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Adapting to changing skill needs in Southeast Asia

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1 Adapting to changing skill needs in Southeast Asia

Megatrends and COVID-19 are changing skill needs

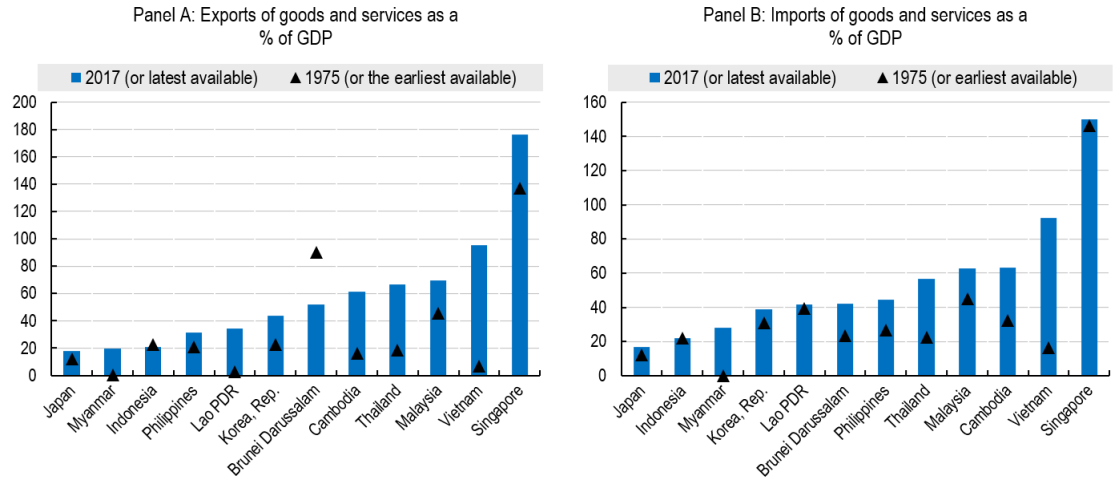
In light of the rapid pace of change in today's world, a high degree of adaptability is becoming more important for people to overcome increasingly diverse challenges and seize emerging opportunities. Megatrends in the form of globalisation, technological progress, demographic change, migration, climate change as well as unforeseen shocks, such as the COVID-19 pandemic, substantially influence the skills that people need to navigate a complex world. People who are equipped with a broad set of skills that are relevant to the needs of work and life can turn these challenges into opportunities and help shape the world for the better (OECD, 2019[1]).

Globalisation

Globalisation has led to the emergence of global value chains (GVC) that allow different parts of the production process to be performed in different geographical locations, with important skills implications. Many Southeast Asian countries are now major players in the world market, both as exporters and importers (Figure 1), and have thus attracted significant investments, in particular in services, trade, communication and manufacturing sectors. Most of the investment comes from Japan, the EU, the US, China and Korea. (OECD-UNIDO, 2019[2]). Participation in GVCs can lead to productivity gains, but potential gains are dependent on Southeast Asian countries' levels of skills in the population.

Figure 1. International trade continues to rise

Trade in goods and services, as a percentage of GDP



Note: For Myanmar, 1995 refers to 2000, which is the earliest year available.
Source: World Bank, *World Development Indicators Database*.

Regardless of their technological sophistication, firms are in need of workers with a broad range of skills. These include professional and technical skills, foundation skills (e.g. literacy, numeracy and digital literacy), transversal cognitive and meta-cognitive skills (e.g. complex problem solving, critical and creative thinking), and social and emotional skills (e.g. conscientiousness, responsibility, empathy, self-efficacy and collaboration) (OECD, 2017[3]).

When individuals have skills that are well aligned with the needs of the labour market, the firms employing them can increase their productivity, be more competitive and have enhanced capacity for specialisation. Access to such skills also allows firms to benefit more from partnerships with multinational enterprises and absorb foreign knowledge and technologies. Southeast Asian countries' skills-related policies can shape the extent of and participation in GVCs, their specialisation in GVCs, their attractiveness for investment, and their opportunities to specialise in advanced industries, such as complex business services and high-tech manufacturing industries (OECD-UNIDO, 2019[2]).

Technological progress

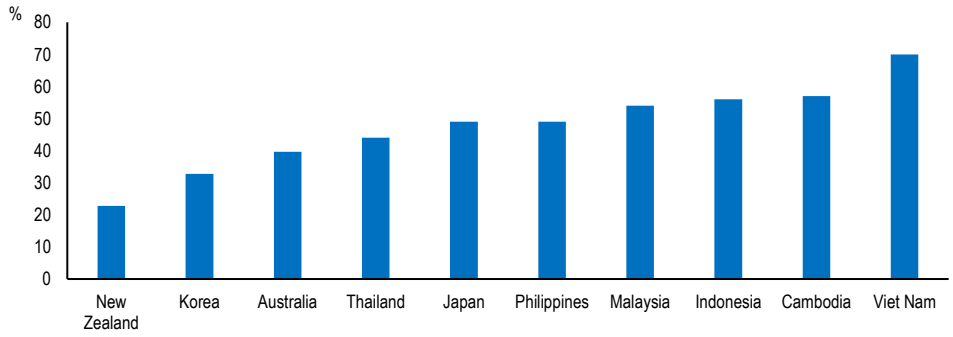
Technological progress is posing new challenges and offering new opportunities (OECD, 2019[17])**.** The way individuals work, learn, communicate and consume is being transformed by technological progress, as digitalisation, artificial intelligence, automation, robotics and machine learning are increasingly used. Without a broad range of skills, individuals are locked out of the benefits that technological progress can offer or are limited to its most elementary uses. Individuals, firms and countries that can harness this new wave of technological progress stand to benefit greatly, as it can enrich lives, boost productivity and make learning easier.

Southeast Asian countries have greater vulnerability to automation than their OECD counterparts, as a larger proportion of jobs/occupations in the Southeast Asian countries could be automated or undergo significant change (Figure 2). The most highly affected sectors are manufacturing, construction, wholesale, retail, hotels and restaurants. Examples of vulnerable occupations include sewing machine operators in Cambodia and Viet Nam, food service attendants in Thailand, shop assistants in the Philippines and office clerk workers in Indonesia (ILO, 2016[5]). The probability of being negatively affected by automation is higher among low-skilled workers, women, and workers in low-wage occupations, which may further increase disparities in the labour market (Nedelkoska and Quintini, 2018[7]).

While certain jobs may disappear, others will emerge and a sharp decline in overall employment is unlikely. (OECD, 2019[6]). Moreover, job automation could contribute large benefits to the economy, such as higher productivity and improved working conditions (as certain hazardous jobs can be automated). It could also help overcome labour shortages in the face of an ageing population (OECD, 2020[8]). Nevertheless, as automation will change the skills that are needed in the labour market, workers will need to up- or reskill to avoid being displaced and to successfully transition between jobs (OECD, 2019[1]).

Figure 2. Many jobs could be affected by automation

Share of jobs at risk of automation or a probability of significant change (%)



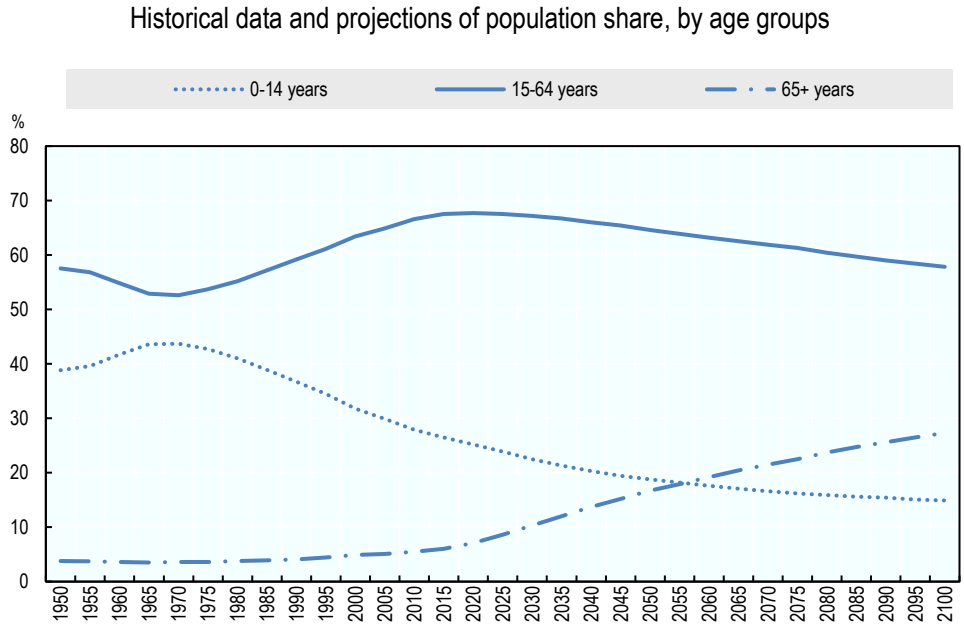
Note: The bars represent occupation-based estimates for the risk of automation, based on Frey and Osborne (2017)
Source: OECD (2020[9]), OECD Economic Surveys: Thailand, OECD Publishing, Paris, https://doi.org/10.1787/ad2e50fa-en.

Demographic change

Demographic change has substantial skills implications. Historically, Southeast Asian countries have benefitted from rapid population growth and a rising share of the working-age population due to decreasing mortality rates and increasing life expectancy. From 1950 to 2020 the population in Southeast Asia grew from 165 million to 669 million (average annual growth of 1.62%), while the working-age population grew from 95 million to 453 million (average annual growth of 2.26%) (United Nations, 2021[9]). Since the working-age population grew faster than the nonworking-age population, Southeast Asian countries were able to reap a "demographic dividend". The rise in the working-age population was accompanied with a rise in skill levels raising overall productivity levels and economic growth (ADB, 2020[9]). Further benefiting from a relatively young population, in comparison to the average OECD country, will require Southeast Asian countries to continue to make the necessary investments to develop and use skills effectively. This would allow Southeast Asian countries to remain attractive for businesses to invest and grow and contribute to further economic growth in the region.

At the same time, there will be significant demographic changes in the foreseeable future. Starting in 2021 the working-age population as a share of the total population will decrease over time in Southeast Asia (**Error! Reference source not found.**). This trend is mostly driven by the rise of individuals above 65+ years and a drop of individuals between 0-14 years reflecting longer life expectancy and lower fertility rates. Population ageing is becoming an increasingly important issue for Southeast Asian countries.

Figure 3. Demographic change affecting Southeast Asia



Note: working-age population is between 15-64 years.
Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). *World Population Prospects 2019,* Online Edition. Rev. 1

With population ageing, economic growth will depend more heavily on productivity growth, and the skills that are important drivers of that growth, and on raising labour force participation rates, particularly among women and older workers. Increased life expectancy and better health in older age imply that older workers can stay in the labour market longer, provided they have adequate incentives and opportunities to reskill and upskill. Furthermore, increasing longevity will mean pressure to extend working lives, making it more important for older people to develop to upskill and reskill for employment. They will also need skills that will allow them to participate fully in society, such as digital skills that facilitate social engagement and access to basic public services in a digital world (OECD, 2019[1]).

Population ageing can also have an impact on consumption and, by extension, skills demand. Consumption will likely shift from durable goods (such as cars) towards services (such as health care and leisure), which are generally difficult to automate given that they require social and interpersonal skills. All of these factors will have an impact on the types of jobs that will be created and skill demands, as well as the associated training needs (OECD, 2019[1]).

Migration

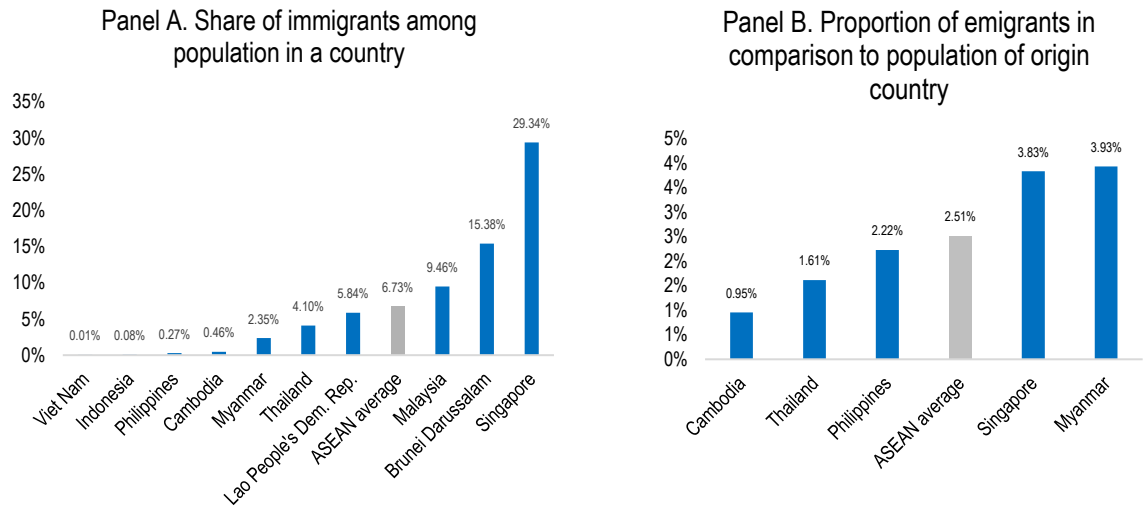
Migration is an important factor affecting the supply of skills in a country. Migrants can be an important supply of skills and can contribute to the economic growth of their host country if their skills are used effectively. Migrants can fill important niches in fast-growing sectors, where educating and training the required workers nationally would either take too much time or be insufficient to meet labour market demand. Migrants can also fill niches in declining sectors by providing temporarily the required skills and where national skills development efforts would not be worthwhile due to the lack of long-term prospects (OECD, 2019[8]).

Migration has also important implications for countries of origin. When individuals with high skills emigrate, this can represent a loss to the origin country, as the investment in educating them cannot be recuperated

and their emigration might increase labour and skills shortages in important sectors. When individuals with low skills emigrate, this may alleviate unemployment pressures in origin country. If the emigrants return to their origin country at some point, they may bring back useful knowhow, skills, and networks that can spur on innovation and economic growth in their countries of origin (OECD, 2019[8]).

Southeast Asian countries are both migrant receiving and sending countries. Around 68% of the 9.8 million immigrants to Southeast Asian countries in 2017 were from other Southeast Asian countries. The share of immigrants in the population varies significantly across countries (Figure 4, Panel A). Given the different demographic profile of ASEAN countries with some growing and others declining in their labour force, more circular migration in the region could be beneficial for all. As a whole, Southeast Asia is a net emigration region to the rest of the world (Figure 4, Panel B). The top destination regions for Southeast Asian emigrants outside of Southeast Asia include North America, the Middle East, East Asia, and Europe. Some of the labour gaps produced by emigrating Southeast Asian workers are filled by immigrants from South Asia. There are also some efforts to encourage Southeast Asian emigrants to return to fill skills gaps. If Southeast Asian countries can effectively address the challenge of attracting and retaining skilled workers from abroad, they can spur innovation and facilitate movement up global value chains (OECD, 2021[10]).

Figure 4. There is significant migration to and from Southeast Asian countries



Source: ILO (2018), International Labour Migration Statistics Database in ASEAN

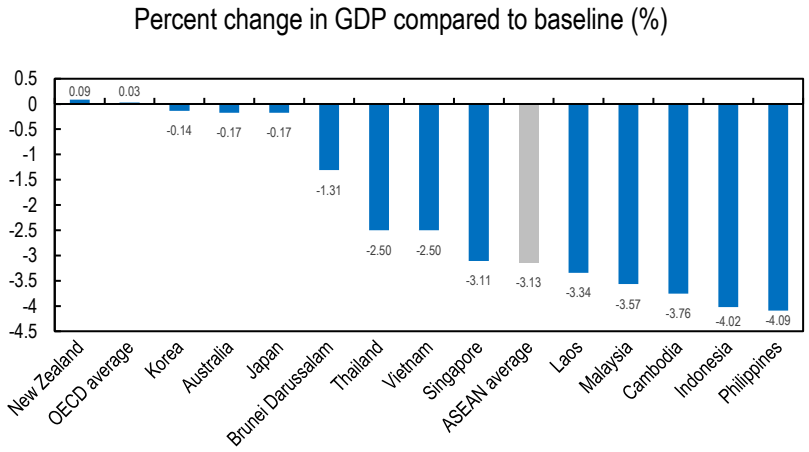
Climate change

Climate change affects skills through market and regulatory changes. The introduction of market and regulatory changes seeking to preserve or restore the environment influences investment decisions, production processes and adoption of technology, which together lead to changing skills needs. Affected sectors include manufacturing, construction, environmental services, transportation, energy and agriculture, among others. The economic potential of transitioning to a green economy is contingent upon the available skills of workers (ILO, 2019[10]).

The impact of this transition can disproportionally have adverse effects on vulnerable groups. Vulnerable groups include for example informal workers, who may have been active in environmentally destructive activities such as mining and logging and would require sufficient reskilling and upskilling opportunities to help them move to job opportunities in the formal sectors of a green economy.

Climate change is a priority for Southeast Asian countries because of the region's risks of floods, droughts, heat waves, typhoons and rising sea levels and their projected adverse impacts on GDP (Figure 5). In 2016, the ASEAN member countries issued a joint declaration, committing to the promotion of green jobs as a means of ensuring inclusive growth. The declaration promotes Technical and Vocational Education and Training (TVET) in developing skills for green jobs and active labour market policies in supporting the transition of workers to green jobs. The declaration also emphasises the need to collaborate with relevant stakeholders, to identify demand and supply in green skills and encourage inter-sectoral collaboration in the development and use of green skills (ASEAN, 2016[9]).

Figure 5. Climate Change is projected to have a significant effect on GDP by 2047

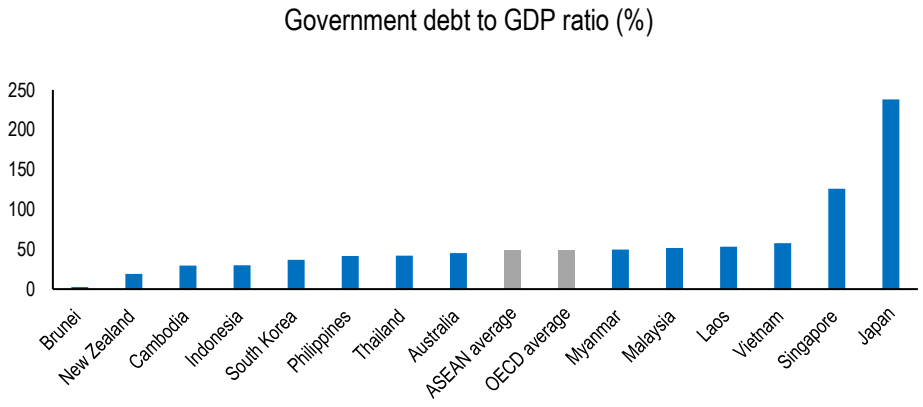


Note: Impacts of Global Warming (3°C) on the World GDP (% Change/Year)
Source: Adapted from Kompas, T., et al. (2018). "The effects of climate change on GDP by country and the global economic gains from complying with the Paris climate accord." Earth's Future.

COVID-19

The COVID-19 pandemic has had a significant impact on Southeast Asia, with an economic downturn caused by domestic containment measures. While the impact on the health sector is most apparent, other affected sectors include manufacturing, construction, whole-sale and retail, accommodation and food services, and real estate, among others. These sectors employ a significant share of workers across Southeast Asia. Supply chains have been disrupted, consumer confidence and consumption have declined, and an uncertain future has led to a significant reduction in investments. The national impact due to the pandemic and the accompanying lockdowns has been exacerbated by the knock-on effects from the difficult economic circumstances of trading and investment partner countries, such as China, Japan, Korea, EU and the US, among others. The ability to effectively respond to COVID-19 depends on available financial resources, but relatively high government debt levels in some countries may be a constraint ***(***Figure 6***).***

Figure 6. Government debt levels are significant



Source: Trading Economics (2020), https://tradingeconomics.com/country-list/government-debt-to-gdp.

The way skills are developed has been affected in Southeast Asian countries. During the lockdown, learning often took place via online resources, resulting in students without access to reliable and fast internet being at a significant disadvantage. Moreover, in the absence of a physical classroom education, the effectiveness of learning has depended more than at other times on the home environment and levels of parental engagement. Students from disadvantaged backgrounds, with a less conducive home learning environment, have been exposed to a greater risk of falling behind. Work-based learning programmes, including apprenticeships, are often more difficult to provide and assess at a distance. This is due to the immediate disruption of provision caused by confinement and social distancing rules. Adult learning, especially non-formal education and informal learning on the job, has suffered setbacks, as employers have historically cut back on training during economic recessions.

Using skills will be is a crucial element of Southeast Asia's skills policy response to COVID-19. Due to the restrictions on mobility, factory closures and disrupted supply chains, many micro, small and medium firms are under pressure to furlough or let go their workers. The situation for the many informal, gig-economy and daily-wage workers, of whom many are women and migrant workers, is also challenging, as they are ineligible for government support measures and lack social security arrangements. More could be done to support firms in introducing health and safety measures in workplaces and adopting technological solutions and managerial practices allowing workers to work remotely, when possible. Workers at risk of losing their jobs in struggling firms could benefit from short-time work schemes, while workers who lost their jobs need income support and other social support measures. As the pandemic is likely to shift the demand for certain goods and services, skill demands and employment prospects will also change. The many workers in adversely affected sectors thus need to be temporarily or permanently reallocated to other sectors to remain employed and would require upskilling and reskilling opportunities.

COVID-19 and its attendant confinement measures have interacted with the other megatrends, such as globalisation, technological progress and migration. From a globalisation perspective, the significant and prolonged supply chain disruptions have encouraged Korean, Japanese, US firms, among others, to consider reshoring some or all of their production from Southeast Asia to their home countries. In terms of technological progress, the pandemic has led to an exponential increase in the adoption of digital solutions in almost every aspect of society, including work and social life. In regards to migration, the pandemic has for the time-being limited and in some cases completely halted cross-border mobility. Since Southeast Asia has been a net exporter of labour, these restrictions may temporarily alleviate labour shortages and may even provide an unusual supply of additional skilled labour.

In order to respond to the skills changes due to COVID-19 and the megatrends with adequate skills policies, effective skills governance arrangements are critical. Effective governance arrangements require collaboration across relevant ministries, across levels of government, and with a wide range of stakeholders, such as employers, unions, academics, NGOs, among many others. As skills systems evolve and become more complex, effective information systems, that policy makers, employers, individuals and others can access and use to inform their decisions, is becoming more important. A co-ordinated and coherent approach to financing skills is also needed to ensure that sufficient funding is available and that funding arrangements support all individuals, regardless of their ability to pay.

The megatrends and COVID-19 are transforming the skills needed to thrive at work and in society. Due to the rapid change and uncertainty, individuals need to develop their skills throughout life and use them effectively. Greater commitment to learning will safeguard individuals' employment and participation in society. Developing a broad set of knowledge, skills, and attitudes will allow individuals to be competent workers and engaged citizens. By improving the development of skills, the effective use of skills, and the governance of skills systems, Southeast Asian countries can overcome the challenges that these trends pose for economic growth and social wellbeing and, at the same time, take advantage of the opportunities many of these trends present for reshaping the world in a positive way.

Skills imbalances have emerged

In light of these structural changes, it is becoming increasingly important to ensure that the skills of workers are effectively aligned with the needs of the labour market. Imbalances between the supply and demand for skills can emerge in the form of 'skill shortages' - when adequate skills are hard-to-find in the current labour market- or in the form of 'skill surpluses' - when certain skills are in excess in the labour market relative to the demand (OECD, 2017b[7]). In addition, imbalances also comprise skill mismatch when a workers' skills or qualifications exceed or fall short of those required for the job under current market conditions (OECD, 2017b[7]; Shah and Burke, 2005[8]).

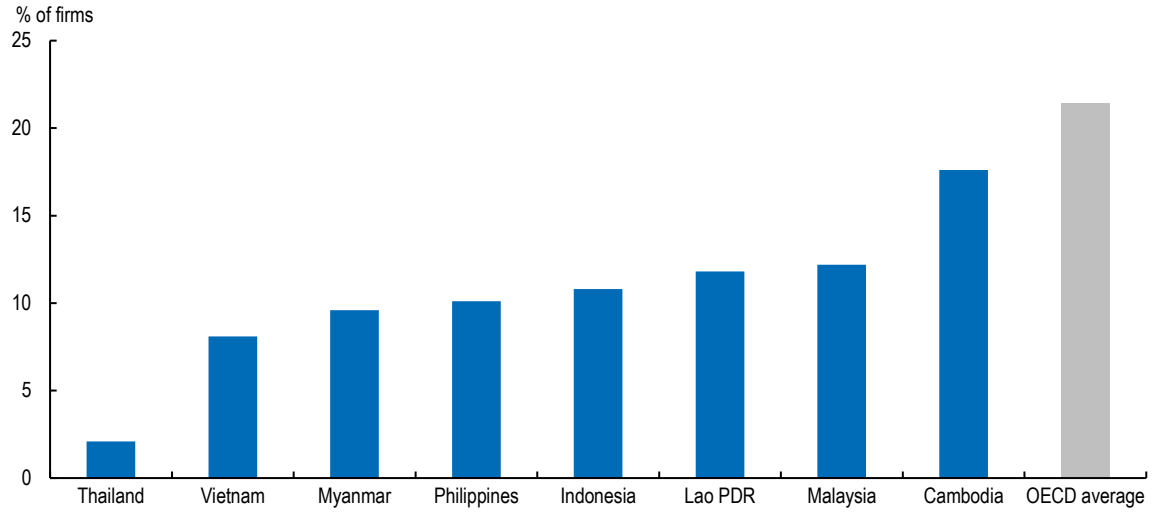
Skills shortages have been found to contribute to lower productivity of firms in several countries, including Ireland and Canada (Tang and Wang, 2005[4]; Bennett and Mcguinness, 2009[5]). Also at the firm level, under-qualification is found to have a negative effect on productivity in Belgian firms, while over-qualification has positive productivity effects (Kampelmann and Rycx, 2012[6]). This finding was recently confirmed for OECD countries more generally (Adalet McGowan and Andrews, 2015[3]). However, while the international study confirms that over-skilling is associated with higher productivity at the firm level, it also shows that over-skilling contributes to lower labour productivity on aggregate, because it tends to constrain the growth of other relatively more productive firms that could more efficiently utilise these workers.

The importance of reducing skills imbalances for productivity and employment growth has been acknowledged in many countries, including in the Southeast Asia region. In Malaysia, for example, the government stated in its 2017/18 Economic Report that "Skill shortages and mismatches in the workforce are among the major challenges in boosting productivity" (Ministry of Finance, 2018[13]). Similarly, Cambodia's National Employment Policy 2015-2025 points towards skills shortages as a constraint to innovation and firm growth.

Measures of skill imbalances are often derived from employer surveys that include questions on hiring intentions and recruitment difficulties. One such employer survey, namely the World Bank Enterprise Survey (World Bank, 2015a[14]), finds that a substantial share of employers in many countries consider the difficulty to find the right skills to be a major obstacle to current operations of the firms (see Figure 7). This is the case for between 10 and 15% of employers in the Philippines, Indonesia, Lao PDR and Malaysia, and 18% of employers in Cambodia. While this clearly shows that employers are struggling finding the right workers, the problem seems less pressing than in OECD countries.

Figure 7. Many firms have difficulties finding workers with the right skills

Percent of firms identifying an inadequately educated workforce as a major constraint

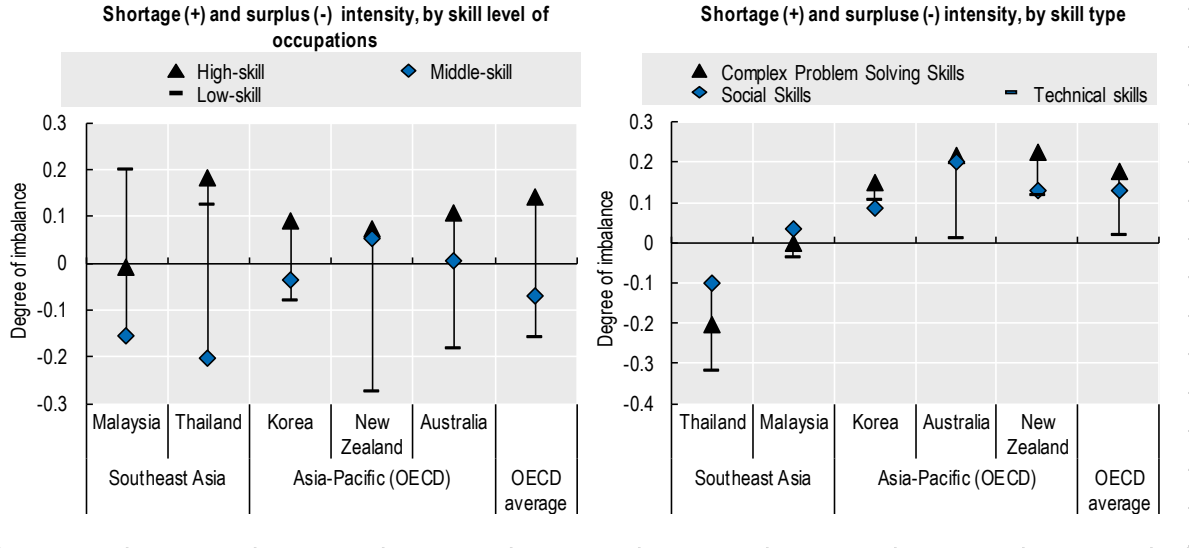


Note: Refers to 2015 for Indonesia, Malaysia, Philippines and Vietnam; 2016 for Cambodia, Myanmar and Thailand; 2018 for LAO PDR. OECD average includes Chile (2010), Czech Republic (2013), Estonia (2013), Greece (2018), Hungary (2013), Israel (2013), Italy (2019), Latvia (2013), Lithuania (2013), Mexico (2010), Poland (2013), Slovak Republic (2013), Slovenia (2013), Sweden (2014) and Turkey (2019).
Source: World Bank (2020), "Enterprise Surveys", https://www.enterprisesurveys.org/.

Countries that want to reduce skills imbalances in their labour markets need to have a good understanding of where the shortages, surpluses and mismatches are, and use this information to (re-)design policies. Results from the OECD Skills for Jobs database shed some light on which occupations and skills are facing the most pressing skills imbalances. The database uses information on employment, unemployment, hours worked, wages and under-qualification to extract signals of shortage or surplus pressure by occupation. As Figure 8 (left panel) shows, Malaysia and Thailand are both experiencing relatively on average shortages in low-skill occupations (i.e. elementary occupations and services and sales occupations). This is very different from what is observed in most OECD countries, where low-skill occupations mostly face surplus pressure. Shortages in low-skill occupations in these Southeast Asian countries reflect the large and growing size of these occupations in total employment, combined with rising educational attainment of the population and often unattractive working conditions in low-skill occupations. Like in OECD countries, the Thai labour market experiences shortage in high-skill occupations on average. In Malaysia, by contrast, high-skill occupations are not facing imbalances on average. However, In Malaysia, this hides that certain high-skill occupations, such as teaching professionals, experience sharp shortage pressure. Finally, middle-skill occupations in Malaysia and Thailand are facing on average the strongest surplus pressure, which is largely due to substantial surpluses of skilled agriculture, forestry and fishery workers.

The OECD Skills for Jobs database not only contains information on shortages and surpluses by occupation, but also translates this into imbalances by skill type. Figure 8 (right panel) shows the degree of imbalance for complex problem-solving skills, social skills and technical skills. In many OECD countries, both problem solving and social skills are experiencing substantial shortage pressure, whereas technical skills are mostly found not to face imbalances. The picture looks different in Malaysia and Thailand. In Malaysia, these three skill types are not facing imbalances, whereas in Thailand they are found to be in surplus. However, certain specific social skills, such as service orientation are found to face shortage pressure in Thailand, as do some high-level cognitive skills, including mathematics skills.

Figure 8. Imbalances are found at all skill levels



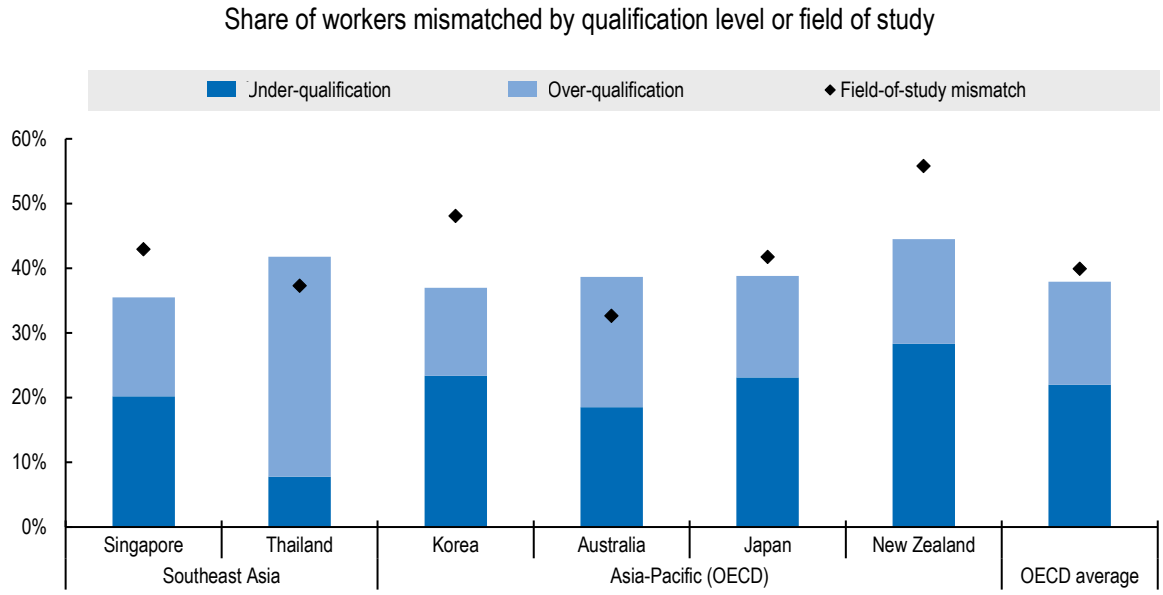
Note: Managers, professionals and technicians and associate professionals are classified as high-skill; clerical support workers, crafts and related trades workers and plant and machine operators and assemblers as middle-skill; services and sales workers and elementary occupations as low-skill. Occupational shortage range between -2.5 and 2.5 (Panel A). Skill shortages are rescaled to be expressed relative to the largest observed shortage in OECD countries (Panel B). See OECD (2017[15]) for details on the methodology used to calculate occupational and skills imbalances. Data refer to 2017 in Thailand, Malaysia, New Zealand and Korea, 2016 in Australia and latest available year in the OECD average.
Source: OECD Skills for Jobs database.

As Southeast Asian countries continues to be exposed to global megatrends, such as globalisation, technological progress, demographic change, migration and climate change, shortages of high-level cognitive skills and social skills are likely to become more pronounced, as is the case in many OECD countries today. Occupations that have a relatively low probability of change due to automation, which are generally the ones requiring high-level cognitive skills and /or social skills, are already more likely to be in shortage in many OECD countries. Moreover, OECD countries that have seen the strongest increase in their old-age dependency ratio are experiencing stronger shortages in health and personal care related jobs, which require strong social skills (OECD, 2017[15]). Moreover, in the United States, employment growth has been strongest in jobs requiring high levels of both cognitive skills and social skills (Deming, 2017[16]). In OECD countries, the occupations that combine high cognitive skills requirements with social skill requirements are the ones that are facing the strongest shortages (OECD, 2017[15]). These trends could affect Southeast Asian countries in a similar way in the medium term.

In addition to substantial shortages and surpluses, labour markets in OECD and Southeast Asian countries also have a significant share of workers who are mismatched in terms of qualification level. On average in OECD countries, 22% of workers are under-qualified for their occupation, and an additional 16% are over-qualified (Figure 9). A similar picture can be observed in Singapore. In Thailand, only 8% of workers are under-qualified, while 34% of workers are over-qualified. The presence of over-qualification in the Thai workforce is consistent with the inability of the labour market to absorb all the higher education graduates. Under-qualification, on the other hand, might reflect that employers have difficulties finding workers with the right qualification level and resort to hiring under-qualified workers. It should be noted, however, that under-qualified workers are not necessarily under-skilled for their jobs, as often workers acquire skills informally. A system of recognition of prior learning can help to certify these skills and make them more visible to employers. When looking at the field of study rather than the level of education, 37% and 43% of workers in Thailand and Singapore, respectively, are mismatched, compared to 40% across OECD countries. Individuals might decide to work in a field that is unrelated to the one they studied for several

reasons, including a lack of job opportunities in their own field and more attractive working conditions in other fields.

Figure 9. Many workers are mismatched for their job



Note: Workers are mismatch by qualification level when their highest obtained qualification (primary education or below, lower-secondary education, upper-secondary and post-secondary non-tertiary education, or tertiary education) is higher or lower than the one most commonly observed among workers in the occupation. Workers are mismatched by field of study when the field of their highest obtained qualification does not correspond to the field of their occupation. Australian data use a different occupational classification, which limits the international comparability of the results. Data refer to 2017 for Thailand, 2016 for Australia, 2014 for Singapore and New Zealand, 2011/12 for Korea and Japan, and latest available for the OECD average.
Source: OECD calculations using data from the OECD Survey of Adult Skills, Thai Labour Force Survey and the Australian Survey of Education and Work.

Most recently, the COVID-19 crisis has affected skills imbalances across countries. As many workers have become unemployed or have been furloughed, aggregate skills pressures are diminishing. Still, in many countries shortages can be found of hospital workers, employees of food retailers, and warehouse personnel. As countries start to recover, skills pressures are likely to accelerate and, if their underlying causes are not addressed, could stall that recovery. Workers in adversely affected sectors may therefore benefit from support to up- and re-skill to position themselves better in the labour market during recovery. For their part, firms and countries can help to avoid skills bottlenecks that could hinder recovery in the medium by investing in skills which are in shortage (OECD, 2021[24]).

To tackle these imbalances in the long-term, it is key that education and skills policies are aligned with labour market needs. To facilitate this alignment, it is of crucial importance that policy makers, individuals and employers have a good understanding of the changing skill needs, so that they can make informed decisions on education and skills investments. Countries differ widely in terms of methods used to identify their skill needs, but also in terms of the level at which these exercises are conducted and stakeholder involvement (OECD, 2016b[17]). In Malaysia, for example, the Critical Skills Monitoring Committee, comprised of the Institute for Labour Market Information and Analysis (part of the Ministry of Human Resources) and TalentCorp, publishes annually a list of Malaysian critical occupations. The occupations on the list are considered to face significant labour market shortages that could be alleviated through government interventions. The criteria for being included in the list are that the occupations are skilled, in high demand and are of strategic importance to economic development. To identify the occupational

shortages, the Critical Skills Monitoring Committee combines a top-down quantitative analysis with bottom-up qualitative evidence from stakeholders (Critical Skills Monitoring Committee, 2019[18]). Many countries face challenges in the development of skills assessment and anticipation exercises, including lack of resources and coordination issues. Low-and middle-income countries report these obstacles more frequently than high-income countries (OECD, 2016b[17]; ILO et al., 2017[19]).

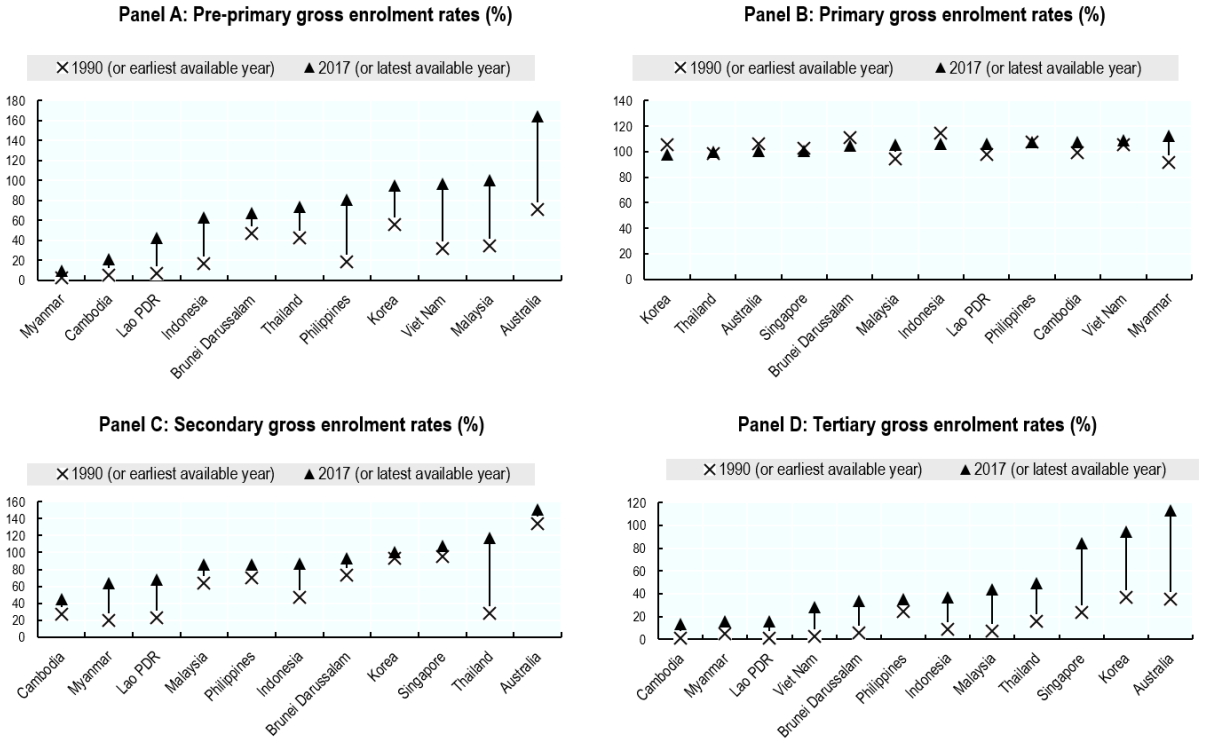
Despite some good practices in the assessment and anticipation of skill needs, governments and social partners still face several barriers when it comes to using the available information. In general, the identified barriers are twofold: i) involving and co-ordinating with stakeholders; and ii) bringing the skills assessment and anticipation exercises closer to the needs and requirements of policy-makers (OECD, 2021[27]). These challenges seem more pressing in low-and middle-income countries than in high-income countries (OECD, 2016b[17]; ILO et al., 2017[19]).

Education systems need to focus on quality and alignment with the labour market

Across Southeast Asia, enrolment has been on the rise. As Figure 10 confirms, gross enrolment rates have increased at all levels of education from pre-primary to tertiary. Gross enrolment rates refer to the total enrolment rates in education, regardless of age, expressed as a percentage of the population at the official education age and it could exceed 100% due to overaged or under-aged students. All countries in the region enjoy near-universal enrolment in primary education with rates comparable to neighbouring OECD countries Korea and Australia. Despite steady increases in several countries, pre-primary enrolment rates remain well below the OECD countries. This is an area where regional inequalities are stark, with gross pre-primary enrolment ranging from 10% in Myanmar to approximately 100% in Malaysia in 2017. Research shows that the returns to investing in preschool education can be high and that it can help bridge inequalities and increase productivity (Carneiro and Heckman, 2003[20]). Moreover, results from the OECD Programme for International Student Assessment (PISA) demonstrate that the number of years spent in early childhood education and care or ECEC (ISCED 0), is a strong predictor of the level of skills performance at later stages (OECD, 2019[21]).

While secondary enrolment rates have also increased across the region, there is much room for improvement, especially in countries where secondary education is not compulsory. For instance, in Myanmar (64%), Lao PDR (68%) and Malaysia (85%), where secondary education is not compulsory, gross secondary enrolment rates are considerably lower than in Korea (100%), Singapore (108%), Thailand (117%), or Australia (150%), where it is compulsory to attend secondary level education. Furthermore, as in pre-primary education, gross enrolment in tertiary education is rife with regional disparities, ranging from 13% in Cambodia to about 85% in Singapore in 2017. Several countries have seen improvements over the last three decades, most notably Singapore, Malaysia and Thailand, but tertiary enrolment in Southeast Asia is still substantially less than that of OECD countries in the region (Korea and Australia).

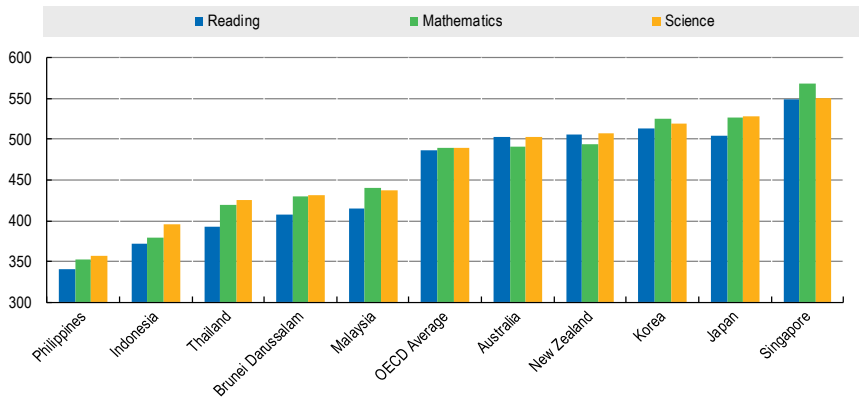
Figure 10. Enrolment in different levels of education is on the rise



Note: Gross enrolment rates refer to the total enrolment rates in education, regardless of age, expressed as a percentage of the population of official education age. Gross enrolment rates could exceed 100% due to overaged or under-aged students.
Source: UNESCO UIS Indicators http://data.uis.unesco.org/

In light of the rising demand for higher-level skills, undoubtedly, rising enrolment rates in all levels of education and a near-universal enrolment in primary education are both good starting points. However, enrolment rates alone are not sufficient for acquisition of relevant skills. – quality challenges remain to be addressed. Performance in standardised international tests could be one metric to assess the quality of educational attainment beyond enrolment rates. The performance of Southeast Asian students (apart from Singapore) in reading, mathematics and sciences, as measured by PISA, is low (Figure 11). Philippines, Indonesia, Thailand and Brunei Darussalam, countries which participated in the 2018 PISA, all scored considerably lower than the average in OECD countries in the three domains.

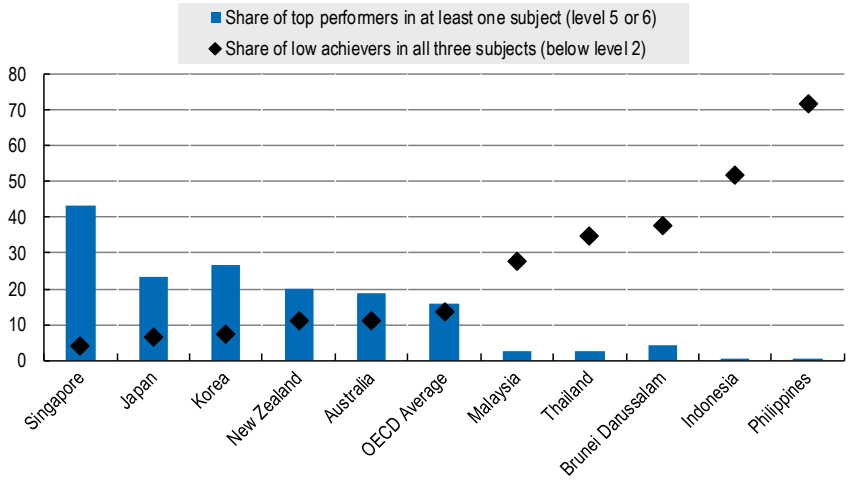
Figure 11. Students in most Southeast Asian countries have relatively low performance in PISA



Note: Countries have been arranged in ascending order of the mean mathematics score
Source: OECD (2019[30]), PISA 2018 Results (Volume I): What Students Know and Can Do, OECD Publishing, Paris.

Another observation that causes concern is the large share of Southeast Asian students who are low achievers, scoring below level 2, meaning the lack of basic competencies which is detrimental to the development of skills further ahead in life (Figure 12). In Indonesia and the Philippines this share exceeds 50%, and it is considerably higher than the OECD average in Malaysia, Thailand and Brunei Darussalam. The COVID-19 pandemic and the related school closure have negatively impacted low performing students who are less likely to benefit from a supportive home learning environment and are thus at risk of falling even further behind. Additionally, these countries have a very low share of students who are top performers in at least one subject, scoring at levels 5 or 6. This is in sharp contrast with Singapore, Japan, Korea, Australia and New Zealand all of which have a high share of high performers and a low share of low achievers as compared to the Southeast Asian countries. Levels 5 and 6 imply a high attainment of competences in critical thinking, making inference, making connections between concepts, and reflection – non-routine and non-procedural skills. As discussed before, with automation, tasks that are in the highest risk of disappearing are routine and procedural. Thus, a low share of top performers in levels 5 and 6 could indicate a deficit in the supply of high-skilled individuals in these countries. .

Figure 12. Very few students in most Southeast Asian countries are top performers in at least one subject and a large share are not mastering basic competencies



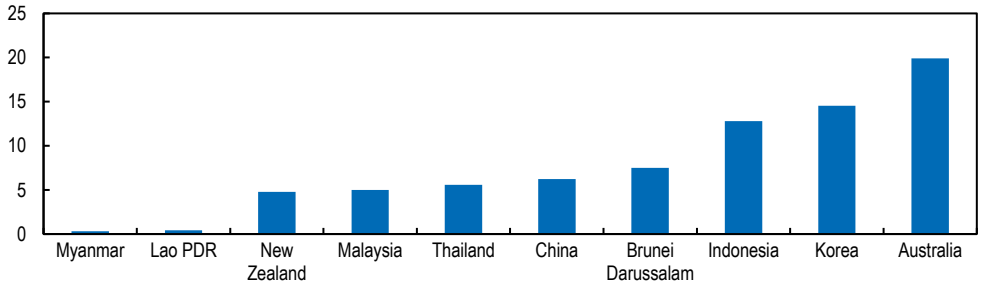
Source: OECD (2019[29]), PISA 2018 Results (Volume I): What Students Know and Can Do, OECD Publishing, Paris.

Skills imbalances exist at all skill levels in Southeast Asian countries like Malaysia and Thailand (Figure 8). In these countries, there exists a surplus of medium-skilled occupations alongside a shortage of low- and high-skilled occupations. These indicate a gap between the demand for and supply of skills – the link between the education systems and the labour market's skill needs is weak. It is necessary to strengthen this link to reduce the imbalances.

Vocational Education and Training (VET) could potentially be a tool through which Southeast Asian countries can better establish and reinforce the link between education and the labour market, while minimising skills imbalances. TVET (technical and vocational education and training) could also help address shortages in certain occupations requiring high-level technical and associate professional skills while improved career guidance could help orient individuals better towards the skills in demand, thus reducing imbalances.

Figure 13. Enrolment in vocational education and training in ASEAN countries

Percentage of 15-24 year olds enrolled in vocational education and training, both sexes, 2018 (or latest available year)

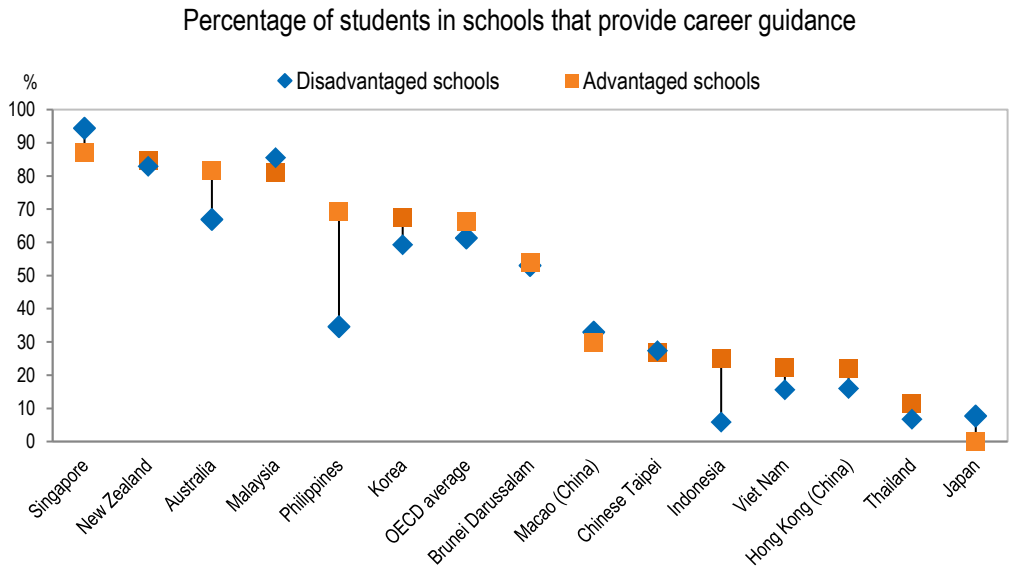


Source: UNESCO Institute for Statistics, *SDG 4 Data by target*, data file, Technical Cooperation Group on the Indicators for SDG 4 - Education 2030

Figure 13 shows the share of 15-24 year olds enrolled in vocational education and training (VET) in several ASEAN countries. While these countries have a lower rate of vocational enrolment than Korea or Australia, it is especially low in Myanmar and Lao PDR. The strong connection between VET systems and the labour market allows individuals to progress in a compatible way with the changes taking place in professional environments. Properly designed and targeted VET systems can offer high levels of employability and access to high-quality jobs, including emerging sectors such as the digital economy. However, in many countries the coordination between the VET system and the world of work is weak and thus potentially limiting the responsiveness and relevance of the VET system. Moreover, many countries struggle to make VET an attractive option for students. One common reason why VET appears unattractive to learners is that VET qualifications are often “dead ends”, not leading easily to higher levels of education. If VET is to attract able and ambitious students, it is essential that clear and well-articulated learning pathways enable progression, up to and including tertiary levels.

Effective career guidance can help address this issue by explaining what VET has to offer and what prospects lie after its completion (OECD, 2019[1]). Career guidance helps individuals to advance in both their educational and professional trajectories thus contributing to the effective functioning of the labour markets. This makes it both an individual and a social good: it paves the way for achieving a range of social policy objectives, including social mobility and equity. Career guidance thus merits public investment. Empirical evidence point towards career guidance services – in school and outside – having a formative influence on young people’s understanding of themselves and the world of work, and it can often improve educational, social and economic outcomes (Kureková and Musset, 2019[24]). Figure 14 shows that in Indonesia, Viet Nam and Thailand, less than 30% of the students have access to a guidance counsellor both in advantaged and disadvantaged schools. On the other hand, Singapore and Malaysia, have a much higher percentage of students who can access career guidance services. From the standpoint of skills and bridging gaps between education and labour market, career guidance is an important tool as it can help in labour force activation and in orientating students towards learning pathways in demand in the labour market.

Figure 14. Advantaged/disadvantaged schools where one or more dedicated counsellor(s) provide career guidance



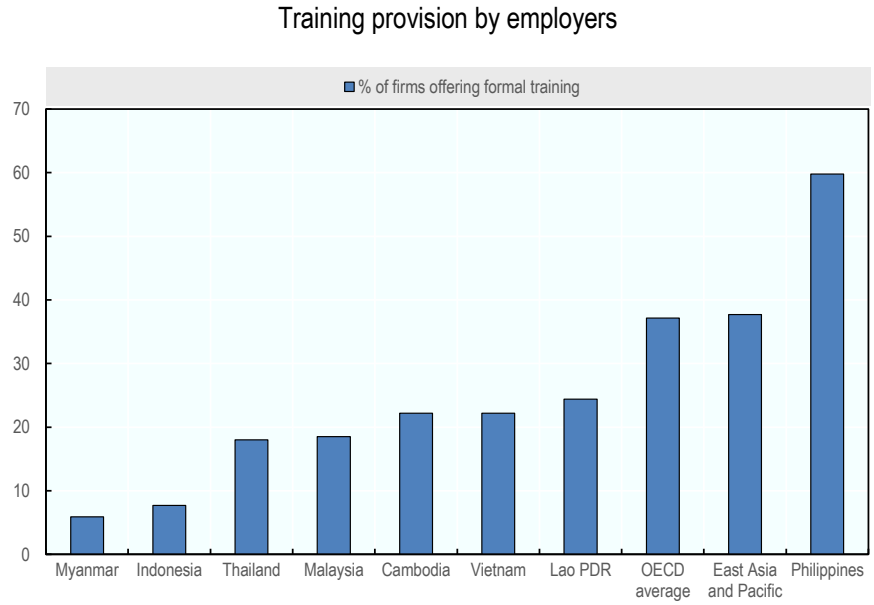
Source: OECD (2019[29]), PISA 2018 Results (Volume I): What Students Know and Can Do, OECD Publishing, Paris.

Opportunities for up-skilling and re-skilling need to be available

As discussed above, a number of people in Southeast Asia work in occupations that do not match their education and skills. In addition, regardless of their skills matches to the jobs, many workers face a risk of being affected by structural changes. Furthermore, people expect longer working lives thanks to higher life expectancy. As most employed persons already left the formal education, adult learning system can play an essential role to ensure sufficient opportunities for up- and re-skilling, responding to changing skills needs and preventing skills imbalances. Yet, this is also where the challenge lies. In most Southeast Asian countries, as well as in many OECD countries, adult learning systems often lack focused attention and resources, putting in doubt their readiness to address future skill challenges (OECD, 2019[32])

Available evidence suggests that adults in most Southeast Asian countries have comparatively limited access to training opportunities. According to the World Bank Enterprise Survey data, which contains information from over a thousand registered firms with at least five employees, less than 25% of firms provide formal training to their workers in most ASEAN countries, including Myanmar, Indonesia, Thailand, Malaysia, Cambodia, Vietnam and Lao PDR. This share is much lower than the average of East Asia and Pacific (37.7%, Figure 15). While these data provide valuable insights into country differences in training provision, they do not tell us what share of workers receive training in those firms stating to provide training. Moreover, the data do not provide information of participation of job-seekers, adults outside of the labour market and workers in the informal sector.

Figure 15. Relatively few firms train their workers in Southeast Asia



Note: Data refer to 2015 for Indonesia, Malaysia, Philippines and Viet Nam, to 2016 for Cambodia, Myanmar and Thailand, to 2018 for Lao PDR and to 2009-18 for the East Asia and Pacific group averages. OECD average includes Chile (2010), Czech Republic (2013), Estonia (2013), Greece (2018), Hungary (2013), Israel (2013), Italy (2019), Latvia (2013), Lithuania (2013), Mexico (2010), Poland (2013), Slovak Republic (2013), Slovenia (2013), Sweden (2014) and Turkey (2019). Only training that has a structured and defined curriculum (e.g. classroom work, seminars, lectures, workshops, and audio-visual presentations and demonstrations) is included.
Source: World Bank (2020), "Enterprise Surveys", https://www.enterprisesurveys.org/.

Adult learning systems should provide sufficient opportunities for participation in high-quality training, while ensuring that all adults have equal access to these opportunities. However, existing evidence suggest that access to adult learning is limited to a minority of the working population in most ASEAN countries (ILO, 2004[25]). In addition, people who need adult learning most, including the unemployed, long –term unemployed, low-skilled adults, older workers and workers in sectors undergoing structural changes, are found to have particularly limited access to adult learning. Therefore, it is of high importance to foster inclusive adult learning systems by expanding access to training opportunities, particularly targeting those who are at disadvantage (OECD, 2019[32]). With the outbreak of COVID-19 and the resulting challenges firms face, adult learning has decreased even further with fewer on-the-job and/or employer-sponsored training opportunities. However, this moment could also present opportunities for continued adult learning, if learning providers can adopt system and technology innovations expanding the provision of distance learning (OECD, 2021[27]).

An increasing body of evidence suggests that the majority of adults not participating in adult learning opportunities also do not want to participate, while adults with low skills and older workers are particularly unable to recognise the need to develop their skills further (Windisch, 2015[27]; Eurofound, 2016[28]). Among the Asian countries for which data are available, the lack of interest is highest among Japanese adults (88% of adults who do not participate in training state that they are not interested), followed by Singapore (76%) and Korea (71%) (OECD, 2019[29]). Hence, the engagement of adults in learning activities should go beyond providing opportunities to those who ask for them. Promoting the benefits and importance of adult learning, providing high-quality information and individualised advice and guidance services are some of the ways policy can encourage higher and more inclusive participation.

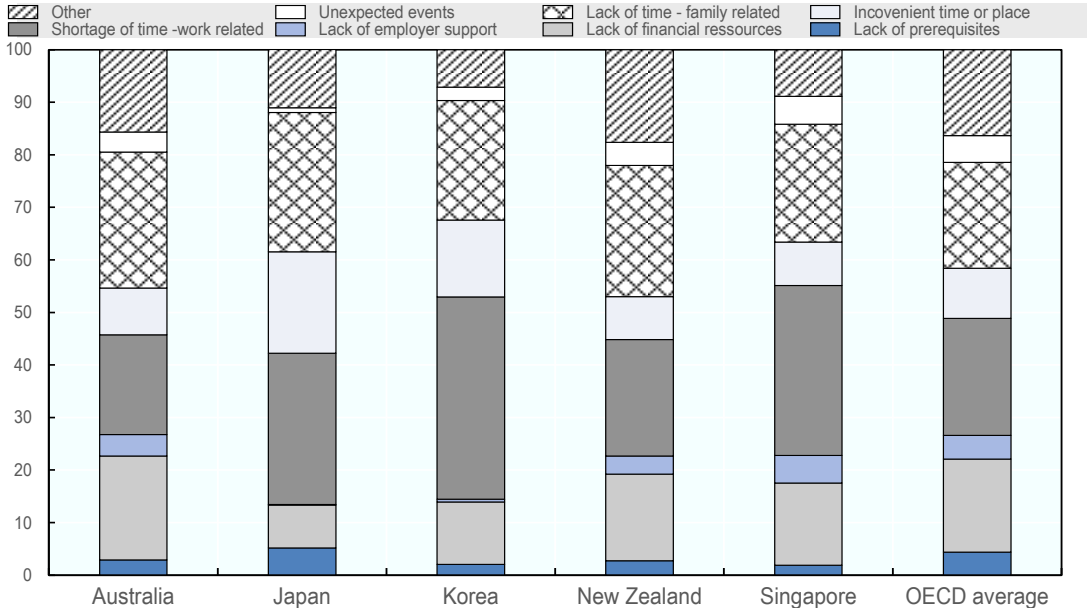
As mentioned above, career guidance could play an important role for individuals (e.g. students, job seekers and workers) to understand their skill set, skills develop needs as well as available and relevant

learning opportunities. Continuous career guidance for older as well as young adults is essential to lead them to adequate skills development and training. Effective career guidance takes into account timely labour market information and the outputs of skill assessment and anticipation exercises in order to provide information on occupations and skills in demand in the labour market relevant to individuals interests and skills sets. In most countries, career guidance is delivered through a range of channels, such as public employment services (PES), specialised guidance services, career guidance websites and education providers. Some countries have developed one-stop-shops to ensure all the information are readily available for individuals to make informed decision. To understand which offer best suits their needs, these career guidance should contain detailed information about available courses, as well as information on outcomes and satisfaction of beneficiaries. In Malaysia, the Employment Insurance System (EIS), which is currently under development, is taking up the role of a traditional PES, which includes providing career guidance. The EIS is engaged in some promising initiatives, such as the development of a job portal based on international good practices (OECD, 2019[29]).

While some reasons for not participating in training are related to a lack of motivation, others include practical barriers such as financial and time constraints. Evidence from OECD countries, including Korea, Japan and Singapore, indicates that the main barriers to participation in training include lack of time (Figure 16. Adults in Thailand report similar time barriers (OECD, 2020[8]). This could imply that many adults feel that their family or work related burdens are too great to schedule extra training. As pointed out by previous OECD reports, to overcome this barrier, adult learning programmes should ideally be flexible (OECD, 2019[30]; OECD, 2019[26]). Modular approaches are especially helpful in providing adult learners with greater flexibility on their learning path. They allow adult learners to focus on developing the skills they currently lack, complete self-contained learning modules on these skills and combine these modules to eventually gain a full (formal) qualification. Research suggests that such provision can broaden access to formal qualifications, in particular for disadvantaged groups (Kis and Windisch, 2018[31]).

Figure 16. Reasons for not participating in job-related formal or non-formal adult learning (OECD average)

Percentage of adults who did not participate but wanted to



Source: Priorities for adult learning Dashboard, based on PIAAC (2012, 2015, 2017); OECD (2019[32]), Getting Skills Right: Future-Ready Adult Learning Systems.

An increasing number of countries offer some or several forms of flexible learning provision. In Thailand, recognition of credits and learning outcomes is possible through partial qualifications, professional certifications, modularisation of programmes, short courses, part-time courses, and via Massive Open Online Courses (Thai-MOOCs). For example, the Bangkok Metropolitan Administration's (BMA) Vocational Training Center provides a number of job training courses, including part-time and weekend courses.

Certain groups of adults generally have less access to training opportunities than others. In all OECD countries as well as Asian countries with available data (e.g. Thailand, Japan, Korea and Singapore), participation is lower among older adults. Considering population aging in most ASEAN countries, however, many workers are likely to have longer working lives while facing rapidly changing skills demand. Moreover, older workers often work in more heavily routinised occupations than the young generation and age-related differences in the use of digital technology can put older workers at a disadvantage (OECD, 2017[33]). Therefore, it is more crucial than ever to ensure sufficient re-skilling and up-skilling opportunities for older workers to help them stay in productive employment.

Many employers perceive that training for older workers is a poor investment, which yields benefits over too short a time. Therefore, to overcome age-related barriers, policy makers should provide training that is more attractive in the eyes of older workers and persuade employers of the benefits of providing training to older workers. For example, training could be directly tied to a specific task or job to ensure that positive returns of training follow swiftly, benefitting both employers and employees at the end of their careers (OECD, 2017[33]).

Not only expanding provision of adult learning is important, but also it is crucial to provide helpful and necessary training programmes. To effectively support workers and job seekers, adult learning needs to be aligned with labour market needs. This is especially true in the context of a rapidly changing demand for skills and in the presence of skills imbalances. Therefore, when designing training programmes, the content of adult learning programmes needs to be responsive to current and future skill needs in the labour market. In addition, incentives need to be set for participants and providers to guide the choice of courses towards skills in demand. To facilitate the alignment of adult learning policy with changing skill demands, it is crucial that policy makers, individuals and employers have a good understanding of these changing skill needs. This will assist them in making informed decisions on updating occupational standards, designing or revising training policies and programmes, setting appropriate incentives and providing advice to people on skill development (OECD, 2019[32]).

As discussed above, countries differ widely in terms of methods used to identify their skill needs, but also the extents at which these exercises are conducted, and how skills information is shared and used to inform policy-making. Not many countries have robust skills assessment and anticipation tools in place. Furthermore, evidence shows that the output from skills assessment and anticipation exercises is not always fully exploited. Across European OECD countries, only 13% of firms have a complete overlap between the skills they identify as priority for the development of the firm and the skills they are training their workers in. (OECD, 2019[32]). In order to ensure that employers and job seekers can benefit the most from the trainings, thorough skills analysis and providing training corresponding with the skills needs is crucial.

One particular area in which many countries are actively developing adult learning programmes is digital skills. These skills are expected to become increasingly important over the next years, and several countries are already experiencing digital skill shortages (OECD, 2017[35]). In many countries, digital skills are now considered to be a foundation skill, along with literacy and numeracy. For example in Thailand, several training programmes with a particular focus on new technology and high-tech skills are in place. The Ministry of Labour's programme, Skills Development for Technological Changes in Manufacturing and Service Sector *(โครงการพัฒนาฝีมือแรงงานเพื่อรองรับการเปลี่ยนแปลงเทคโนโลยีของภาคอุตสาหกรรมและบริการ)*, aims to provide training to 5 200 new workers with no or limited skills with particular focus on technology and foreign language in support of targeted industries.

Another way that adults can be guided in their choice of training options is by targeting certain financial or nonfinancial incentives to training programmes that address skill needs in the labour market. The availability of financial incentives for individuals, such as vouchers or grants, can be limited to certain training programmes or be made more generous for those programmes. Similarly, employers can receive financial support, such as subsidies or tax exemptions, when training their workers for certain in demand skills (OECD, 2017[36]).

Discussion points

1. Unexpected shocks, such as the recent COVID-19 crisis, have important consequences on the economy.
    a. In the short run, they can result in travel restrictions and work-from-home policies that remain in place for weeks. In this context, access to effective digital learning is important. Have ASEAN countries assessed the potential benefits of digitally enabled work and learning experiences? How can training systems be adapted to support the increased demand for remote work solutions and online training programmes? How can the ed-tech industry work with governments and the private sector to support digital learning and training?
    b. In the medium-term, these shocks can lead to significant restructuring and layoffs as firms take financial difficulties as an opportunity to cut costs and automate production. Do ASEAN countries have plans and means to assess the potential consequences of the ensuing structural change on skill demand? How can training systems, economic incentives and social safety nets support sustainable workforce transitions out of affected sectors and towards future-oriented industry, particularly for self-employed workers and vulnerable persons?
2. Megatrends, such as globalisation, technological progress, demographic change, migration and transition to low-carbon society, have an impact on skills in demand everywhere, including ASEAN countries. What can ASEAN Countries do to ensure that individuals and firms have the skills to take advantage of the opportunities created by these trends? For example, how can countries in the region better assess changing skills needs as well as design skills systems that are flexible and adaptable in the context of uncertainty?
3. How can OECD's labour skills assessment policy tools prepare ASEAN countries for the transition to demand-driven education? In particular, how can countries in the region develop analytical skills assessment indicators? How can they develop a coordinated approach to developing micro-credentials system tailors to TVET and lifelong learning for school drop-outs and unskilled workers?
4. For the digitalising world of work, what initiatives can ASEAN countries take in partnership with the private sector and tech start-ups to reform school curricula and equip our workforce with digital literacy skills, digital entrepreneurial skills and financial literacy skills?
5. Climate change will also have significant implications for the economies and societies of the ASEAN region. Have you considered assessing the skill needed to support the creation of green jobs and the transition to low-carbon society (e.g. decline in carbon-intensive industries)? What could this mean for school curricula and adult learning programmes?
6. Effective governance arrangements are critical for skills policies. What are countries in the region doing to improve collaboration across ministries, levels of government and wide a range of stakeholders to implement skills policies that are aligned with evolving skill needs?

7. PISA data shows that years spent in ECEC yields high returns in terms of future success in learning and the labour market. What initiatives should ASEAN countries take to increase pre-primary enrolment? How can ASEAN countries prevent digital disruptions to skills learning in pre-primary education?
8. Do you think career guidance can help reduce skills imbalances in the labour market? Are countries in the region planning to use this tool and expand access to guidance services and improve their quality, both for students and for adults? What are some ways by which this could be done? Is there any room for potential collaboration with the private sector to adopt skills-based profiling tools to improve job matching processes?
9. In many ASEAN countries, differences in skills development by gender persist. How can countries take initiatives to encourage girls to develop skills in STEM? How can they bridge the widening gender gap in labour market participation to ensure that women's skills are used productively? Is there any room for the curriculum reform to tackle gender discrimination?
10. Firms in certain ASEAN countries have difficulties finding people with certain technical skills, while VET enrolment among the youth is much lower than the OECD average. How can ASEAN countries further encourage enrolment in VET to bridge these skills gaps?
11. Training provision by employers continues to be low in the region. Are countries planning to do more to encourage firms to provide on-the-job training? What kind of incentives, financial or otherwise can countries undertake to increase the provision of on-the-job training?
12. Access to training is particularly difficult for some groups of people. Are countries taking initiatives to foster inclusive adult learning systems, finance equitable access to lifelong learning, and prevent pandemic-related digital disruptions to skills training? How can countries ensure that training opportunities reach the vulnerable groups, including unemployed, unskilled workers, self-employed workers, informal economy workers, MSMEs and older workers?

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