre-launch, launch and early stages under "Seed/start-up/early stage", which also includes support provided by angel investors, and support for expansion and growth stages under "Later stage".

Source: OECD Enterprise Statistics database.

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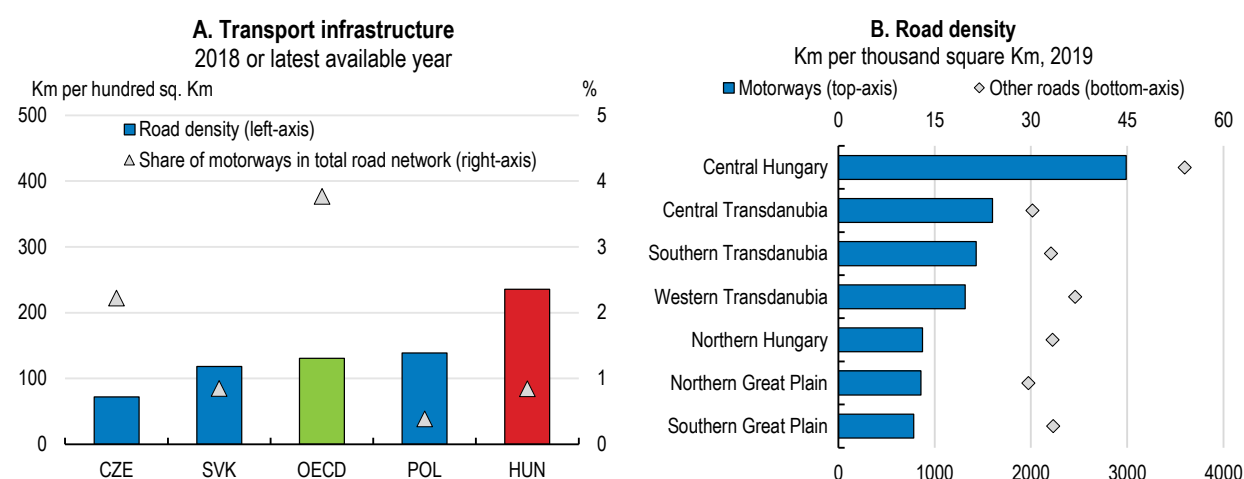
Stronger competition in the retail banking sector is often hindered by the low portability of banking data. To strengthen competition in the sector, the United Kingdom and Australia have recently introduced data sharing obligations on the larger retail banks to make the data of their customers available to their

competitors (upon request by the customer), including creditworthiness and financial needs (Open Banking Implementation Entity, 2021^[108]; Australian Competition and Consumer Commission, 2021^[109]). For example, the UK's Competition and Markets Authority mandates retail banks through its Open Bank Initiative to use open application programming interfaces in order to enable FinTech companies to access their customer information at their request. Once approved by the customer, FinTech companies can access the customer's information at different retail banks and build their services using this information. Another case is Korea, where the amended Credit Information Act from 2021 gives consumers the right to demand that their personal credit information is transferred to other financial providers upon request. To strengthen competition in the banking sector, data sharing obligations for retail banks should be considered.

Improve the quality of local infrastructure

In contrast to the modern motorway network, the secondary and tertiary road networks are poorly maintained, especially those run by municipalities (Figure 2.16). Weak local transportation links increase commuting costs and hamper job mobility of people from rural areas to nearby urban regional centres with better employment prospects. The government aims to address this challenge by investing annually 0.4% of GDP on road maintenance under its Road Rehabilitation Programme. In addition, the Village Programme has provided funding in the order of 0.2% of GDP for infrastructure upgrades since 2018 (Hungarian Public Road, 2020^[110]). Although these programmes have started to reverse the decline in road quality, road development plans maintain their focus on national motorways and high-speed roads.

Figure 2.16. There are large regional disparities in road infrastructure



Note: In Panel A, unweighted average for the OECD aggregate, including available countries.

Source: International Transport Forum (ITF) database; Eurostat Regional transport statistics database; and OECD calculations.

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Funding remains inadequate. Given current spending levels, it would take another 10 years to renew 17 000 km of local roads in bad condition out of approximately 30 000 km of local roads. This is despite evidence that shows that investment in secondary and tertiary roads have led to a considerable reduction in transportation costs, with highest impacts in the most disadvantaged regions (Persyn, Díaz-Lanchas and Barbero, 2020^[111]). Increasing funding for maintenance of secondary and tertiary roads would improve the quality of local roads. Co-financing by counties could incentivise the selection projects with highest returns (see below). At the same time, sound economic cost-benefit analyses can help determine investment priorities and prevent overspending, especially on motorways. Such cost-benefit analysis should also look at environmental impacts of infrastructure investments.

A more efficient and effective public transport system would also increase regional labour mobility. Despite ongoing investment in the railways, Hungary ranks among the lowest in the EU in terms of customer satisfaction (European Commission, 2018^[112]). In the capital region, high inflows of young, skilled people have led to an uncoordinated suburban sprawl (OECD, 2020^[113]; Angel et al., 2016^[114]). This has not been met by sufficient investment in the suburban train network to better connect Budapest to new centres of agglomeration in Pest. In remote areas, better connections between villages and regional urban centres could lower commuting costs and improve access to urban labour markets.

Despite the need to upgrade local infrastructure, spending focuses on national and international railway lines. The government has committed to invest 1.4% of GDP per year into new national and international railways and in the modernisation of 1 000 km of existing rail tracks up to 2024, mostly funded by European funds to improve linkages with neighbouring countries (Portfolio, 2020^[115]). In contrast, the government plans to allocate only 0.2% of GDP per year for the development of regional transport networks and the suburban rail network in Budapest, financed by the European Recovery and Resilience Facility. Instead, the government should re-allocate railroad investment towards suburban train networks and improved local bus connections to improve the efficiency of local public transport and reduce commuting time.

A highly centralised public governance system leaves little room for local investment considerations (OECD, 2019^[1]). Investment in new roads and railroads is financed mainly by the central government and EU funds according to national or EU priorities. Similarly, road maintenance is centralised, including for secondary roads and tertiary roads. For instance, the government plans to spend about 0.6% of GDP in EU funds in urban infrastructure for the period 2021-2027, including roads and public transportation, while spending on Budapest will account for only a tenth of this budget in spite of strong population growth in the capital and its surroundings. Moreover, the central government will distribute 80% of the funds according to its own discretion, leaving little room for local considerations (Portfolio, 2020^[116]). As a result, planning is not based on specific local conditions or improving regional connections.

To increase the role of local considerations in infrastructure investments, the central government could devolve responsibility for local roads and train connections to the county level. County-level planning could also prevent coordination failures among municipalities. Local strategic planning will also require better planning and cost-benefit capacity at the county level. Co-financing measures could incentivise counties to select projects with highest returns, as discussed in more detail in the last *Survey* (OECD, 2019^[1]). In urban regions, a stronger consideration of local infrastructure needs could help promote agglomeration effects between cities and their surrounding area through better transport links. In rural areas, it could allow a better integration of roads into local and national networks (Ahrend et al., 2017^[117]).

More spending responsibilities for local governments need to go hand-in-hand with more revenue raising responsibilities. However, local governments' role in implementing public investment is decreasing. In 2021, the government cut revenue sources for local governments by halving the local business tax for small and medium-sized enterprises (Portfolio, 2020^[118]). In addition, 50% of the revenues from the municipal motor vehicle tax were channelled into the central budget (Portfolio, 2020^[119]). Only municipalities with less than 25 thousand inhabitants were automatically compensated by grants from the central budget, while compensations for bigger municipalities depended on a case-by-case review. The revenue loss for bigger municipalities risks further downsizing public investment by local government, which has already been on a downward trajectory since 2007. Stronger investment in local amenities such as roads, suburban trains and housing requires adequate funding for local governments. Municipalities should receive more powers to raise local tax. This should be combined with block grants for poorer municipalities. Alternatively, grants from the central government should compensate municipalities for their revenue losses due to cuts to the local business tax.

Promote digital adoption

Digitalisation is key to support innovation. Hungary's innovation performance is modest, although it has been increasing recently according to the European Innovation Scoreboard (European Commission,

2021_[120]). The improvement is partly due to the rise in research and development (R&D) spending, which increased by 0.5 percentage point to 1.5% of GDP between 2009 and 2019. Nonetheless, R&D spending as a share of GDP remains lower than the OECD average and below the country's own target of 1.8% for 2020 (OECD, 2020_[121]). Despite generous subsidies and tax incentives for R&D, only few enterprises innovate or adapt digital technologies, which reflects that many small and medium-sized enterprises lack innovation capacity and are constrained by shortages of highly-skilled workers (Eurostat, 2021_[122]). The government has several strategies that address these issues, including the Industry 4.0 Strategy for a digital industry, the Digital Education Strategy for stronger digital skills, and the National Research, Development and Innovation Strategy, which is the country's main innovation strategy. However, the government's innovation strategy follows a top-down approach, which is not effective in identifying local opportunities for innovation, as discussed below. A more effective innovation policy also needs to ensure pro-competitive regulations to allow innovative and digitally advanced companies to gain a market foothold and expand (see below).

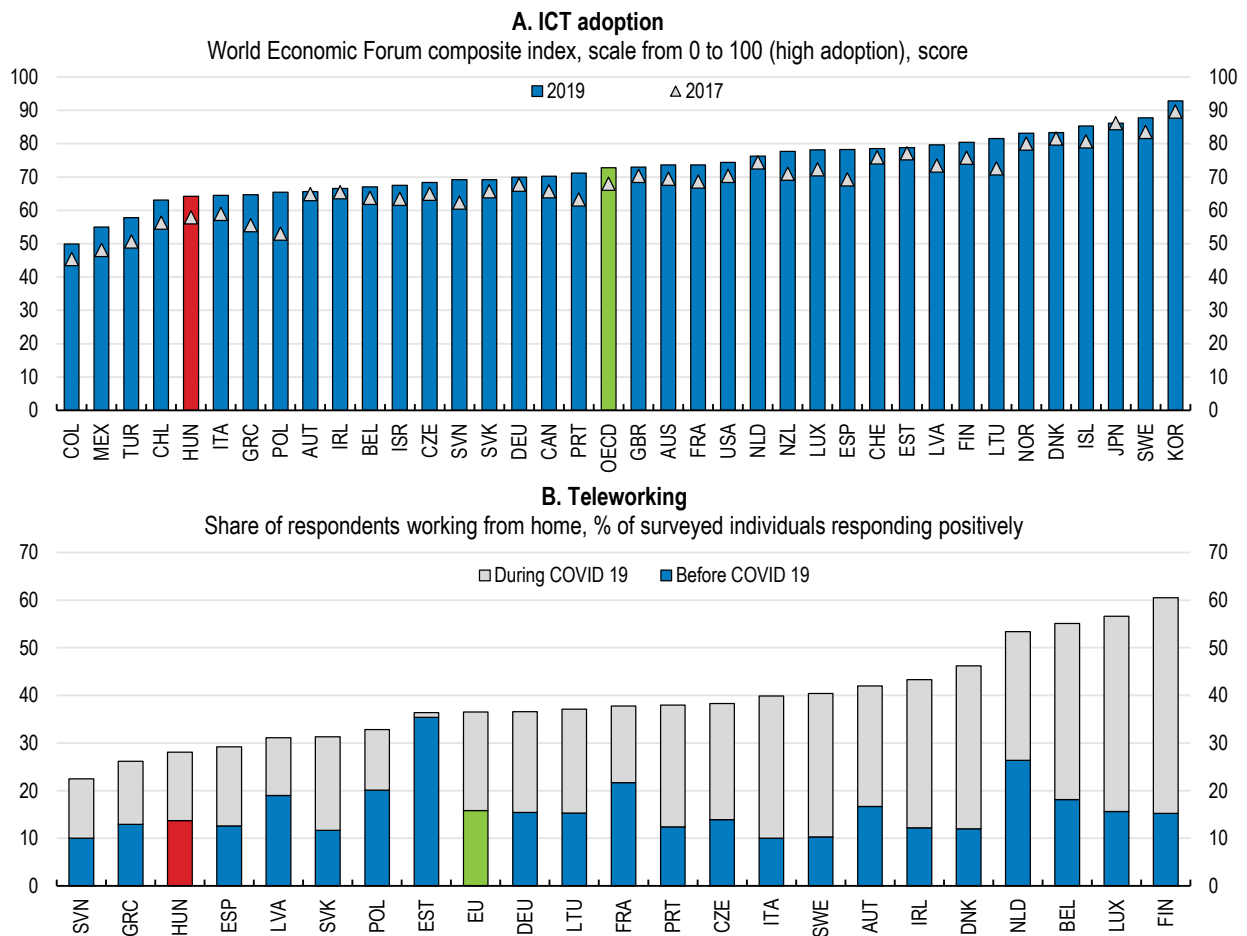
Hungary is among the least digitalised economies in the OECD (Figure 2.17, Panel A). Despite a sharp increase in the number of households with Internet access over the last decade, Hungarian households still have lower Internet usage than the OECD average. Similarly, fewer households use the Internet to visit or interact with public authorities' webpages than the OECD average, although this share has increased by 7 percentage points during the COVID-19 crisis in 2020 (OECD, 2021_[123]). In order to strengthen the use of Internet in the economy, the government has increased efforts to digitalise public administration. Since 2018, there is an online tax register and businesses must file their tax declarations online. Online invoices have successfully increased tax revenues by 0.5% of GDP through lower tax avoidance (Ministry of Finance, 2019_[124]). The government is currently setting up a similar online invoice system for VAT returns. To support these services, the government established an online service portal for businesses (see above). Citizens also have the option to file their personal tax declaration online using pre-filled online tax forms based on employers' monthly assessments, although online filing is not mandatory.

The government could stimulate digitalisation by increasing its use of the Internet further. For instance, mandatory online filing of personal income tax, as in Denmark and Portugal, could enhance the digital uptake among households. Making all government services available on mobile phones would help. An additional step would be to move all communication between citizens and public authorities online, as, for example, done in Denmark. To safeguard equal access to government services for everyone, including people without internet access, public authorities could provide free access to e-government services and user support at their local branches.

The COVID-19 crisis has accelerated the pace of digitalisation by speeding up remote work, albeit to a lesser extent than in most other OECD countries. Teleworking, which has the potential to raise productivity and worker well-being under the right conditions, was relatively uncommon among workers before and even during the COVID-19 crisis, which is likely to be related to the economy's reliance on manufacturing activities that are difficult to do remotely, but also due to the lack of digital preparedness among businesses and workers as discussed above (OECD, forthcoming_[125]) (Figure 2.17, Panel B).

Looking ahead, teleworking is expected to remain above pre-crisis levels, with uncertain effects on productivity. Telework can raise productivity through cost savings on office spaces as well as more flexible working arrangements and thus higher worker satisfaction. Less commuting could also be beneficial to the environment. However, disadvantages could easily dominate, including inconvenient home office space, solitude as well as reduced innovation due to the lack of spontaneous, in person interactions (OECD, 2020_[126]). Governments can address potential concerns for workers' productivity by implementing best practices for teleworking, for example regarding working hours and screen-free breaks, allowing some degree of voluntary telework so that employees can benefit from more flexible working arrangements, while at the same time enabling firms to coordinate the office schedules of their employees so that personal interactions can still occur (see Chapter 1).

Figure 2.17. Hungary is less digitalised than most other OECD countries



Note: In Panel A, the WEF composite index includes: number of mobile-cellular telephone subscriptions per 100 population; number of active mobile-broadband subscriptions per 100 population; number of fixed-broadband internet subscriptions per 100 population; fibre-to-the-home/building internet subscriptions per 100 population; percentage of individuals who used the internet from any location and for any purpose, irrespective of the device and network used, in the last three months. Unweighted average for the OECD aggregate. In Panel B, respondents were asked to answer a question: "Have you started to work from home as a result of the COVID-19 situation?".

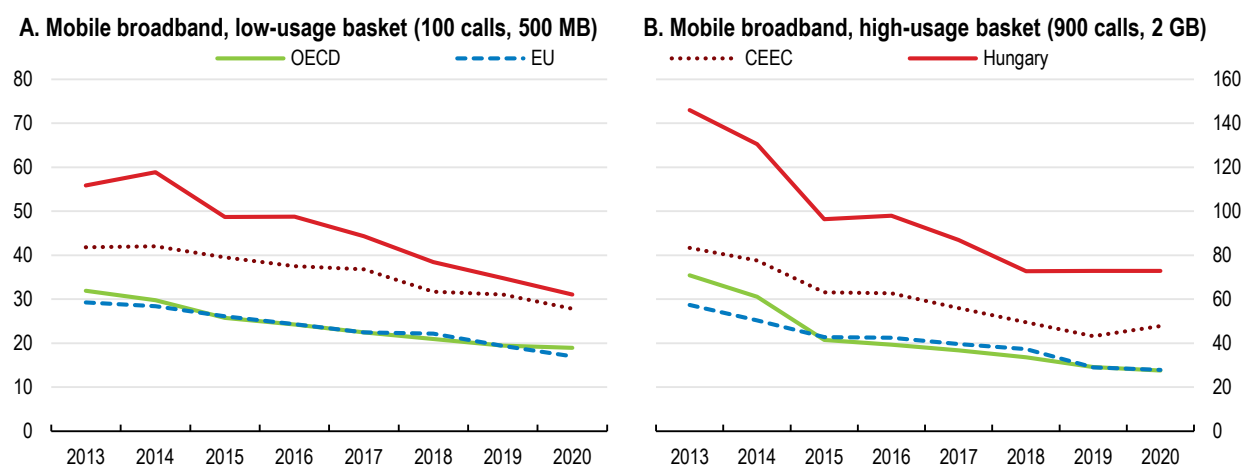
Source: World Economic Forum (2019), Global Competitiveness Report Pillar 3 ICT Adoption; and Eurofound (2020), Living, working and COVID-19 dataset.

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High prices may deter mobile broadband penetration. In fact, mobile broadband subscriptions per 100 inhabitants remain below the OECD average (OECD, 2021_[127]). Indicative evidence suggests that prices for mobile internet are high in international comparison, although mobile broadband prices are not fully comparable across countries (Figure 2.18). For instance, a mobile broadband basket with unlimited calls and 4GB data volume offered by one operator costs currently HUF 3 390 (USD PPP 23) in Hungary (including group discount). Comparable user baskets from the same operator are between 8% and 40% less expensive in neighbouring countries, such as the Czech Republic and the Slovak Republic. In competitive markets such as the Netherlands, prices for comparable baskets are 6% lower. In addition, the government raises a levy of HUF 2 per minute on phone calls and per message, which does not apply directly to mobile broadband services, but nonetheless raises costs of using mobile phone services for consumers. In addition, lengthy procedures discourage non-discriminatory third-party access for Mobile Virtual Network Operator (MVNOs) to networks. Phasing out sector taxes could lower costs. Furthermore, reducing procedures for non-discriminatory access for MVNOs to networks of existing operators could further enhance competition.

Figure 2.18. Mobile broadband prices remain relatively high

USD PPP



Note: The CEEC (Central and Eastern Europe Countries) aggregate includes Czech Republic, Hungary, Poland, and Slovak Republic; EU only includes OECD EU countries. 2019 data for Hungary is only indicative: it is an average of 2018 and 2020 data and not fully comparable with the observations for other countries due to a different methodology to calculate mobile basket prices.

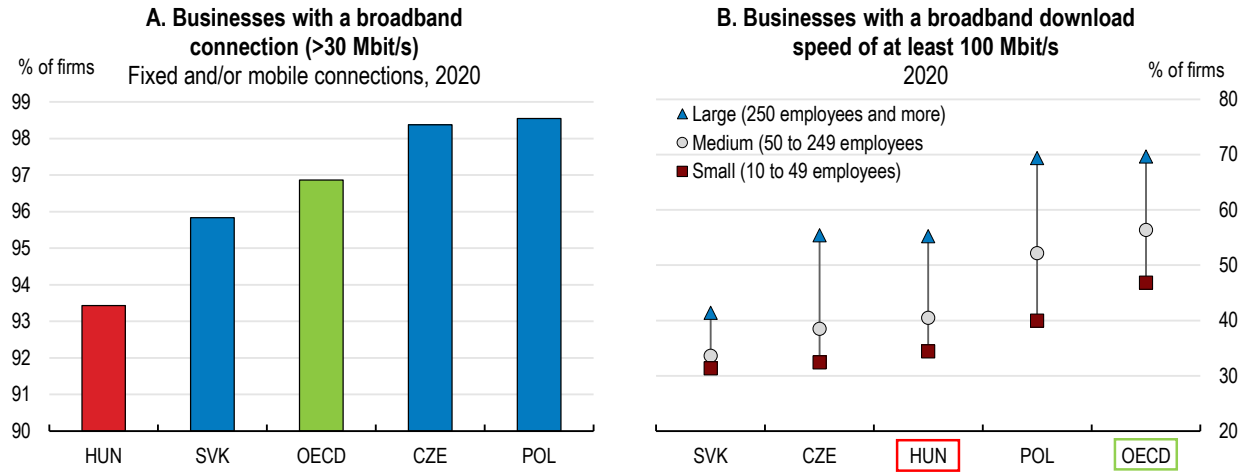
Source: OECD Broadband Statistics database; and OECD calculations.

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Widely accessible high-speed broadband is a precondition for firms to adapt new digital technologies and reach regional and national markets. Although the COVID-19 crisis has accelerated broadband uptake, relatively few businesses have access to high-speed broadband networks (Figure 2.19, Panel A), especially small- and medium-sized enterprises (Panel B). A concern is that low competition pressures in the 5G market may dampen investment in the deployment of the latest generation 5G networks. 5G is the fifth generation of wireless networks that can potentially boost the use and development of new applications and services at higher download- and upload speeds, including greater use of cloud solutions and Internet of Things applications (OECD, 2019_[128]). The government auctioned in March 2020 new spectrum for the new 5G mobile networks to the three incumbent operators. A fourth new operator was excluded from the auction for failing to meet eligibility criteria, reducing bid competition in the auction. This has resulted in relatively low proceeds from the auction of 0.27% of GDP, while proceeds from the more competitive US auction were considerably higher with 0.39% of GDP (European 5G Observatory, 2021_[129]). Stronger competition in the 5G market is needed for a faster deployment of the latest generation 5G networks, and would also help achieve the government's objective to provide 95% of all households with broadband connections of at least 1Gbit/s by 2030. Strengthening competition in the telecommunication sector requires awarding additional spectrum to a fourth mobile network operator.

Firms often lack the digital maturity to enter national and international value chains. This is reflected in low adoption rates of digital technologies in spite of strong direct government funding and tax support for business innovation and R&D (Figure 2.20) (OECD, 2021_[130]). To some extent, the lower digital uptake among enterprises may reflect barriers to competition. More competitive product market regulations and a less stringent insolvency regime could help raise digital adoption and productivity growth (Sorbe et al., 2019_[131]) (Figure 2.21). Pro-competitive regulations boosting business dynamics can allow digitally advanced companies to gain a market foothold and can allow the most productive companies to grow.

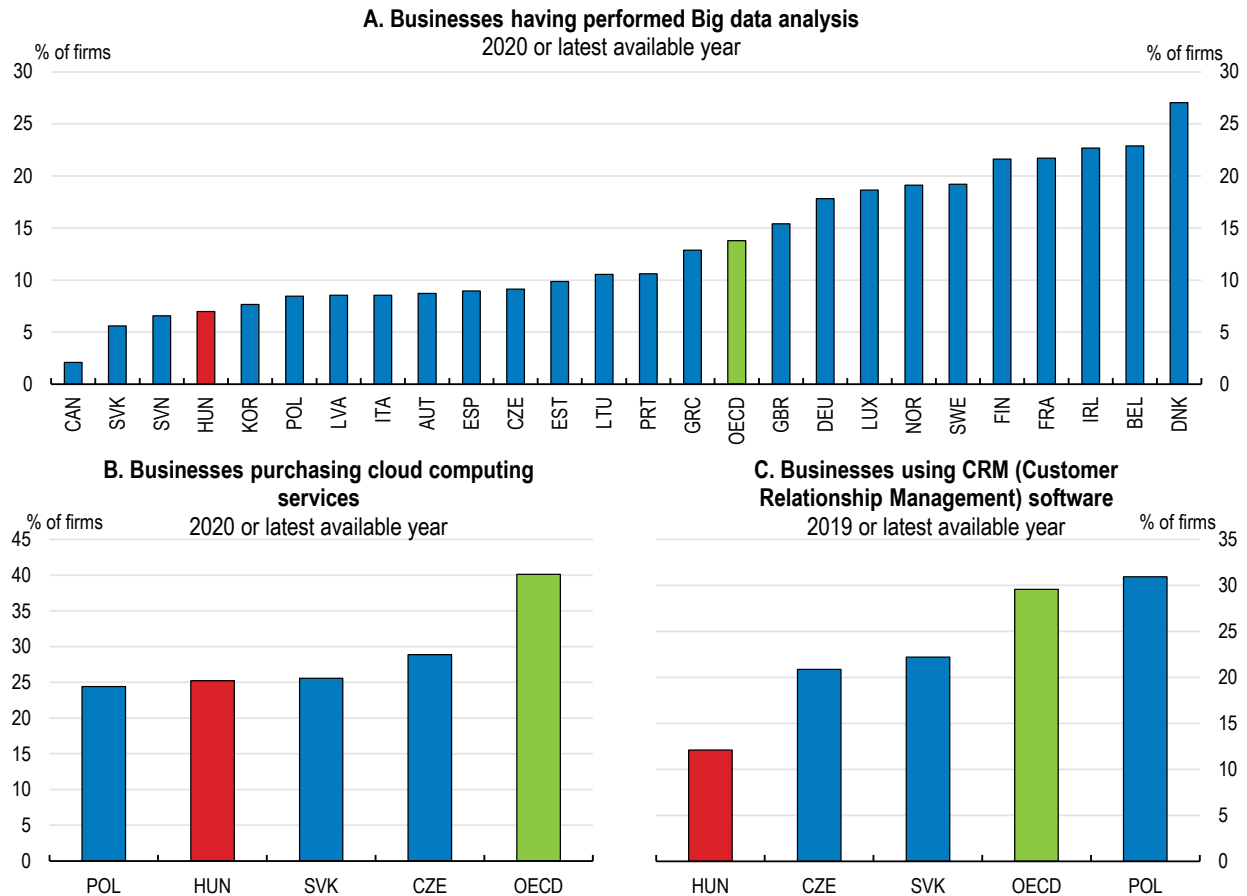
Figure 2.19. High-speed broadband uptake among businesses is relatively low



Note: In Panel A, data refers to firms with at least 10 employees.
Source: OECD ICT Access and Usage by Business database; and OECD Broadband Portal, Figure 1.10, <http://www.oecd.org/sti/broadband/broadband-statistics/>.

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Figure 2.20. Adoption of digital technologies lags behind

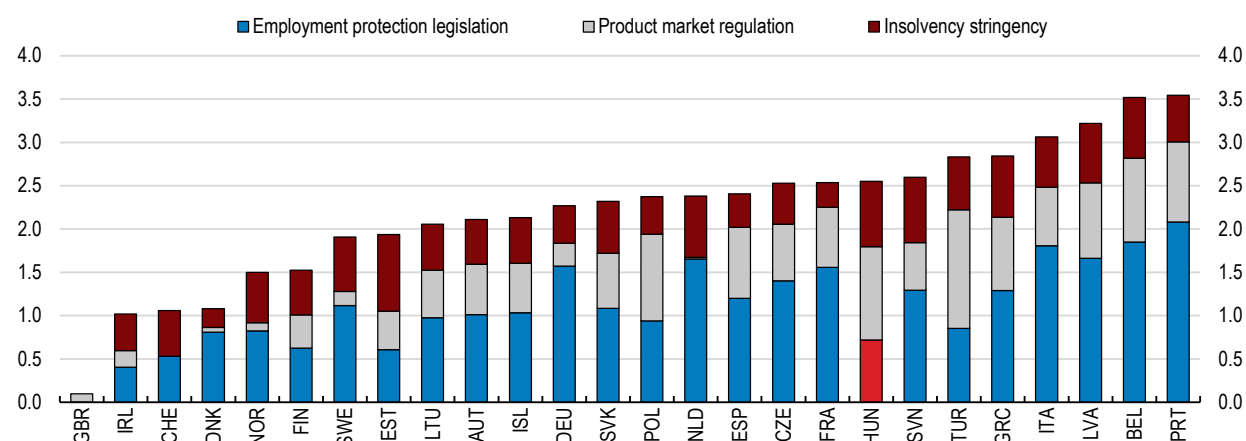


Note: Data refers to firms with at least 10 employees. Unweighted average for the OECD aggregate.
Source: OECD ICT Use by Business database.

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Figure 2.21. Streamlining regulations could boost digital technology adoption and productivity

Effect on productivity (MFP) after three years (through digital adoption) of reducing regulatory barriers to reallocation, %



Note: Estimated effect on multi-factor productivity (MFP) of the average firm from closing one-fourth of the gap to countries with least stringent labour protection on regular contracts, administrative barriers to start-ups and insolvency regimes.

Source: Sorbe et al. (2019), "Digital Dividend: Policies to harness the potential of digital technologies", OECD Economic Policy Papers, No. 26.

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A limited awareness and understanding of digital technologies is likely another major barrier to digital take-up among enterprises. This is illustrated by the low adoption rate of cloud computing, a technology that facilitates access to a range of computing services at low cost (Figure 2.20, Panel B). Similarly, a relatively large share of companies has no broadband connection (see above). The COVID-19 crisis has strengthened the uptake of cloud computing and broadband among enterprises by 7 percentage point. However, only few firms have a website or use social media in spite of the low adoption costs and the opportunities offered by these technologies to engage in e-commerce during the crisis (OECD, 2021_[132]). Although the government's Modern Enterprises Programme supports the adoption of state-of-the-art digital technologies, the support is not well-targeted to local enterprises that often lag behind in basic technologies. In addition, the government's top-down approach is not effective in identifying local opportunities for digitally lagging sectors. For instance, social media and online platforms offer new possibilities enter global supply chains at low cost, especially for tourism and retail sectors.

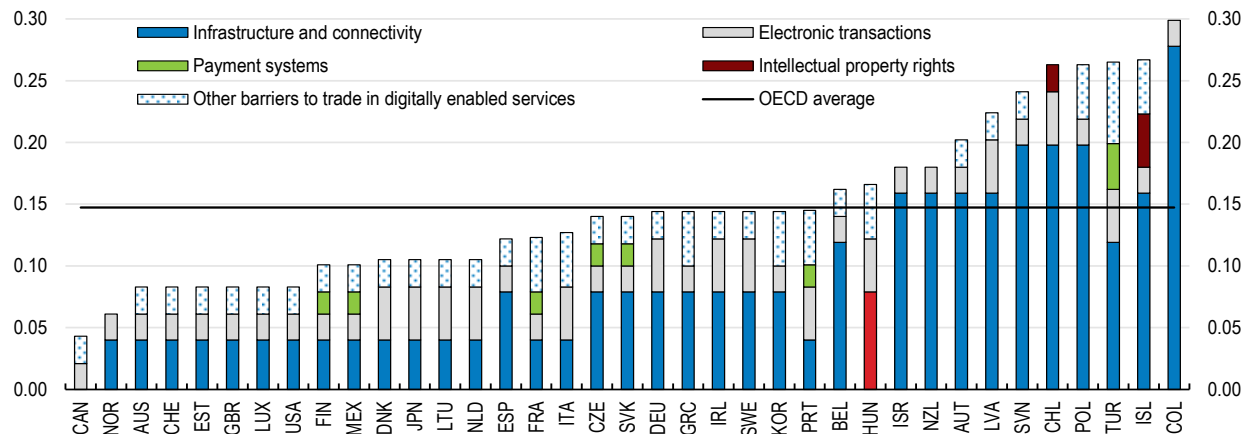
A more bottom-up approach that moves policy support to the lowest possible level would help identify local needs of enterprises. In the Netherlands, for instance, Smart Industry Field Labs are public-private associations consisting of enterprises, industry associations and research institutions that provide business advisory services and testing facilities to SMEs (Dutch Ministry of Economic Affairs and Climate Policy, 2019_[133]). In order to integrate digitalisation better into local development, Field Labs provide research and advisory services related to sectors where their region has a comparative advantage. A better integration of the Modern Enterprises Programme into local development plans could help better target local needs of SMEs and support their digitalisation. At the same time, local development strategies will also require better planning capacity at the county level (see above).

Barriers to trade in digital services are higher than in most other OECD countries (Figure 2.22). Cumbersome practices around cross-border service provision deter foreign companies from market entry. For instance, a local presence is required in order to provide online cross-border services by a provider not domiciled in Hungary, such as online delivery, movie streaming, or financial services. The government has set up an online service portal for businesses to reduce administrative burdens (see above). However, online tax registration and declaration is not available for non-resident foreign companies in contrast to most other countries in the region (Ferencz, 2019_[134]). These barriers discourage the development of a

digital service sector. For instance, a stronger presence of e-commerce and online platforms could help domestic firms to become exporters and to gain export market shares. The government has requested an EU funded project to identify other potential barriers to the digitalisation of professional services (European Commission, forthcoming^[135]). Stronger competition may help domestic firms to internationalise by facilitating international sales, especially on the internet. Expanding e-government registration and tax services to non-resident foreign companies can boost market entry and competition in digital services.

Figure 2.22. Restrictions to trade in digital services are relatively high

Digital Services Trade Restrictiveness Index, scale from 0 to 1 (most restrictive), 2020



Note: The OECD Digital STRI captures cross-cutting impediments that affect all types of services traded digitally. As a stand-alone instrument, it complements the OECD Services Trade Restrictiveness Index (STRI).

Source: OECD Services Trade Restrictiveness Index Regulatory database.

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People's and firm's willingness to use online services depends on their trust in the security of digital infrastructure. Safer infrastructure requires better defences against security breaches. The accelerated use of the Internet and the reliance on digital technologies during the COVID-19 pandemics highlighted the importance of a secure digital infrastructure (OECD, 2020^[136]). In early 2021, several government webpages including the website to register for a coronavirus vaccine faced a coordinated cyber-attack, leading to temporary outages (Bloomberg, 2021^[137]). This has contributed to the fact that trust in digital security is low when dealing with the government (OECD, 2021^[123]). At the same time, the share of businesses experiencing IT incidents is high and above the OECD average (OECD, 2021^[132]). These concerns notwithstanding, only one in ten enterprises has an updated IT security policy in place, which is well below the EU average (Eurostat, 2021^[138]).

In response, the government has stepped up its security efforts. Enterprises can report security breaches with the National Cyber Security Centre (NCSC), which has the mandate to provide assistance in case of cybersecurity incidents at private companies. As part of its Modern Enterprise Programme, the Ministry of Technology organises workshops to raise awareness about digital security among SMEs. Companies can also apply for financial support under the Modern Enterprise Programme to cover their digital security expenses. Nonetheless, further actions are required to raise digital security. For instance, the government can support digital security by facilitating platforms for IT security markets, as happened in Israel. The Israeli government launched a dedicated online platform for certified IT security providers and businesses affected by IT security breaches. In order to strengthen market entry in the sector, the Israeli National Cyber Directorate fast-tracked the licensing process of IT security providers (OECD, 2020^[139]).

MAIN FINDINGS	RECOMMENDATIONS (Key recommendations are bolded)
Support skills and mobility	
Skills of vocational graduates do not meet labour market needs. Few vocational students have apprenticeships.	Link funding for vocational schools to the number of students in work placements. Allow apprenticeships to start only once a placement with a company for the work-based part of the programme is secured.
Vocational graduates have weak basic and generic skills such as in ICT, literacy, numeracy and problem-solving.	Dedicate more time to ICT, literacy, numeracy and problem-solving in vocational schools.
Labour mobility is low, especially in poorer regions.	Extend transportation allowances to all job seekers independently of the travel distance.
Rental housing is underdeveloped.	Regulate tenancy to better balance the interest of tenants and landlords. Consider increasing the reliance on immobile property taxes and gradually reduce mortgage subsidies, while addressing adverse distributional impacts.
The short (3 months) duration of unemployment benefits discourages geographical mobility.	Consider increasing the duration of unemployment benefits.
Active labour market policies provide insufficient support for mobility and upskilling.	Continue downsizing the Public Works Scheme and concentrate its use in high unemployment areas as a poverty reduction measure. Reallocate active labour market spending towards training and public employment services that improve the employability of jobseekers.
The high minimum wage relative to the median wage reduces employment opportunities for low-skilled people.	Ensure that minimum wage growth does not outpace median wage growth.
Ensure dynamic and competitive product markets	
The energy sector is dominated by state-owned enterprises.	Ensure cost recovery in regulated energy and open energy markets to competition. Compensate providers for the costs associated with public service obligations.
Sectoral taxes discourage expansions and new entry.	Phase out distortionary sector taxes in energy, finance and retail sectors.
Exemptions from competition policy reduce the effectiveness of the competition framework.	Subject all mergers that fulfil the merger threshold to full reviews. Establish limited and explicit public interest grounds for exemptions.
The pro-competition regulatory framework is underused.	Increase the resources of the competition authority.
Public procurement lacks competition.	Increase the use of e-invoicing through the electronic procurement system. Further enhance transparency and continue to increase the share of public procurement subject to competitive tendering.
Slow insolvency proceedings hold back business dynamics.	Shorten the discharge period for entrepreneurs and judicial proceedings.
Strengthen equity-based funding	
Generous subsidised loan programmes reduce efficient allocation of capital to most productive firms.	Gradually exit from the Going for Growth funding schemes once the recovery is firmly underway.
Capital markets remain underdeveloped.	Reduce the preferential treatment of debt finance vis-à-vis equity. Extend the central bank's powers to give waivers to non-licensed Fintech companies within the Regulatory Sandbox environment. Establish data sharing obligations on retail banks to make the data of their customers available to their competitors at the customers' request.
Improve local infrastructure	
Local train networks are underdeveloped and local roads are poorly maintained.	Increase investment in local train networks. Increase funding for maintenance of secondary and tertiary roads. Introduce cost-benefit analysis and co-funding for infrastructure projects.
Promote digital adoption	
Few households use the internet to interact with public authorities.	Continue to increase online availability of all government services.
Prices for mobile internet are high.	Phase out levies on phone calls and messages. Strengthen network competition through auctioning of additional spectrum to expand the number of mobile network operators. Facilitate non-discriminatory network access for Mobile Virtual Network Operators.
Practices around cross-border service provision deter foreign companies from market entry.	Extend e-government registration and tax services to non-resident foreign companies.

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The COVID-19 pandemic interrupted the strong economic growth performance in 2016-19, which entailed large increases in employment and real incomes, and the lowest unemployment rate in thirty years. The swift vaccination rollout allows a faster recovery from the pandemic from mid-2021 onwards. However, the strength of the recovery is uncertain, reflecting the potential scarring of the economy arising from the prolonged crisis. Looking further ahead, population ageing will lead to a smaller and older workforce, reinforcing the need for improving the productivity performance of the economy to restore the impressive employment and income gains achieved before the pandemic. In the near-term, underutilised labour resources, such as low-skilled workers, need to be mobilised through higher labour mobility and skills upgrading. Thereafter, maintaining productivity growth requires improved vocational and tertiary education, more competitive markets, and faster adoption of new technologies, particularly to accelerate the digital transformation of the economy. These policies should be implemented alongside measures to promote green growth and prepare public finances for the long-term fiscal challenges associated with population ageing.

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