OECD Skills Studies

OECD Skills Strategy Southeast Asia

SKILLS FOR A POST-COVID RECOVERY AND GROWTH



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BETTER POLICIES FOR BETTER LIVES

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Foreword

Developing relevant skills and using them effectively is crucial for Southeast Asia's ability to thrive in an increasingly interconnected and rapidly changing world.

Globalisation, technological progress, demographic changes, migration and climate change are combining to increase and transform the skills needed to thrive in Southeast Asian countries' workplaces and society. People will need a stronger and more well-rounded set of skills, including cognitive, social, emotional and job-specific skills, to flourish in life both in and outside of work. The coronavirus (COVID-19) crisis has accelerated the digitalisation of learning and work and made upskilling and reskilling even more critical for many adults.

Southeast Asia has achieved relatively strong skills performance in various areas. In terms of developing people's skills, gross enrolment rates have increased at all levels of education. In terms of using people's skills, the labour force participation rate is generally high throughout the region and has been relatively stable over the last decade. The region has instituted various bodies to improve horizontal and vertical co-ordination for skills policies; has strengthened the collection of skills data; and has established more equitable mechanisms to allocate (often scarce) resources in education and employment.

However, Southeast Asia still faces several skills challenges. Participation in skills development tends to decline at later stages of life, as education and training offers tend to decrease in supply or become more difficult to access. Employment in the informal sector is widespread in many countries, contributing to skills imbalances, lowering overall productivity and placing millions of workers in precarious working situations. Disadvantaged groups, such as women, individuals from low-income households, and ethnic and linguistic minorities, are disproportionately affected by these challenges.

Recent and planned policy reforms show great promise, but more needs to be done to ensure better skills outcomes. Governments and all relevant stakeholders should continue to pursue partnerships that involve every level of government, as well as civil society groups that represent the interests of all learners and workers, especially those from disadvantaged backgrounds. Moreover, there is great incentive to build stronger data and skills financing systems throughout the region to achieve more equitable outcomes for the Southeast Asian workforce.

While no single action can address all the issues facing the region, a clear vision and concrete steps taken together by all stakeholders can ensure that Southeast Asian countries will address their skills challenges. Citizens of all ages and backgrounds should be able to develop and use their skills effectively to take up the opportunities of a rapidly changing society.

To support Southeast Asia in its reform agenda, the OECD has conducted a collaborative and tailored regional skills strategy. It has done this by providing detailed analysis and engaging widely with stakeholders, leading to several tailored recommendations for Southeast Asia, as outlined in this report.

The OECD stands to support Southeast Asia as it seeks to implement better skills policies for better lives.

The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD countries or Association of Southeast Asian Nations (ASEAN) member states.

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Table of contents

Foreword 3

Acknowledgements 4

Abbreviations and acronyms 10

Executive summary 12

1 Key insights and recommendations for Southeast Asia 14
Skills matter for Southeast Asia 15
The OECD Skills Strategy project in Southeast Asia 18
The performance of Southeast Asia's skills system 19
The policy context in Southeast Asia 27
OECD Skills Strategy dimensions and recommendations 29
Annex 1.A. The OECD Skills Strategy Dashboard for Southeast Asia 34
Annex 1.B. Overview of recommendations 37
References 45

2 Responding to the skills implications of megatrends and COVID-19 in Southeast Asia 53
The world is changing rapidly, transforming the skills needed for success for today and tomorrow 54
Megatrends 55
COVID-19 68
References 72

3 Developing relevant skills over the life course in Southeast Asia 78
The importance of developing relevant skills over the life course 79
Summary of recommendations 80
Overview and performance 81
Opportunities to improve the development of relevant skills over the life course 92
References 137
Notes 152

4 Using skills effectively in work and society in Southeast Asia 153
The importance of using skills effectively in work and society 154
Summary of recommendations 155
Overview and performance 156

Opportunities to use skills effectively in work and society 164
References 199
Notes 211

5 Strengthening the governance of skills systems in Southeast Asia 212
The importance of strengthening the governance of skills systems 213
Summary of recommendations 214
Overview and performance of Southeast Asia's governance of skills systems 215
Opportunities to strengthen the governance of skills systems 223
References 270
Notes 284

FIGURES

Figure 1.1. The OECD Skills Strategy Framework 18
Figure 1.2. OECD Skills Strategy Dashboard: Southeast Asia and selected benchmarking countries, 2022 20
Figure 1.3. Performance of ASEAN countries and OECD countries in developing relevant skills, 2022 21
Figure 1.4. Performance of ASEAN countries and OECD countries in using skills effectively, 2022 24
Figure 2.1. Literacy proficiency and positive economic and social outcomes 54
Figure 2.2. International trade of goods and services, 1975 and 2020 56
Figure 2.3. Connectivity among individuals in Southeast Asia and selected OECD countries, 2000 and 2020 58
Figure 2.4. Share of jobs at risk of automation or with a probability of significant change in Southeast Asia and selected OECD countries, 2017 59
Figure 2.5. Demographic changes over time in Southeast Asia and selected OECD countries 61
Figure 2.6. Migration to and from Southeast Asian countries, 2020 64
Figure 2.7. Global Climate Risk Index, 2021 67
Figure 2.8. The projected effect of climate change on GDP by 2047 in selected OECD and ASEAN countries 67
Figure 2.9. Daily new confirmed COVID 19 cases per million people in Southeast Asia and selected OECD countries, March-November 2022 69
Figure 2.10. Working hours lost due to COVID 19 in Southeast Asia and selected OECD countries, 2021 70
Figure 2.11. Potential workforce transition to remote working arrangements among ASEAN countries, 2020 71
Figure 2.12. Government debt levels in Southeast Asia and selected OECD countries, December 2020 72
Figure 3.1. Number of years of free and compulsory education guaranteed in legal frameworks in Southeast Asia and selected OECD countries, 2022 83
Figure 3.2. Gross enrolment rates in pre-primary education in Southeast Asia and selected OECD countries, 2000 and 2019 85
Figure 3.3. Gross enrolment rates in primary and secondary education in Southeast Asia and selected OECD countries, 2000 and 2019 86
Figure 3.4. Enrolment rates in technical and vocational programmes in Southeast Asia and selected OECD countries, 2000 and 2019 87
Figure 3.5. Gross enrolment rates in tertiary education, Southeast Asia and selected OECD countries, 2000 and 2019 88
Figure 3.6. Access to formal training provided by employers by firm size and ownership in Southeast Asia, latest available year 89
Figure 3.7. Average performance in reading, mathematics and science for 15-year-old students in Southeast Asia and selected OECD countries, 2018 90
Figure 3.8. Literacy rates among youth and adults in Southeast Asia, latest available year 91
Figure 3.9. Youth and adults aged 15 or over with digital skills in Southeast Asia and selected OECD countries, 2019 92
Figure 3.10. Lower secondary completion rates in Southeast Asia and selected OECD countries, 2018 94
Figure 3.11. Access to early learning environments at home in Southeast Asia, 2019 96
Figure 3.12. Self-reported levels of digital literacy in ASEAN countries, 2021 99
Figure 3.13. Gross attendance rates at the tertiary level in Southeast Asia, by location, sex, and wealth quintile, latest available year 104
Figure 3.14. Qualified teachers at different levels of education in Southeast Asia, latest available year 109

Figure 3.15. Pupil-teacher ratio by level of education in Southeast Asia and selected OECD countries, latest available year 111
Figure 3.16. Difference in shortages of educational materials and staff by school socio-economic profile, Southeast Asia and selected OECD countries, 2018 114
Figure 3.17. Relationship between educational funding and PISA reading performance, 2018 117
Figure 3.18. Initial government funding per level of education in Southeast Asia and selected OECD countries, latest available year 118
Figure 3.19. Skills needs in Southeast Asia and selected OECD countries, 2019 124
Figure 3.20. Tertiary graduates in science, technology, engineering, and mathematics programmes in Southeast Asia and selected OECD countries, 2010 and 2020 126
Figure 3.21. Acquisition of essential workplace skills among young workers aged 15-35 years old in Southeast Asia, 2018 127
Figure 3.22. Students in schools with one or more dedicated counsellor(s), Southeast Asia and selected OECD countries, 2018 132
Figure 4.1. Labour force participation rates across socio-demographic groups in Southeast Asia and selected OECD countries, 2021 or latest available year 159
Figure 4.2. Share of workers mismatched by qualification level and field of study in Southeast Asia and selected OECD countries, 2017 or latest available year 161
Figure 4.3. Information-processing skills used at work in Southeast Asia and selected OECD countries, 2012/2015 161
Figure 4.4. Share of people who volunteered time to an organisation in the past month in Southeast Asia and selected OECD countries, 2019 163
Figure 4.5. Information-processing skills used in everyday life in Southeast Asia and selected OECD countries, 2012/2015 163
Figure 4.6. Gender gap in time spent on unpaid work in Southeast Asia and selected OECD countries, 2019 167
Figure 4.7. Rate of informal employment in Southeast Asia, 2021 174
Figure 4.8. Ease of registering a new business in Southeast Asia and selected OECD countries, 2019 176
Figure 4.9. Relationship between the use of reading skills at work and the adoption of HPWPs, 2018 181
Figure 4.10. Reliance on professional management in Southeast Asia and selected OECD countries, 2019 184
Figure 4.11. Global Innovation Index, Southeast Asia and selected OECD countries, 2020 189
Figure 4.12. R&D spending in Southeast Asia and selected OECD countries, 2019 190
Figure 4.13. Entrepreneurial activity in Southeast Asia and selected OECD countries, 2018 194
Figure 4.14. Female and male self-employment rates in Southeast Asia and selected OECD countries, 2019 196
Figure 5.1. Regional Authority Index, Southeast Asian countries and selected OECD countries, latest available year 217
Figure 5.2. Collective bargaining coverage rates in Southeast Asian countries and selected OECD countries, 2016 219
Figure 5.3. Civil society capacity and participation in policy formulation in Southeast Asian countries and selected OECD countries, 2022 220
Figure 5.4. Availability and accessibility of information: Right to information vs. publicised laws and government data in Southeast Asian countries and selected OECD countries, 2020 221
Figure 5.5. Government expenditure on education per student in Southeast Asian countries and selected OECD countries, latest available year 222
Figure 5.6. Trade union density in Southeast Asian countries and selected OECD countries, 2016 234
Figure 5.7. Political participation of women in Southeast Asian governments, 2018 242
Figure 5.8. Initial household funding on education in Southeast Asia and selected OECD countries, latest available year 261
Figure 5.9. Educational expenditure by nature of spending in public educational institutions in Southeast Asia and selected OECD countries, 2019 or latest available year 268

TABLES

Table 1.1. ASEAN policies and strategies relevant to skills 28
Table 1.2. Opportunity 1: Broadening access to skills development 29
Table 1.3. Opportunity 2: Increasing excellence and equity in skills development 30
Table 1.4. Opportunity 3: Developing skills that matter 30
Table 1.5. Opportunity 1: Promoting participation in the labour market 31
Table 1.6. Opportunity 2: Making intensive use of skills in work and society 31

Table 1.7. Opportunity 3: Increasing demand for higher-level skills 32
Table 1.8. Opportunity 1: Promoting a whole-of-government approach 32
Table 1.9. Opportunity 2: Promoting a whole-of-society approach 32
Table 1.10. Opportunity 3: Building integrated information systems 33
Table 1.11. Opportunity 4: Aligning and co-ordinating financial arrangements 33
Table 3.1. Overview of Southeast Asian government agencies responsible for education and training 83
Table 3.2. Measures targeting populations at risk of exclusion from digital education platforms in Southeast Asia and selected OECD countries, 2021 98
Table 3.3. Support for teachers in Southeast Asia and selected OECD countries to transition to remote teaching in 2020 onwards 112
Table 3.4. Skills and knowledge areas measured by school-based assessment exercises at the primary and secondary levels 120
Table 3.5. Overview of available career guidance services in Southeast Asia 131
Table 3.6. Financial incentives for participation in adult learning: Examples from ASEAN and OECD countries 134
Table 4.1. Overview of Southeast Asian government agencies responsible for employment and skills use policies 156
Table 4.2. Recent ASEAN initiatives to promote intensive skills use in work and society 157
Table 4.3. Adjusted employment services in response to the COVID-19 crisis in Southeast Asia and selected OECD countries, 2021 165
Table 4.4. ASEAN-wide initiatives promoting formal labour market participation of vulnerable groups 166
Table 4.5. Online platforms for registering workers and businesses in Southeast Asia 177
Table 4.6. Government financial support for R&D in Southeast Asia 190
Table 4.7. Government initiatives and programmes that promote entrepreneurship in Southeast Asia 194
Table 4.8. Differences between men and women in starting businesses and signing contracts in ASEAN countries, 2021 197
Table 5.1. Main national-level skills government institutions in Southeast Asian countries 216
Table 5.2. Examples of skills-related inter-ministerial oversight bodies in Southeast Asian countries 224
Table 5.3. Skills as a priority in Southeast Asian countries' development plans 227
Table 5.4. Horizontal co-ordination in Southeast Asian countries’ key policy documents 228
Table 5.5. Representation of employers in Southeast Asia 234
Table 5.6. Measures in place to foster a whole-of-society approach to skills policies in Southeast Asian countries 236
Table 5.7. Bodies enabling the participation of employers and trade unions in skills policies 237
Table 5.8. Civil society actors in Southeast Asian skills policies 241
Table 5.9. Youth representation and participation in governance bodies in Southeast Asia 243
Table 5.10. Southeast Asia’s participation in selected international surveys 250
Table 5.11. Data integration measures in Southeast Asia’s national data strategies 254
Table 5.12. Legal frameworks for data in Southeast Asia 254
Table 5.13. Overview of skills assessment and anticipation exercises 256
Table 5.14. Types of financial incentives for employers 262
Table 5.15. Type of levies 262
Table 5.16. Overview of funding transfer mechanisms 265
Table 5.17. Policies and programmes to provide resources to disadvantaged learners in Southeast Asia 266

Annex Table 1.A.1. The OECD Skills Strategy Dashboard: Dimensions, indicators, and sources 35
Annex Table 1.B.1. Opportunity 1: Broadening access to skills development 37
Annex Table 1.B.2. Opportunity 2: Increasing excellence and equity in skills development 38
Annex Table 1.B.3. Opportunity 3: Developing skills that matter 39
Annex Table 1.B.4. Opportunity 1: Promoting participation in the labour market 40
Annex Table 1.B.5. Opportunity 2: Making intensive use of skills in work and society 41
Annex Table 1.B.6. Opportunity 3: Increasing demand for higher-level skills 41
Annex Table 1.B.7. Opportunity 1: Promoting a whole-of-government approach 42
Annex Table 1.B.8. Opportunity 2: Promoting a whole-of-society approach 43
Annex Table 1.B.9. Opportunity 3: Building integrated information systems 44
Annex Table 1.B.10. Opportunity 4: Aligning and co-ordinating financial arrangements 44

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Abbreviations and acronyms

The following are the main acronyms cited in the report.

Abbreviation/acronym	Full description
AI	Artificial intelligence
ASEAN	Association of Southeast Asian Nations
BLK	Balai Latihan Kerja (Indonesia)
BTI	Bertelsmann Transformation Index
CAPE	Confederation of Asia-Pacific Employers
CVS	Community volunteer supplement
DepEd	Department of Education (Philippines)
ECEC	Early childhood education and care
EHIS	Education Information System (Estonia)
ESCS	Economic, social and cultural status
FDI	Foreign direct investment
FDWs	Foreign domestic workers
FTAs	Free trade agreements
GDP	Gross domestic product
GMAP	Gender mainstreaming action plan
GMS	Greater Mekong Subregion
GVC	Global value chain
HPWPs	High-performance workplace practices
ICT	Information and communication technology
ILO	International Labour Organization
iNEIS	Integrated National Education Information System (Brunei Darussalam)
INSEAD	Institut Européen d'Administration des Affaires
IT	Information technology
JSP	JobStart Philippines Programme
MRAs	Mutual recognition agreements
MRCs	Migrant worker resource centres
MSMEs	Micro, small and medium-sized enterprises
NEET	Not in education, employment, or training
NGOs	Non-governmental organisations
NYC	National Youth Council (Singapore)
ODA	Official development assistance
OOSC	Out-of-school children
PES	Public employment services
PIAAC	Programme for the International Assessment of Adult Competencies
PISA	Programme for International Student Assessment
PISA-D	PISA for Development
R&D	Research and development
RCEP	Regional Comprehensive Economic Partnership

Abbreviation/acronym	Full description
SAMC	Social Affairs Ministers' Committee (Korea)
SBM	School-based management
SCORE	Sustaining Competitive and Responsible Enterprises (Viet Nam)
SEAMEO	Southeast Asian Ministers of Education Organization
SEA-PLM	Southeast Asia Primary Learning Metrics
SENAI	Serviço Nacional de Aprendizagem (National Industrial Apprenticeship Service) (Brazil)
SIP	Settling-In Programme (Singapore)
SMEs	Small- and medium-sized enterprises
SSCs	Skills sectoral councils
STEM	Science, technology, engineering and mathematics
TACs	Technology access centres (Canada)
TESDA	Technical Education and Skills Development Authority (Philippines)
TIMMS	Trends in International Mathematics and Science Study
TVET	Technical and vocational education and training
UCLG	United Cities and Local Governments
UIAPs	University industry advisory panels (Malaysia)
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization
WIPO	World Intellectual Property Organization

Executive summary

OECD-Southeast Asia collaboration on the OECD Skills Strategy project

This *OECD Skills Strategy Southeast Asia* identifies priority areas for action for Southeast Asia and provides tailored recommendations for improving its skills outcomes. The Skills Strategy has benefited from the insights of a wide range of government and stakeholder representatives through the OECD Policy Questionnaire, written input on performance within the three dimensions of the strategy and stakeholder consultations with a wide variety of actors in Southeast Asia. This process provided invaluable input that shaped the findings and recommendations in this report.

Key findings and opportunities for improving Southeast Asia's skills system

In Southeast Asia, megatrends such as globalisation, technological progress, demographic changes, migration and climate change are transforming jobs, the way society functions and how people interact. These megatrends have many repercussions in Southeast Asia, including for workers struggling to reskill and upskill quickly enough to adapt to changes in the world of work, and employers who often encounter difficulties in finding the skills they need as productivity becomes a more important driver of the region's economic growth. The coronavirus (COVID-19) crisis has accelerated the digitalisation of learning and work, disrupted the economy and increased the risk of inequalities in education and labour markets in Southeast Asia. The Russian Federation's 2022 invasion of Ukraine has led to high volatility in the stock market, contributing to a rise in inflation and wage pressures, which further exacerbate prevalent skills shortages in Southeast Asia's economy.

These megatrends and challenges reinforce the need for Southeast Asia to design forward-looking and dynamic skills policies. To thrive in the world of tomorrow, people in Southeast Asia, especially those from disadvantaged groups, need access to high-quality opportunities to develop and use their skills over the life course, which would help them transition out of informality, boost productivity and promote individual and societal well-being. In line with these goals, Southeast Asia has already implemented a range of relevant strategies at the regional level: the Association of Southeast Asian Nations (ASEAN) Comprehensive Recovery Framework and its Implementation Plan (2020), the ASEAN Declaration on Human Resources Development for the Changing World of Work and Its Roadmap (2020), and the Consolidated Strategy on the Fourth Industrial Revolution for ASEAN (2021), among many other strategies, that have a strong focus on skills. In the context of Southeast Asia's ongoing medium- and long-term planning initiatives, the region has a unique window of opportunity to put skills at the top of the agenda to positively influence the megatrends, tackle the challenges and seize the opportunities facing the region.

To support these efforts, the performance of countries in Southeast Asia has been assessed against the three dimensions of the OECD Skills Strategy. These dimensions and the key findings are summarised below.

Dimension 1: Developing relevant skills over the life course

To improve their performance in developing relevant skills over the life course, Southeast Asian countries need to expand the offer for high-quality education and training opportunities, especially at higher levels of education and later stages of life, and to reduce barriers to participation for all. Particular attention must be paid to facilitating participation among key vulnerable groups in the region, such as informal workers, women, learners from remote rural areas, low-skilled adults, migrants, individuals from ethnic and cultural minorities, and learners with disabilities, among others. This requires stronger collaboration with a wide range of stakeholders, including from industry, to ensure an alignment between training offers and labour market demands, as well as the improvement of the quality of learning through increased human, financial and data capacities of countries in the region. Southeast Asia can improve its performance in this area by:

- broadening access to skills development
- increasing excellence and equity in skills development
- developing skills that matter.

Dimension 2: Using skills effectively in work and society

To boost economic development and foster social cohesion, Southeast Asia needs to promote participation in the labour market and facilitate the full use of people's skills at work and in society. Countries in the region still face multiple barriers to formal employment, especially among disadvantaged groups, and the use of skills in everyday life, such as through civic engagement and leisure activities, could be improved. There is a need to increase awareness about economic and societal benefits that accrue from both adopting high-performance workplace practices (HPWPs) and participating more fully in civic life, as well as to encourage these actions among firms and individuals respectively. As the region aims to move up global value chains and boost economic growth, fostering demand for higher-level skills and creating opportunities for innovation and entrepreneurship will be important. Southeast Asia can improve its performance in this area by:

- promoting participation in the formal labour market
- making intensive use of skills in work and society
- increasing demand for higher-level skills.

Dimension 3: Strengthening the governance of skills systems

Southeast Asia's skills systems could benefit from a more comprehensive approach to skills governance, where a shared understanding of skills-related objectives is fostered among relevant ministries and across all levels of governance. More could be done to increase engagement with stakeholders outside of government, such as with employer organisations, trade unions, and civil society groups, to make skills policies more inclusive and better aligned with labour market needs. Co-ordination among a wide range of these actors inside and outside of government could be improved to help the region respond to various challenges in its skills systems, such as the lack of data that could better inform skills policies, and inadequate financial arrangements to implement skills policies. Southeast Asia can strengthen the governance of its skills systems by:

- promoting a whole-of-government approach
- promoting a whole-of-society approach
- building integrated information systems
- aligning and co-ordinating financial arrangements.

1 Key insights and recommendations for Southeast Asia

This chapter summarises the context, key insights and policy recommendations of the OECD Skills Strategy project in Southeast Asia. It applies the OECD Skills Strategy Framework to provide a high-level assessment of the performance of Southeast Asia's skills system. The chapter provides an overview of: 1) responding to the skills implications of megatrends and COVID-19; 2) developing relevant skills over the life course; 3) using skills effectively in work and society; and 4) strengthening the governance of skills systems. The chapter summarises the related key findings and recommendations. Subsequent chapters provide more details on the opportunities for improvement, good practices and policy recommendations for Southeast Asia.

Skills matter for Southeast Asia

Skills are vital for enabling individuals and countries to thrive in an increasingly complex, interconnected and rapidly changing world. Countries in which people develop strong skills, learn throughout their lives and use their skills fully and effectively at work and in society are more productive and innovative and enjoy higher levels of trust, better health outcomes and a higher quality of life.

As new technologies and megatrends increasingly shape our societies and economies, getting skills policies right becomes even more critical for ensuring societal well-being and promoting inclusive and sustainable growth. The coronavirus (COVID-19) crisis has accelerated the digitalisation of learning and work and risks increasing inequalities in education and labour markets. For Southeast Asia, implementing a strategic approach to skills policies is essential to support the region's efforts to boost economic recovery and to build a resilient and adaptable skills system. Southeast Asia must build the foundations today for a more inclusive, prosperous and healthy future through strategic investments in the skills of its people.

Skills are essential for Southeast Asia's response to global megatrends and COVID-19

In Southeast Asia, as in OECD countries, megatrends such as globalisation, technological progress, demographic change, migration and climate change, and most recently, COVID-19, are transforming jobs, the way society functions and how people interact. To thrive in the world of tomorrow, people will need a stronger and more well-rounded set of skills. These include foundational skills; cognitive and meta-cognitive skills; social and emotional skills; and professional, technical, and specialised knowledge and skills. Southeast Asia will also need to make better use of people's skills in the labour market and in individual workplaces.

Globalisation has led to the emergence of global value chains (GVCs). GVCs 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, and have thus attracted significant investments in services, trade, communication and manufacturing sectors (OECD-UNIDO, 2019[1]). When Southeast Asian countries have a highly skilled workforce, this enables them to participate in the higher end of the global production chain characterised by high-skilled activities. Participation in GVCs can lead to productivity gains, but achieving those gains is dependent on Southeast Asian countries having people with the right sets of skills.

New technologies and digital infrastructure are spreading rapidly throughout Southeast Asian countries. Many Southeast Asian countries attract new technologies to accelerate industrialisation and economic development. The region is projected to be one of the world's fastest-growing data centre markets in the next few years, exceeding the growth in North America and the rest of the Asia-Pacific (ASEAN Secretariat and UNCTAD, 2019[2]). Technological progress has been accelerated by the COVID-19 pandemic, as fear of the spread of the virus and social distancing measures have made online interactions at work and everyday life more common (Google, Temasek and Bain & Company, 2021[3]). Individuals, firms and countries that can harness this new wave of technological progress stand to benefit greatly, but only if they have a broad mix of skills, including cognitive (e.g. problem solving), socio-emotional (e.g. communication, teamwork) and digital skills (OECD, 2019[4]).

Southeast Asian countries continue to experience unprecedented and sustained change in the age structure of their populations. Life expectancy is increasing, while fertility is decreasing, driven by improved living standards. In many Southeast Asian countries with relatively youthful populations, greater investment in the skills of youth can dramatically improve their skills profiles, increasing their productivity and competitiveness, and, by extension, help them to move up the GVC in the longer term. Currently, the share of older people over 65 in the population is, on average, lower across Southeast Asian countries (10.7%) than in OECD countries (17.3%) (OECD, 2022[5]). However, the speed of population ageing is increasing, and the share of older people over 65 years old in total population is projected to be over 27%

in Southeast Asia by 2050 (UN DESA, 2019[6]). Increased life expectancy and improving 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. 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[7]).

Southeast Asian countries are significant sources of both migrant inflows and outflows. Brunei Darussalam, Malaysia, Singapore and Thailand are countries with net migrant inflows, while Cambodia, Indonesia, Lao People's Democratic Republic (hereafter "Lao PDR"), Myanmar, the Philippines and Viet Nam have net migrant outflows (Migration Policy Institute, 2020[8]). Migrants increase the supply of skills and can contribute to economic growth in their host country if their skills are well used. When individuals with high skills emigrate, this can be a loss to the origin country due to increased labour shortages in important sectors. However, it can also be a gain due to remittances and useful know-how, skills, and networks for the economy, if the individuals return (OECD, 2019[7]). As Southeast Asian countries have different demographic profiles, with the size of workforces growing in some and declining in others, more circular migration in the region could be beneficial for all. In addition, managing migration better can boost workers' welfare and accelerate economic integration.

Climate change is a priority for Southeast Asian countries. The region is vulnerable to floods, droughts, heat waves, typhoons and rising sea levels and their projected adverse impacts on gross domestic product (GDP). Climate change affects skills development, usage and skills demand in various ways. Learning and work could be interrupted by direct channels, such as the closure of schools and workplaces, damages to relevant infrastructure, and the relocation of families, as well as by indirect channels, such as the onset of various health issues due to climate-change-induced increases in precipitation and the rise of temperatures (UNICEF, 2019[9]; ADB, 2017[10]). When countries transition towards green economies and create new "green jobs", sufficient reskilling and upskilling opportunities are crucial to creating a workforce that can support such a transition, as well as helping vulnerable workers find new job opportunities in emerging sectors (ILO, 2017[11]; Martinez-Fernandez, Hinojosa and Miranda, 2010[12]; ILO, 2019[13]).

The COVID-19 pandemic has disrupted progress and may exacerbate systemic challenges

The COVID-19 pandemic has significantly impacted all countries in Southeast Asia. There have been widespread impacts on countries' economic development, social systems and public well-being. The first COVID case was reported in the region as early as January 2020, with all Southeast Asian countries reporting at least one case by March 2020. While many of the countries managed to contain the spread of the virus during the first wave of the pandemic, the emergence of variants, particularly B.1.617.2 (Delta), accelerated the rate of infection in the region. As of 10 May 2022, a total of over 3 million cases had been reported in the region, representing an infection rate of 9 480 cases per 100 000 population – higher than the equivalent at the global level (6 609 cases), but much lower than across OECD countries (30 486 cases). Rates of full vaccination (as of November 2022) vary widely across countries – from as low as 50.6% in Myanmar to as high as 101.9% in Brunei Darussalam – with the Association of Southeast Asian Nations (ASEAN) average (77.8%) performing slightly better than that of the OECD (74%) (WHO, 2022[14]).

COVID-19 has significantly impacted Southeast Asian economies, slowing down the impressive growth many countries had been experiencing prior to the pandemic. All countries experienced drops in real GDP growth rates from 2019 to 2020, with the worst-hit economies being the Philippines (-9.6%), Thailand (-6.1%) and Malaysia (-5.6%) (IMF, 2022[15]). In 2021, the pandemic wiped out an estimated 9.3 million jobs and pushed 4.7 million people into extreme poverty in Southeast Asia, many of them being low-skilled workers and those employed in agro-processing, garments, retail and tourism, the informal

economy and businesses with low digitalisation uptake. While countries have begun to slowly recover, the region's economic output in 2022 is projected to remain 10% weaker than that of a scenario without COVID-19 (ADB, 2022[16]; 2022[17]; The Asia Foundation, 2020[18]).

The pandemic has greatly affected the way skills are being developed and used in Southeast Asia, exacerbating existing skills imbalances in the region. School closures and social distancing measures have shifted education on line, putting at risk students without access to reliable Internet, digital devices and conducive learning environments at home. The pandemic has also led to reductions in informal and non-formal learning opportunities, including internships, apprenticeships and work-based learning programmes (OECD, 2020[19]). Moreover, the intensity of skills use in workplaces has dropped significantly, with member countries of the Association of Southeast Asian Nations (ASEAN) experiencing an average 7.3% loss in working hours due to COVID-19 – higher than OECD countries with available data, including Australia, Germany, Korea and Japan (ILOSTAT, 2021[20]). Containment measures have also led to increases in remote work, which have led to benefits, such as reductions in commuting time, but also challenges in employee well-being and productivity (Eurofound and ILO, 2017[21]; Messenger, 2019[22]).

Skills should be at the core of Southeast Asia's policy response

Megatrends and shocks, such as the COVID-19 pandemic, reinforce the need for Southeast Asia to design forward-looking and dynamic skills policies. To thrive in the world of tomorrow, people will need a comprehensive set of skills (Box 1.1). Strong foundational skills will make people more adaptable and resilient to changing skills demands. Digital, transversal, social and emotional, and job-specific skills (OECD, 2019[7]) are becoming increasingly essential for individuals to succeed in learning, work and life. High-quality learning across the life course should be accessible for everyone to enable full participation in society and to successfully manage transitions in the labour market. Adults need continuous opportunities to upskill and reskill, and learning providers need to create more flexible and blended forms of learning to accommodate this. Firms must adopt more creative and productive ways of using their employees' skills. Finally, robust governance structures are needed to ensure that skills reforms are effective and sustainable.

Box 1.1. A wide range of skills are needed for success in work and life

The *OECD Skills Strategy 2019* identifies a broad range of skills that matter for economic and social outcomes, including:

- **Foundational skills**: Including literacy, numeracy, and digital literacy.
- **Transversal cognitive and meta-cognitive skills**: Including critical thinking, complex problem solving, creative thinking, learning to learn and self-regulation.
- **Social and emotional skills**: Including conscientiousness, responsibility, empathy, self-efficacy and collaboration.
- **Professional, technical, and specialised knowledge and skills**: Needed to meet the demands of specific occupations.

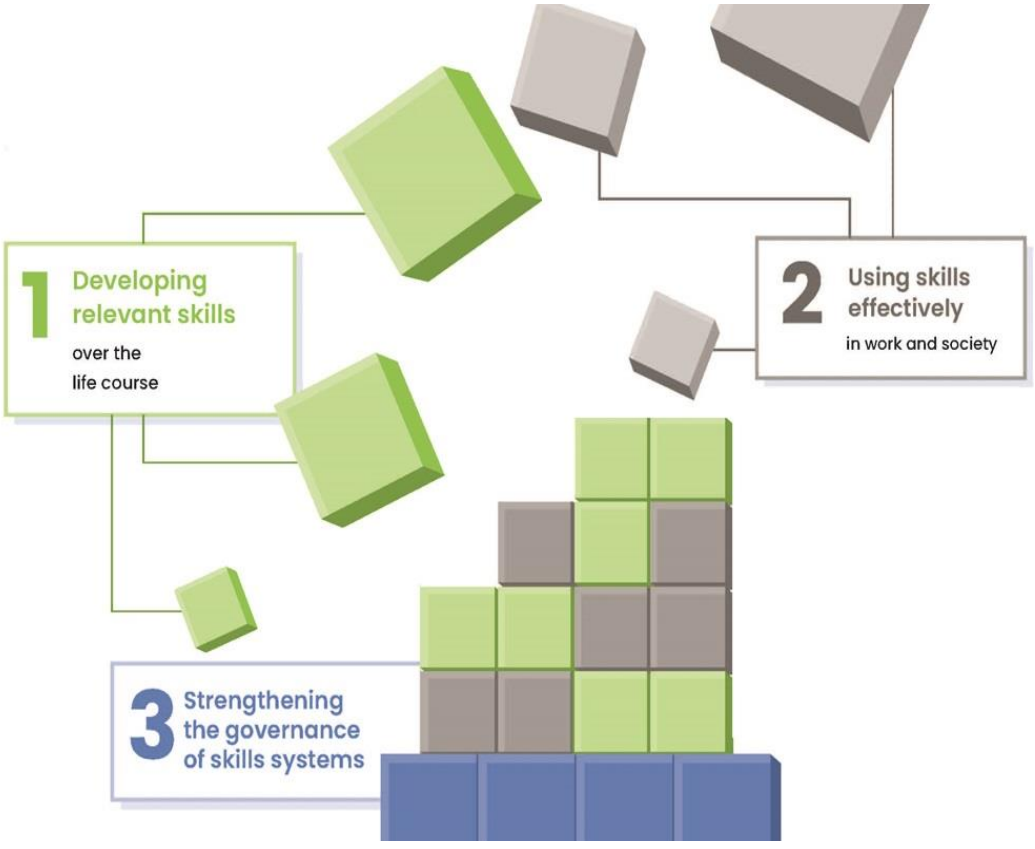
Source: OECD (2019[7]), *OECD Skills Strategy 2019: Skills to Shape a Better Future*, https://dx.doi.org/10.1787/9789264313835-en.

The OECD Skills Strategy project in Southeast Asia

The OECD Skills Strategy Framework provides countries with a comprehensive model for analysing the performance of countries' skills systems, benchmarking performance internationally and exploring good practices internationally. The framework has three key dimensions (Figure 1.1):

- **Developing relevant skills over the life course**: To ensure that countries can adapt and thrive in a rapidly changing world, all people need access to opportunities to develop and maintain strong proficiency in a broad set of skills. This process is lifelong, starting in childhood and youth and continuing throughout adulthood. It is also "life-wide", occurring both formally in schools and higher education and non-formally and informally in the home, community and workplaces.
- **Using skills effectively in work and society**: Developing a strong and broad set of skills is just the first step. To ensure that countries and people gain the full economic and social value from investments in developing skills, people also need opportunities, encouragement and incentives to use their skills fully and effectively at work and in society.
- **Strengthening the governance of skills systems**: Success in developing and using relevant skills requires strong governance arrangements to promote co-ordination, co-operation and collaboration across the whole of government; engage stakeholders throughout the policy cycle; build integrated information systems; and align and co-ordinate financial arrangements. The OECD Skills Strategy project for Southeast Asia adopted this approach by forming an interdepartmental project team to support the whole-of-government approach to skills policies and by engaging a broad variety of stakeholders.

Figure 1.1. The OECD Skills Strategy Framework



Source: OECD (2019[7]), *OECD Skills Strategy 2019: Skills to Shape a Better Future*, https://dx.doi.org/10.1787/9789264313835-en.

This report was prepared after the initial outbreak of the COVID-19 pandemic and makes recommendations that could facilitate Southeast Asia's recovery, as well as recommendations to build the performance and resilience of Southeast Asia's skills system in the longer term.

Overall, the OECD Skills Strategy project in Southeast Asia engaged around 115 participants who represented ministries and agencies, municipalities, education providers, employers, workers, researchers and other sectors. From January to November 2022, 20 bilateral meetings were held with regional actors, such as the ASEAN Secretariat, the ASEAN Trade Union Council, the ASEAN Technical and Vocational Education and Training (TVET) Council, the Southeast Asian Ministers of Education Organization (SEAMEO), and ASEANstats, among others, as well as with national government agencies, including ministries responsible for education and employment, and national statistics offices. Key development partners in the region were also consulted, including international development agencies and research centres. The bilateral meetings sought to enrich the report with local insights and help the OECD team develop a deeper and more nuanced understanding of each country's skills challenges and opportunities.

Furthermore, through the ASEAN TVET Council, the OECD Skills Strategy Southeast Asia Policy Questionnaire was administered to relevant government agencies and stakeholders to gather cross-country comparative data on various topics, including education and employment measures adopted in response to the COVID-19 pandemic. Responses were received from five countries (Cambodia, Malaysia, Myanmar, Singapore and Viet Nam).

The OECD also organised the Southeast Asia Regional Policy Network on Education and Skills, with the 11th meeting taking place in November 2021 and the 12th meeting in November 2022. Each meeting convened approximately 80 participants from ASEAN, partner countries in Southeast Asia, OECD countries and international organisations. The 11th meeting focused on Southeast Asian countries' skills responses to COVID-19 and the strategies they adopted in response to global megatrends, while the 12th meeting discussed skills in partnership. Both events informed the report by promoting exchanges between OECD and Southeast Asian countries on best policy practices and areas for co-ordinated intervention.

The performance of Southeast Asia's skills system

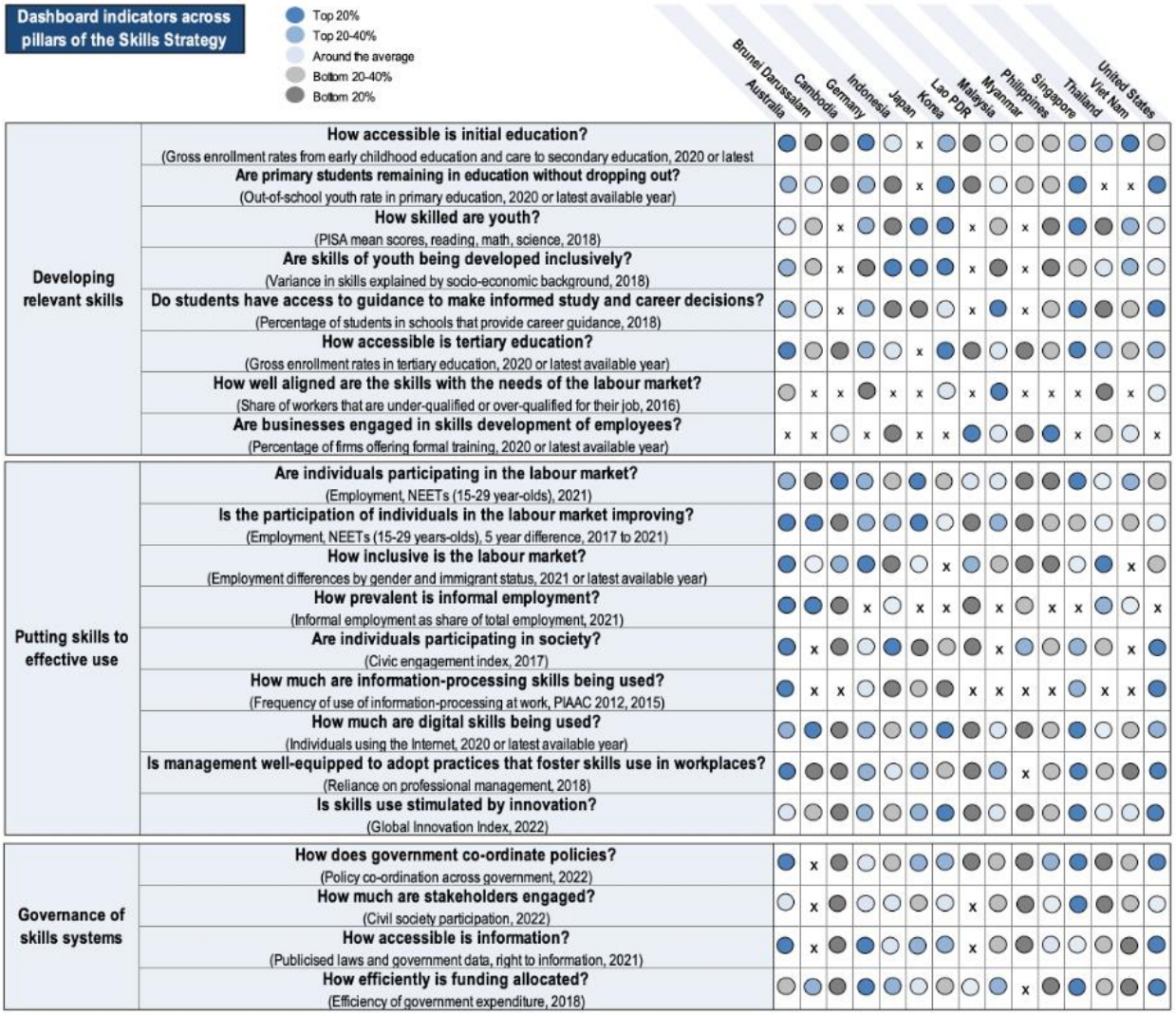
The OECD Skills Strategy Dashboard provides an overview of the relative performance of countries across the dimensions of the OECD Skills Strategy (Figure 1.2). For each dimension of the strategy, there are a number of indicators, some of which are composite indicators, which provide a snapshot of each country's performance (see Figure 1.2 for the indicators).

Developing relevant skills over the life course

Access to skills development has improved at all levels of education, but many barriers remain, especially for disadvantaged groups

Southeast Asian countries have made considerable progress in increasing participation in skills development over the life course. Figure 1.3 presents the key indicators of the dimension "Developing relevant skills over the life course" in the dashboard presented in Figure 1.2and shows the average performance of ASEAN countries and OECD countries relative to each other. Over the years, countries in Southeast Asia have succeeded in boosting enrolment rates in early childhood education and care (including pre-primary education), compulsory education, TVET, tertiary education and adult learning. However, at all levels, enrolment rates in Southeast Asia still generally fall behind those of OECD countries, and out-of-school children rates are nearly four times larger in the region than in the OECD. Participation in skills development also tends to be lower at later stages of life, such as in tertiary education and adult learning. For instance, while average 2019 enrolment rates throughout Southeast Asia were high at the primary (103.4%) and secondary (84.3%) levels, the rates at the tertiary level (36%) are far lower (World Bank, 2021[23]).

Figure 1.2. OECD Skills Strategy Dashboard: Southeast Asia and selected benchmarking countries, 2022

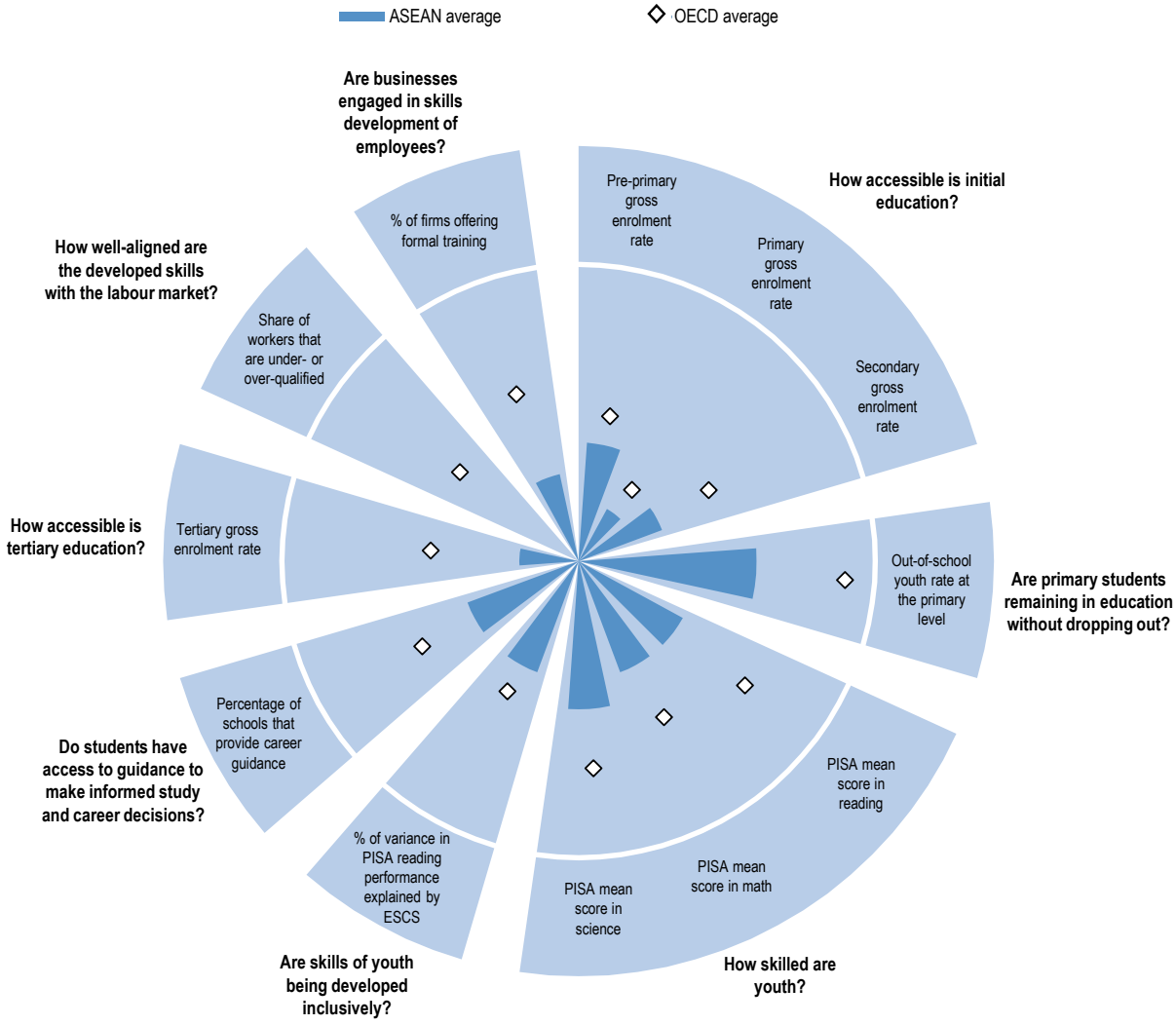


Note: The Skills Strategy Dashboard has a focus on outputs of the skills system. Colours in the dashboard represent the quintile position of the country in the ranking, and "x" indicates insufficient or no available data for the underlying indicators. See Annex Table 1.A.1 in Annex 1.A1 for a more detailed analysis and an overview of the underlying indicators. The ranking of ASEAN countries is relative to other ASEAN countries and the five benchmarking OECD countries (Australia, Germany, Japan, Korea and the United States).

Participation in skills development over the life course remains highly unequal across groups in Southeast Asia. Consistently across all levels of education, access to learning is limited for learners from low-income households, remote areas, ethnic minorities and learners who have disabilities (SEAMEO INNOTECH, 2021[24]; The HEAD Foundation, 2022[25]). Moreover, among the working-age population, access to training remains limited, with only 48.8% of large firms, 36.1% of medium-sized firms, and 16.8% of small firms offering training to their employees (World Bank, 2020[26]). Moreover, the lack of access to training among workers in Southeast Asia's sizeable informal economy is one of the region's principal policy concerns. It is estimated that there are about 244 million informal workers throughout the region who do not have access to social security or employment benefits, including employer-sponsored training (ASEAN, 2022[27]; ASEAN Secretariat, 2019[28]; OECD, 2021[29]).

Figure 1.3. Performance of ASEAN countries and OECD countries in developing relevant skills, 2022

Relative position in country ranking (based on normalised scores), where higher value reflects better performance



Note: ESCS stands for economic, social and cultural status. OECD average is based on the performance of the 38 OECD countries.
How to read this figure: The normalised scores indicate the relative performance, 0 for weakest performance and 10 for strongest performance across OECD countries. The further away from the core of the chart, the better the performance.
Source: See Annex Table 1.A.1 in Annex 1.A1 for an explanation of sources and methodology.

Improving the quality of learning – both in school and at home – is a key policy concern in Southeast Asia

The skills performance of Southeast Asian learners remains low in international comparison, raising questions about the quality of education. For instance, the performance of Southeast Asian students in the latest round of the Programme for International Student Assessment (PISA) in 2018 remained well below the OECD average in reading, mathematics and science, although Singapore was a top-performing country (OECD, 2019[30]). Literacy, especially among adults, has not reached universal

rates in the region (89.9%) and remains relatively low in certain countries, such as Lao PDR (70.4%), Cambodia (81.9%) and Myanmar (88.9%) (World Bank, 2022[31]). Moreover, digital literacy is a key policy concern, especially as economic activities become more dependent on technology. Only 28% of youth and adults in Southeast Asia possess the digital skills needed in the workplace compared to 44.5% across OECD countries (UNESCO Institute for Statistics, 2021[32]).

Material and human resource limitations in schools, especially in disadvantaged areas, negatively impact students' skills outcomes. For instance, only 34% of children in Cambodia, 56% in Lao PDR and 58% in Myanmar had access to a classroom library. The lack of learning materials is especially pronounced in rural areas, which risks widening location-based equity gaps in education (UNICEF and SEAMEO INNOTECH, 2022[33]; Oblina, Linh and Phuong, 2021[34]). In addition, large class sizes and varying student profiles (in terms of language and skill level) make it difficult for teachers to provide well-tailored and focused instruction to their students (UNICEF and SEAMEO INNOTECH, 2022[33]).

In addition to challenging conditions in schools, the lack of stimulating learning environments at home contributes to the low performance of Southeast Asian learners. Children from low-income households often do not have access to learning materials, such as books and playthings. Those in the poorest quintile are 28.2 percentage points less likely to live in a positive and stimulating home than children in the wealthiest quintile (UNICEF, ILO and WIEGO, 2021[35]). Parents who are migrants or work in the informal economy with long and unregulated working hours are less able to support the development of children's skills and engage in healthy learning relationships with them (UNICEF, ILO and WIEGO, 2021[35]). Moreover, the lack of digital infrastructure and devices has made it difficult for many disadvantaged learners to continue participating in education in the context of the COVID-19 pandemic (UNICEF and ASEAN, 2021[36]).

Southeast Asia needs to better ensure people develop skills that are in line with evolving skills demands

Considering rapid changes in labour markets, Southeast Asian countries must ensure students' access to relevant and higher-level skills. Enrolment in educational programmes in key sectors, such as those related to science, technology, engineering and mathematics (STEM) at the tertiary level, has increased in all countries over the last decade by an average of 6.8 percentage points (UNESCO Institute for Statistics, 2021[32]). Despite this progress, the content of tertiary education curricula remains outdated in many cases, and many higher education institutions lack the infrastructure and human resources needed to adequately develop emerging and highly technical skills (CISCO and Oxford Economics, 2018[37]; ASEAN University Network, 2017[38]; Cunningham et al., 2022[39]).

Offering better skills, labour market information and more guidance counsellors can help the Southeast Asian workforce develop relevant skills and reduce skills mismatches. At present, skills mismatches by level of qualification and field of study are significant in countries with available data (i.e. Singapore and Thailand). Under-qualifications are prevalent in Singapore, where 20% of workers are under-qualified, while over-qualifications are highest in Thailand, where 34% of workers are over-qualified for their jobs. Field-of-study mismatches are significantly high in both countries: 43% in Singapore and 37.3% in Thailand (OECD, 2019[40]). In addition to these current mismatches, an estimated 6.6 million Southeast Asian workers will become redundant over the next decade, as they are in jobs that will disappear due to technological advancements, highlighting the need for targeted career guidance support and more relevant reskilling and upskilling opportunities (ASEAN, 2021[41]; CISCO and Oxford Economics, 2018[37]). However, the use of skills data to identify emerging skills needs remains limited, which makes it difficult for career guidance counsellors to provide relevant information on relevant training offers (Intad, 2021[42]; Muhamad, Salleh and Nordin, 2016[43]). Moreover, the supply of qualified career guidance counsellors remains limited in Southeast Asia, especially among disadvantaged groups, whose access to

career guidance counsellors is about 8 percentage points below that of advantaged groups (OECD, 2019[44]; Saputra and Sudira, 2019[45]).

Using skills effectively in work and society

Southeast Asian countries' performance on key labour market indicators has improved, but many challenges remain

Formal labour force participation rates in Southeast Asia are generally high, owing to various targeted policy interventions. The average labour force participation in ASEAN countries stood at 67.7% in 2021, surpassing that of the OECD (59.6%) (Figure 1.4), and has remained relatively stable over the last ten years, fluctuating only between 65.6% and 68.2% from 2011 to 2021 (ILOSTAT, 2021[46]). Governments in the region have aimed to enlarge the size of the workforce by improving employment support services and strengthening international labour mobility. However, full and effective participation remains a challenge for many disadvantaged groups, such as women, whose participation rate is 29 percentage points below that of men. Youth and migrants participating in the labour force are also more likely to be found in part-time work and low-skilled occupations (Gentile, 2019[47]; Eurostat, 2022[48]).

The skills of people in Southeast Asia could be used more fully and effectively in everyday life. The use of basic skills, such as reading, writing, numeracy, and information and communication technology skills, in everyday life are lower in Southeast Asian countries with available data (Indonesia and Singapore) than in OECD countries. This is an area of policy concern, as the use of these skills is associated with higher levels of social trust and greater participation in civic activities. Consequently, participation rates in civic activities across Southeast Asia are also relatively low, especially in some countries, such as Cambodia, Thailand and Viet Nam, where less than 20% of individuals in the working-age population have volunteered time to an organisation (OECD, 2019[49]). Rates may vary depending on country context, for example, to what extent volunteering is encouraged from a young age in the formal education system and, more generally, in society at large.

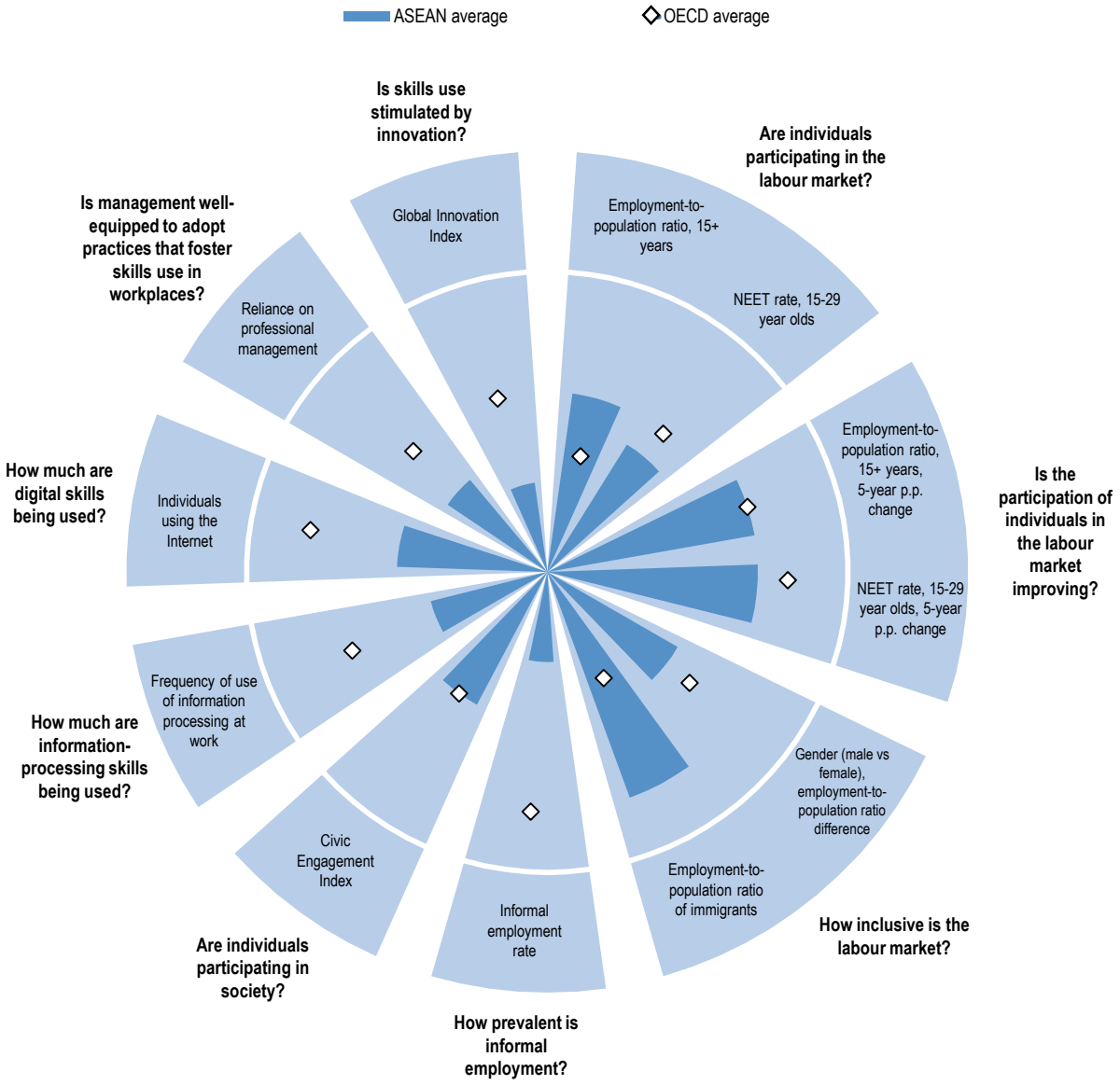
Disadvantaged groups face multiple challenges in fully and effectively using their skills

Widespread employment in the informal sector is a primary policy concern in Southeast Asia. On average, 71% of those who are employed in the region are found in the informal sector, with informal employment rates being significantly high in nearly half of ASEAN countries, namely Cambodia (88%), Lao PDR (83%), Indonesia (80%) and Myanmar (80%) (ILOSTAT, 2021[50]). This constitutes a key policy concern in Southeast Asia, as informal employment is associated with poor working conditions, such as lower compensation, fewer employee benefits and lack of access to skills development opportunities, which not only lowers productivity but also makes informal workers particularly vulnerable to labour market changes brought about by global megatrends (ILO, 2019[51]).

Women in Southeast Asia disproportionally face barriers to participating in the formal labour force. Gender gaps are significant in the region, and when women are working, many of them are found in the informal sector and low-productivity and low-pay sectors, such as food, accommodations, essential domestic work and manufacturing (ILO, 2019[52]; ILOSTAT, 2021[46]; Lai, 2020[53]). In addition, women face multiple barriers to participating in the formal labour market, such as unpaid care work that lessens the amount of time they can devote to economically productive activities. While the burden of unpaid care work more often falls on women around the world, these expectations are especially pronounced in Southeast Asia, where women spend 4.2 times longer hours than men on unpaid care work, in comparison to 2.2 times in OECD countries (OECD, 2019[54]). The COVID-19 pandemic and lockdown measures have also exacerbated the situation of women, who have assumed the extra work associated with children's remote learning following the closure of schools (OECD, 2021[55]).

Figure 1.4. Performance of ASEAN countries and OECD countries in using skills effectively, 2022

Relative position in country ranking (based on normalised scores), where higher value reflects better performance



Note: NEET refers to "not in education, employment or training". "5-year p.p. change" refers to a 5-year percentage points change. OECD average is based on the performance of the 38 OECD countries.
How to read this figure: The normalised scores indicate the relative performance across OECD countries: the further away from the core of the chart, the better the performance. For example, the indicator "How much are digital skills being used" shows a lower score for the ASEAN average, indicating that the share of individuals using digital skills is lower than the OECD average.
Source: See Annex Table 1.A.1 in Annex 1.A1 for an explanation of sources and methodology.

In addition to women, other disadvantaged groups in Southeast Asia, such as migrants and youth, face challenges in securing productive and meaningful employment. While migrants have higher labour market participation rates than native populations in all countries with available data (Brunei Darussalam, Cambodia, Lao PDR, Malaysia and Thailand), many of them have low levels of skills and are employed in low-skilled sectors, namely agriculture, construction and domestic services (Gentile, 2019[47]; ILOSTAT, 2021[46]). Similarly, there are many challenges in finding employment for youth in

Southeast Asia, who face employment barriers, such as a lack of previous work experience (ILO, 2020[56]). As a result, youth often take about 11.6 months to find their first job and an even longer 13.8 months to find a job that is up to their satisfaction (ILO, 2019[57]; 2020[56]).

Policies that increase demand for higher-level skills and promote their use need to be strengthened in Southeast Asia

The low use of skills in Southeast Asia stems from the lack of an enabling environment for intensive skills use in the workplace and limited management capacities among employers. Adopting high-performance workplace practices (HPWPs) is key to facilitating the more extensive use of skills among workers. However, awareness about them remains scarce, especially among small- and medium-sized enterprises (SMEs) (OECD, 2019[7]). This is a concerning policy issue in Southeast Asia, where SMEs dominate the business environment and account for 97% of countries' total firms (ADB, 2020[58]). Evidence on the use of HPWPs in Southeast Asia is extremely limited. However, available data show that the share of jobs employing HPWPs in Singapore (26%) is close to that of the OECD average (27%) but is extremely low in Indonesia (1.98%) (OECD, 2018[59]). The capacity to maximise the use of HPWPs is also restricted by the limited management capacity of SMEs in Southeast Asia, where reliance on professional management is lower than that of the OECD (World Economic Forum, 2019[60]).

Southeast Asian countries could benefit from policies that foster demand for the use of higher-level skills in innovation and entrepreneurship. While enrolment in STEM programmes has risen in all countries in Southeast Asia over the last decade, countries invest only 0.59% of their GDP on research and development (R&D) activities, in comparison to 2.57% in OECD countries (UNESCO Institute for Statistics, 2021[32]). Moreover, Southeast Asia scores 14 points lower than the OECD on the Global Innovation Index, which measures how well various country-level factors (e.g. political and business environments) can support innovation (Cornell University, INSEAD and World Intellectual Property Organization, 2020[61]).

Strengthening the governance of skills systems

Southeast Asian countries have established mechanisms to improve co-ordination among various actors inside and outside of government, but implementation challenges remain

Horizontal and vertical co-ordination mechanisms for skills policies in Southeast Asia have been established, but implementation remains difficult. Countries have established oversight agencies, inter-ministerial bodies and working groups, among other mechanisms, that could serve as platforms to work a common skills agenda across the whole of government. However, Southeast Asia still scores poorly on the Bertelsmann Transformation Index (BTI) indicator on policy co-ordination, which measures the extent to which governments can co-ordinate conflicting objectives into a coherent policy. On average, ASEAN countries score 5.5 points on a scale of 1 (lowest) to 10 (highest), in comparison to 6.9 points among OECD countries (Bertelsmann Stiftung, 2020[62]).

Outside of government, stakeholder groups can make important contributions to skills policies, but engagement with them remains low in Southeast Asia. It is important to co-ordinate with labour market actors, such as employer organisations, who can help align skills policies with industry demands, as well as with trade unions, who can represent the interests and needs of workers. However, the formation of employer organisations is limited by high rates of informality in the region (ILO, 2015[63]). Moreover, only 8.5% of workers in Southeast Asia are members of trade unions, in comparison to 15.8% in the OECD (ILOSTAT, 2020[64]; OECD, 2020[65]). While civil society organisations, such as non-governmental organisations, community-based organisations and religious groups, work to promote the development and use of skills of women, migrants and youth, only a few Southeast Asian governments formally recognise their roles in major skills policy documents (Chong and Elies, 2011[66]; Weaver, 2006[67]).

The collection, management and use of skills data in Southeast Asia could be improved to better inform skills policies

There are many barriers to collecting and managing high-quality, up-to-date and comprehensive data on skills in Southeast Asia. Most Southeast Asian countries have fewer measures in place to facilitate access to information, such as government data, that could be used to inform skills policies (World Justice Project, 2021[68]). Among the data available, there are still significant gaps remaining, particularly on the development of skills among disadvantaged groups, namely out-of-school youth, learners from remote areas and children with disabilities. There is also limited data collected on the effective use of skills in the workplace, such as information on the skills firms need and the employer initiatives in place to facilitate their full and effective use in the workplace (UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific, 2017[69]; UNESCO Institute for Lifelong Learning, 2016[70]).

Data could also be better managed and used in Southeast Asia to inform skills policies. Central to the management of skills data is a robust digital infrastructure. However, many countries in the region do not have the sufficient information technology hardware and software needed to manage and process the data that has been collected (Open Data Watch, 2020[71]). In addition to managing data, it is equally important to ensure that countries in the region use the data to understand evolving skills supply and demand trends. However, the use of data through skills assessments and anticipation exercises remains limited in the region, although some countries have notable initiatives in place to facilitate the use of such exercises (e.g. Malaysia TalentCorp's skills assessments based on the Labour Force Survey and Salaries and Wages Survey).

Southeast Asian countries could diversify financial resources and allocate them in a more equitable manner

Public funding for education could be supplemented with private funding, particularly from employers. Average government spending on education in Southeast Asia is lower than in OECD countries at all levels of education**.** While countries allot a substantial portion of GDP per capita to education, it is still significantly lower than OECD countries at the primary level (11.3% in ASEAN, 20.3% in the OECD), secondary level (16.9% in ASEAN, 22.4% in the OECD) and tertiary level (22.8% in ASEAN, 25.4% in the OECD) (World Bank, 2021[23]). Government investment in TVET as a percentage of GDP is also significantly lower in Southeast Asia (0.16%) than it is in OECD countries (0.5%) (AFD, 2019[72]; OECD, 2022[73]). Private funding from employers could help augment financial resources for skills in Southeast Asia, but engagement with them remains relatively low across the region. Several types of employer-driven financing mechanisms exist, such as levy-sponsored skills development funds (e.g. Malaysia and Singapore's Human Resource Development Fund, Thailand's "train or pay" approach to their Skills Development Fund). However, their use in other countries is limited (UNESCO, 2022[74]).

Monitoring and evaluating financial expenditure in Southeast Asia could be strengthened to better assess the achievement of equity goals. Countries in the region have funding arrangements in place to allot financial resources specifically for disadvantaged groups, leaving discretion to schools on how to allocate the funding for different elements based on their students' needs (e.g. Philippine Department of Education's block grant through the Governance of Basic Education Act of 2001) (Philippines Department of Education, 2015[75]). However, while such financial mechanisms are important to fostering equity, monitoring and evaluation measures that ensure transparency and accountability are also key, especially when they are conducted in partnership with a wide range of stakeholders, such as those represented on school boards (OECD, 2017[76]). While school boards have been established in Southeast Asian countries, many challenges remain, such as an inadequate infrastructure for monitoring school expenditure, weak planning and budgeting practices, and the lack of processes that check for accountability in school budgets, among others (Robredo, 2012[77]).

The policy context in Southeast Asia

A range of policy reforms in Southeast Asia recognise the importance of skills

Southeast Asia has already developed a range of strategies and reforms to help countries respond effectively to megatrends, addressing challenges and seizing the opportunities they present to countries' skills systems. The relevant priorities and goals of these strategies are summarised at the beginning of each chapter in this report, as assessed considering the OECD's analysis and recommendations. Furthermore, as elaborated in subsequent chapters, Southeast Asia has embarked on a range of skills policy reforms in recent years, covering all aspects of the skills system, namely skills development, skills use and the governance of skills systems.

Southeast Asian countries have prioritised increasing participation in skills development, especially among disadvantaged groups, and improving the quality of education. Many countries have made education and training the foundation of their national development plans, explicitly recognising the importance of skills development in their ability to adapt to labour market changes, increase competitiveness and foster social cohesion (ASEAN, 2020[78]). Measures have been put in place to address issues in educational quality, such as the upskilling of teachers and school leaders to help them prepare for pedagogical and administrative challenges in the education system, the upgrading of classrooms and educational infrastructure, the reinforcement of educational quality assurance bodies, the strengthening of links between schools and industries, the improvement of data collection for skills policies, and the adoption of performance-based funding in schools (Lee, 2016[79]; SEAMEO INNOTECH, 2020[80]). In these policy efforts, particular attention has been paid to disadvantaged learners, with governments affirming their commitment to making high-quality education and training accessible to all regardless of gender, socio-economic background, location and ethnicity (UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific, 2017[69]).

Southeast Asia has also launched policy initiatives to reduce barriers to formal labour market participation, aiming to boost the region's economic productivity and competitiveness. These include improving the delivery of public employment services that provide school-to-work transition support for young graduates and job seekers (especially during the COVID-19 pandemic), as well as promoting the use of HPWPs that foster both employee productivity and well-being in the workplace. Innovation and entrepreneurship have been on the rise in the region, with many countries actively promoting the demand for higher-level skills in key strategic sectors (e.g. STEM), strengthening links between higher education institutions and firms, and investing in R&D activities through the provision of research grants and incentives to innovative start-ups and SMEs. In all these efforts, increased policy attention has been given to disadvantaged groups in Southeast Asia, notably informal workers, women, youth and migrants. Throughout the region, there is a strong political commitment given to boosting their participation in the formal economy, as well as the protection of their rights in the workplace (ILO, 2016[81]; Gentile, 2019[47]).

There have also been policy efforts to make the governance of skills systems in Southeast Asia more equitable and responsive to the needs of students and workers. Countries in the region have established multiple mechanisms to improve horizontal and vertical co-ordination across government (e.g. oversight agencies, policy development forums), as well as create more room for civil society groups to participate and advance the interests of disadvantaged groups in the design of skills policies (UNESCAP, 2019[82]). There are also efforts underway in individual countries to increase engagement with industry representatives for various objectives, including making educational systems more responsive to labour market needs and incentivising employers to contribute resources to skills development (ILO, 2020[83]). Moreover, Southeast Asia is participating more and more in the conduct of skills assessments, including at the international level, to benchmark the region's performance against other countries and better inform the design of skills policies (Cambodia MoEYS, 2018[84]).

Southeast Asia should seize this moment to adopt a more strategic approach to its skills policies

ASEAN is now amid a new round of strategy development for the medium and long term. This gives Southeast Asia a unique window of opportunity to implement a more strategic approach to skills to help drive economic prosperity, social cohesion and sustainable growth. Some of these key strategies and regional initiatives are shown in Table 1.1.

Table 1.1. ASEAN policies and strategies relevant to skills

Title of policy or strategy	Description
Consolidated Strategy on the Fourth Industrial Revolution for ASEAN (2021)	Increases the competitiveness of Southeast Asian countries in increasingly digital economies and implements forward-looking human resource development initiatives Promotes capacity building to support the region's Fourth Industrial Revolution reforms
ASEAN Comprehensive Recovery Framework and its Implementation Plan (2020)	Outlines the region's exit strategy from the COVID-19 pandemic, focusing on key sectors and groups that have been disproportionately affected Highlights human resource development as the core of all five Broad Strategies
ASEAN Declaration on Human Resources Development for the Changing World of Work and its Roadmap (2020)	Promotes lifelong learning and increases inclusiveness of education and employment services, especially for women, persons with disabilities, the elderly, learners in rural or remote areas and workers in SMEs
ASEAN Labour Ministers' Statement on the Future of Work: Embracing Technology for Inclusive and Sustainable Growth (2019)	Strengthens the capacity of educational institutions to prepare their workforce, especially disadvantaged groups (e.g. women, persons with disabilities, elderly, youth) for labour market changes due to technological advancements Outlines the importance of closer co-operation with industries, the improvement of TVET standards and the expansion of reskilling and upskilling offers for workers
ASEAN Consensus on the Protection and Promotion of the Rights of Migrant Workers (2017)	Establishes a framework for co-operation on issues related to the employment and working conditions of migrant workers in the region Encourages the formal employment of migrants and promotes access to labour market information and skills development offers for migrant workers
Vientiane Declaration on Transition from Informal Employment to Formal Employment towards Decent Work Promotion in ASEAN (2016)	Reduces informal employment in the region and assesses the factors contributing to informal employment, especially in rural areas Promotes policy measures to facilitate wider access to skills development (especially TVET), employment promotion (including in entrepreneurial sectors) and labour protection.

Source: ASEAN (2020[85]), *ASEAN Comprehensive Recovery Framework and its Implementation Plan*, https://asean.org/wp-content/uploads/2021/09/ASEAN-Comprehensive-Recovery-Framework_Pub_2020_1.pdf; ASEAN (2017[86]), *ASEAN Consensus on the Protection and Promotion of the Rights of Migrant Workers*, https://asean.org/wp-content/uploads/2017/11/ASEAN-Consensus-on-the-Protection-and-Promotion-of-the-Rights-of-Migrant-Workers1.pdf; ASEAN (2020[87]), *ASEAN Declaration on Human Resources Development for the Changing World of Work and its Roadmap*, https://asean.org/wp-content/uploads/2021/08/ASEAN-Declaration-on-Human-Resources-Development-for-the-Changing-World-of-Work-and-its-Roadmap_Final_19Feb2021.pdf; ASEAN (2019[88]), *Labour Ministers' Statement on the Future of Work: Embracing Technology for Inclusive and Sustainable Growth*, https://asean.org/asean2020/wp-content/uploads/2021/01/ASEAN-Labour-Ministers-Statement-on-the-Future-of-Work-Embracing-Techno.pdf; ASEAN (2021[89]), *Consolidated Strategy on the Fourth Industrial Revolution for ASEAN*, https://asean.org/wp-content/uploads/2021/10/6.-Consolidated-Strategy-on-the-4IR-for-ASEAN.pdf; ASEAN (2016[90]), *Vientiane Declaration on Transition from Informal Employment to Formal Employment towards Decent Work Promotion in ASEAN*, https://asean.org/wp-content/uploads/2016/09/Vientiane-Declaration-on-Employment.pdf.

The assessment and recommendations in this report can feed into these processes to help ensure that Southeast Asia's skills priorities, policies and investments over the next decade improve outcomes across the skills system.

OECD Skills Strategy dimensions and recommendations

Applying the OECD Skills Strategy Framework, the OECD analysed the performance of Southeast Asian countries across the three dimensions of the OECD Skills Strategy. Over the course of the project, the OECD identified opportunities for improvement and developed recommendations in each dimension based on in-depth desk analysis and consultations with stakeholder representatives. The three dimensions are: 1) developing relevant skills over the life course; 2) using skills effectively in work and society; and 3) strengthening the governance of skills systems.

The skills implications of megatrends, such as globalisation, technological progress, demographic changes, migration and climate change, as well as unforeseen shocks, such as the COVID-19 crisis, are covered in Chapter 2.

The summaries below highlight the key findings and recommendations for each dimension, while subsequent chapters provide a fuller description of these. A full overview of the recommendations can be found in Annex 1.B.

Dimension 1: Developing relevant skills over the life course (Chapter 3)

Opportunity 1: Broadening access to skills development

Access to skills development must start from the early years, given that foundational skills lay the groundwork for the acquisition of higher-level skills later in life (OECD, 2019[91]; 2021[92]). Continued participation in education after compulsory schooling also ensures that individuals have relevant, higher-level skills that will help them succeed in work and life (OECD, 2019[7]). Southeast Asian countries have adopted various policies to expand access to skills development over the life course. However, room remains to improve participation rates in post-compulsory education, particularly in TVET, tertiary education and adult education. Across all levels, particular policy attention must be paid to disadvantaged groups, such as those coming from low-income households, remote areas, ethnic minorities and those who have disabilities (SEAMEO INNOTECH, 2021[24]; The HEAD Foundation, 2022[25]). Opportunity 1 describes how Southeast Asian countries can broaden access to skills development (Table 1.2).

Table 1.2. Opportunity 1: Broadening access to skills development

Policy directions	High-level recommendations
Improving access to early childhood education and care and compulsory education for disadvantaged groups	1.1. Establish strong monitoring systems to detect children who have failed to enter the education system, as well as those who are at risk of dropping out 1.2. Support provision of learning materials parents can use at home 1.3. Strengthen digital infrastructure, digital education platforms, and digital literacy to broaden access to skills development opportunities, especially among disadvantaged groups and during times of disruption
Promoting access to skills development after compulsory education	1.4 Adopt a comprehensive policy strategy to address both supply- and demand-side barriers to technical and vocational education and training participation 1.5 Facilitate access to tertiary education by reducing the most significant financial barriers, both in terms of tuition fees and the cost of learning materials 1.6 Create a comprehensive national adult learning strategy that targets disadvantaged groups and facilitates their participation.

Opportunity 2: Increasing excellence and equity in skills development

Well-qualified teachers and school leaders, adequate funding and strong student assessment systems are indispensable parts of skills development systems, as these ensure that learners have access to the high-quality instruction and learning experiences they need (Baker, 2017[93]). In Southeast Asia, there are efforts to improve educational quality, including the provision of training for school personnel, upgrading of classrooms and educational infrastructure, the strengthening of student assessment practices and the use

of performance-based funding mechanisms (Lee, 2016[79]; SEAMEO INNOTECH, 2020[80]). However, improvements in student performance have been unequal, and many learners in disadvantaged schools still encounter barriers to learning in the classroom, such as large classroom sizes, insufficient instructional support and a lack of learning materials. Identifying solutions to these challenges is hindered by limited capacity to use data on student assessment to inform schools' policies, as well as low levels of management skills among school leaders (SEAMEO INNOTECH, 2012[94]; UNESCO, 2020[95]). At the regional level, sharing best practices in designing, implementing and using student assessments could be expanded. Opportunity 2 describes how Southeast Asian countries can increase excellence and equity in skills development (Table 1.3).

Table 1.3. Opportunity 2: Increasing excellence and equity in skills development

Policy directions	High-level recommendations
Improving the quality of human resources in schools	1.7. Invest in professional development opportunities for teachers to equip them with better pedagogical skills 1.8. Consult regularly with school leaders about their various needs in terms of resources and upskilling
Strengthening funding and student assessment in schools to improve equity	1.9. Improve the financial management skills of school leaders and personnel 1.10. Establish avenues for relevant stakeholders to collaborate on improving student assessment systems.

Opportunity 3: Developing skills that matter

As the world of work is constantly changing due to global megatrends and disruptions such as the COVID-19 pandemic, ensuring the relevance of skills development is key to helping countries become economically competitive and foster social cohesion. In line with this, Southeast Asian countries have embarked on various initiatives to strengthen links between education and industry, increase the provision of work-based learning and on-the-job training, improve labour market information to inform the work of career guidance counsellors and provide incentives to steer individuals' educational choices towards areas of skills shortage. However, there is significant room to help build the capacity of smaller firms to provide training for their employees and make career counselling more accessible to disadvantaged segments of the population, helping them access skills development offers that are in line with labour market demand. Opportunity 3 describes how Southeast Asian countries can develop skills that matter (Table 1.4).

Table 1.4. Opportunity 3: Developing skills that matter

Policy directions	High-level recommendations
Improving the alignment between skills development offers and labour market demand	1.11. Increase the involvement of relevant government agencies and industry partners in reviewing the curricula of skills development offers in technical and vocational education and training and tertiary education 1.12. Increase the provision of on-the-job training opportunities, especially among workers in smaller firms and in the informal economy
Steering skills development choices towards labour market needs	1.13. Provide regular training to guidance counsellors and make updated labour market data more accessible to inform their work 1.14. Expand financial incentives for individuals and institutions to encourage the uptake of skills development in strategic industries, especially among disadvantaged groups.

Dimension 2: Using skills effectively in work and society (Chapter 4)

Opportunity 1: Promoting participation in the formal labour market

Promoting participation in the formal labour market and making full use of people's skills at work provides positive economic returns, improves individuals' well-being, increases the size of the productive labour force and strengthens economic growth (OECD, 2019[7]). A range of interventions has been implemented in the region to promote employment, especially in the formal sector, such as expanding employment services, improving workplace conditions and simplifying processes to formally register and monitor

workers and firms. However, more policy attention must be paid to extending these services to disadvantaged groups in Southeast Asia, such as women, youth, migrants, and informal workers, and tailoring these services to their specific needs. Given the large intra-regional migration flow, regional co-operation in migration policies would need to be strengthened to improve cross-border recruitment and integration services. Opportunity 1 under this dimension describes how Southeast Asian countries can promote participation in the labour market (Table 1.5).

Table 1.5. Opportunity 1: Promoting participation in the labour market

Policy directions	High-level recommendations
Reducing barriers to employment for disadvantaged groups	2.1. Facilitate women's participation in the labour market through the promotion of a more equitable distribution of housework and encouraging flexible work arrangements 2.2. Support youth employment through tailored and online employment services 2.3. Enhance migrant employment possibilities through job search support, legal counselling and language training from specialised institutions for migrants
Facilitating the transition of workers from the informal to the formal labour market	2.4. Facilitate the registration of workers and businesses by making online business registration platforms more user-friendly and simplifying registration procedures 2.5. Improve the effectiveness and efficiency of labour inspection by adopting new technologies to ease the verification of workers' employment status.

Opportunity 2: Making intensive use of skills in work and society

Making full and effective use of skills in work and society is associated with higher wages and greater well-being among individuals, translating into higher labour productivity, greater social cohesion and more inclusive economic growth (OECD, 2015[96]; 2016[97]; 2019[7]). In recognition of the importance of intensive skills use, some countries have begun to actively promote the adoption of HPWPs, as well as create opportunities to facilitate the use of skills outside of the workplace, such as volunteering and other civic activities. However, there is room to strengthen awareness about economic and societal benefits that accrue from both adopting HPWPs and participating more fully in civic life, as well as to facilitate these actions among firms and individuals, respectively. Opportunity 2 under this dimension describes how Southeast Asian countries can make intensive use of skills in work and society (Table 1.6).

Table 1.6. Opportunity 2: Making intensive use of skills in work and society

Policy directions	High-level recommendations
Promoting skills use in the workplace through the greater adoption of high-performance workplace practices	2.6. Create a single portal in each country to efficiently disseminate comprehensive information on high-performance workplace practices to firms, especially SMEs 2.7. Improve the managerial skills in SMEs by providing networking and mentoring opportunities
Promoting skills use in everyday life through civic engagement and leisure activities	2.8. Make volunteering activities available as part of the school curricula to encourage young people to contribute their skills to society from an early age 2.9. Raise awareness about the benefits of using skills in society and personal life 2.10. Provide financial incentives to encourage adults to use skills in civil society.

Opportunity 3: Increasing demand for higher-level skills

Promoting the development and use of higher-level skills is central to the ability of Southeast Asian countries to create more innovative products and services that will help them move up GVCs and boost economic competitiveness (OECD, 2019[7]). In recent years, there has been increasing public and private interest in creating a culture of innovation and entrepreneurship in Southeast Asia. However, there is room to improve funding for innovative and entrepreneurial activities and to foster networks of stakeholders that can exchange best practices and provide mentoring support, especially among disadvantaged groups. Opportunity 3 under this dimension describes how Southeast Asian countries can increase demand for higher-level skills (Table 1.7).

Table 1.7. Opportunity 3: Increasing demand for higher-level skills

Policy directions	High-level recommendations
Promoting innovation to increase demand for high-level skills	2.11. Increase expenditure on research and development through direct grant support and tax incentives 2.12. Foster collaboration between institutions of higher education and industry
Fostering entrepreneurship	2.13. Improve access to finance for female entrepreneurs by providing targeted financial services combined with financial training 2.14. Facilitate the transfer of entrepreneurial knowledge and skills to women by supporting unions for female workers and business associations for women.

Dimension 3: Strengthening the governance of skills systems (Chapter 5)

Opportunity 1: Promoting a whole-of-government approach

A whole-of-government approach to skills governance is crucial, given that skills encompass a wide variety of policy domains. The two components of a whole-of-government approach, namely horizontal co-ordination and vertical co-ordination, both contribute to developing a shared understanding of the skills agenda and reducing redundancies in policy implementation (ADB, 2015[98]; OECD, 2011[99]; Christensen and Lægreid, 2007[100]). In Southeast Asia, various mechanisms have been established to improve co-ordination both horizontally (e.g. through oversight agencies, inter-ministerial bodies and sectoral bodies) and vertically (e.g. formal bodies, working groups and ad hoc meetings), but implementation challenges remain. These include a lack of clarity regarding the specific roles of each actor and inadequate human and financial capacity to implement reforms at subnational levels of government. Opportunity 1 under this dimension describes how Southeast Asian countries can promote a whole-of-government approach (Table 1.8).

Table 1.8. Opportunity 1: Promoting a whole-of-government approach

Policy directions	High-level recommendations
Strengthening horizontal co-ordination	3.1. Support skills-related inter-ministerial governance bodies in their engagement of all relevant ministries 3.2. Promote a shared skills goal among relevant ministries through strategic documents, such as national development plans and skills-related policy documents
Strengthening vertical co-ordination	3.3. Support subnational governments in implementing skills policies by providing additional human and financial resources and capacity-building support.

Opportunity 2: Promoting a whole-of-society approach

Promoting a whole-of-society approach to skills governance ensures that policies are relevant to labour market needs and adequately reflect the interests of a wide variety of stakeholders, especially disadvantaged groups (OECD, 2019[7]). Throughout Southeast Asia, there are formal and informal mechanisms for consultation with labour market actors, such as employer organisations and trade unions, as well as with civil society groups that represent informal workers, women, youth and migrants. However, participation in these consultation mechanisms remains low, and a co-ordinated approach to consultations is complicated by actors' varying capacity levels and differing priorities or interests. At the regional level, the role of stakeholder representatives (e.g. ASEAN Confederation of Employers and ASEAN Trade Union Council) in informing skills policies needs to be raised. Opportunity 2 under this dimension describes how Southeast Asian countries can promote a whole-of-society approach (Table 1.9).

Table 1.9. Opportunity 2: Promoting a whole-of-society approach

Policy directions	High-level recommendations
Identifying and engaging relevant labour market actors	3.4. Establish legal frameworks to strengthen engagement with actors in the labour market 3.5. Strengthen the effectiveness of governance bodies engaging labour market actors
Identifying and engaging relevant civil society actors	3.6. Provide financial, technical and networking resources to facilitate the participation of women, as well as the organisations that represent them, in governance 3.7. Strengthen youth's input in official governance bodies and development of youth strategies 3.8. Support migrant organisations' active participation in governance bodies and influence in skills policies.

Opportunity 3: Building integrated information systems

Building integrated information systems is central to gathering evidence that could be used to improve the relevance and effectiveness of skills policies. However, doing so is a complex process that involves multiple components, namely data collection, management and use, and requires effective co-ordination between relevant government agencies (OECD, 2019[7]). Some Southeast Asian countries have pursued efforts to improve their stock of skills data by increasing participation in international student assessment exercises and adopting national data strategies. However, the ability to collect, manage and use skills data varies widely across Southeast Asian countries. Common challenges still exist, namely limited technical and financial resources to routinely collect and process data on a comprehensive list of skills indicators, as well as the lack of a robust infrastructure to manage and use large amounts of data. Regional co-operation should be further enhanced to build capacity in collecting skills data that is consistent and compatible across Southeast Asian countries and can be used for regional skills analysis (e.g. skills assessment and anticipation exercises). Opportunity 3 under this dimension describes how Southeast Asian countries can build integrated information systems (Table 1.10).

Table 1.10. Opportunity 3: Building integrated information systems

Policy directions	High-level recommendations
Improving data collection	3.9. Implement robust national data collection processes to address data gaps 3.10. Support participation in international surveys to generate internationally comparable data
Improving the management and use of skills data	3.11. Establish the institutional and legal groundwork for integrating data management systems 3.12. Regularly conduct skills assessment and anticipation exercises to design and update skills policies.

Opportunity 4: Aligning and co-ordinating financial arrangements

Diversified financial resources and equitable mechanisms for allocation are needed to support the sustainability of skills governance systems. A diverse set of financial sources is needed to pool funding for skills development, especially in resource-constrained countries. Equitable funding formulas could help maximise a limited amount of resources (Fazekas, 2012[101]; OECD, 2017[76]). In Southeast Asia, initiatives are underway to augment the resources of governments and households by encouraging employers to contribute funding through levies. With the decentralisation of education, there is also increased policy attention given to allocating resources more equitably. However, the use of levies and other employer incentives remains relatively limited in most of Southeast Asia, and inadequate technical and administrative capacities, especially at lower levels of governance, limit countries' ability to track and evaluate how well allocation arrangements are working. Opportunity 4 describes how Southeast Asian countries can align and co-ordinate financial arrangements (Table 1.11).

Table 1.11. Opportunity 4: Aligning and co-ordinating financial arrangements

Policy directions	High-level recommendations
Diversifying financial resources	3.13. Promote the use of levies among employers to encourage skills development and mobilise financial resources for training
Allocating financial resources equitably and effectively	3.14. Design a funding formula that allocates adequate financial resources to disadvantaged learners 3.15. Establish strong monitoring and evaluation systems to ensure the effectiveness of allocation arrangements.

Annex 1.A. The OECD Skills Strategy Dashboard for Southeast Asia

This annex presents the OECD Skills Strategy Dashboard for Southeast Asia. Its objective is to present an overview of the performance of skills systems in Southeast Asia. It is the starting point for analysis and allows the OECD to identify the priority skills policy themes. Presenting the relative position of countries on key skills outcomes, the dashboard provides a general overview of the strengths and weaknesses of a given country's skills system. This annex describes the characteristics, presents the indicators and describes the underlying methods for calculating the indicators.

Characteristics

The dashboard is the result of internal consultation and analysis, drawing from the original dashboard produced for the 2019 OECD Skills Strategy. It presents a simple, intuitive overview of the outcomes of skills systems that is easy to interpret, and which provides a quick impression of a country's skills performance across the pillars of the OECD Skills Strategy ("developing relevant skills over the life course", "using skills effectively in work and society" and "strengthening the governance of the skills system"). The dashboard applies a broad definition of skills by presenting foundational skills, problem-solving skills, and broadness of skill sets, and considers both economic and social outcomes. A total of 31 key outcome indicators were selected and grouped into 21 aggregated indicators. All ASEAN countries have been included. Two OECD countries in Asia (Japan and Korea) and three OECD countries outside the Asian region (Australia, Germany and the United States) have been included for benchmarking purposes. However, given that some countries have no data for specific indicators, there are some gaps across the dashboard. The ranking of ASEAN countries is relative to other ASEAN countries and the five benchmarking OECD countries.

Indicator selection

Where data were available, indicators used in the 2019 OECD Skills Strategy were also used in this Southeast Asia Skills Strategy dashboard. Where data were not available for ASEAN countries, indicators were replaced with equivalent for which data are available. Indicators of level, trend and equity of performance are included for the first two dimensions ("developing relevant skills over the life course" and "using skills effectively in work and society"). A new set of indicators for "strengthening the governance of the skills system" was developed for this dashboard.

The indicators are mostly based on the OECD, International Labour Organization (ILO), World Bank and United Nations Educational, Scientific and Cultural Organization (UNESCO) sources, using the most recent data available. Four additional sources are employed for specific indicators, mostly related to the second and third pillars of the OECD Skills Strategy ("using skills effectively in work and society" and "governance of the skills system"). Those are the Bertelsmann Transformation Index (BTI) 2020, the World Justice Project, the Global Competitiveness report and the Global Innovation Index.

Method for the calculation of aggregate indicators

To develop aggregate indicators that represent the relative position of countries on key outcomes of the skills system, several calculations were made on the collected data. To describe the relative position across countries, a score for each indicator was calculated ranging from zero to ten, with zero for the weakest performance and ten for the strongest performance in the list. This resulted in an indicator that allows for comparisons between different types of indicators (e.g. averaging performance of literacy scores and educational attainment rates). The resulting scores were normalised in such a way that better performance results in a higher score. Subsequently, an unweighted average of the indicators was calculated for each of the aggregates, and these scores were then ranked. The final ranking was separated into five groups of equal size, ranging from "Top 20% performer" to "Bottom 20% performer". A full list of included indicators is presented in Annex Table 1.A.1.

Annex Table 1.A.1. The OECD Skills Strategy Dashboard: Dimensions, indicators, and sources

Pillar and aggregates	Indicator	Source
Developing relevant skills over the life course		
How accessible is basic education?	Pre-primary gross enrolment rate, 2020, or latest available year	UNESCO, UIS Database
	Primary gross enrolment rate, 2020, or latest available year	UNESCO, UIS Database
	Secondary gross enrolment rate, 2020, or latest available year	UNESCO, UIS Database
Are primary students remaining in education without dropping out?	Out-of-school rate in primary education, 2020 or latest available year	UNESCO, UIS Database
How skilled are youth?	Reading (PISA),[1] mean score, 2018	OECD, PISA Database[2]
	Mathematics (PISA), mean score, 2018	OECD, PISA Database[2]
	Science (PISA), mean score, 2018	OECD, PISA Database[2]
Are skills of youth being developed inclusively?	Percentage of variance in reading performance explained by ESCS, 2018	OECD, PISA Database
Do students have access to guidance to make informed study and career decisions?	Percentage of students in advantaged schools that provide career guidance, 2018	OECD, PISA Database
	Percentage of students in disadvantaged schools that provide career guidance, 2018	OECD, PISA Database
How accessible is tertiary education?	Tertiary gross enrolment rate, 2020	UNESCO, UIS Database
How well aligned are the developed skills with the labour market?	Share of workers that are under-qualified and over-qualified for their job, 2016 or latest available year	OECD Database, computation based on Survey of Adult Skills (PIAAC) (2012, 2015), Thailand LFS, Australian Survey of Education and Work, Skills for Jobs database
Is there a strong culture of adult education?	Percentage of firms offering formal training, 2020 or latest available year	World Bank Enterprise Survey
Using skills effectively in work and society		
How well are skills activated in the labour market?	Employment-to-population ratio, working age (15+), ILO modelled estimates, 2021	ILO, ILOSTAT
	Youth not in employment, education or training (NEET), % of 15-24 year-olds, 2020	ILO, ILOSTAT
Is the participation of individuals in the labour market improving?	Employment-to-population ratio, 15+ years old, ILO modelled estimates, 5-year p.p. change, 2017 to 2021	ILO, ILOSTAT
	Youth not in education, employment or training (NEET), 15-24 year-olds, 5-year p.p. change, 2017 to 2021	ILO, ILOSTAT
How inclusive is the labour market?	Gender (m-f), employment rate difference, ILO modelled estimates, 2021 or latest available year	ILO, ILOSTAT
	Employment rate of immigrants (%), 2021 or latest available year	ILO, ILOSTAT
How prevalent is informal employment?	Informal employment as a share of employment (%), 2021	ILO, ILOSTAT
How well are individuals participating in society?	Civic engagement index, 2017	World Gallup Poll

Pillar and aggregates	Indicator	Source
How much are information-processing skills used?	Information-processing skills used at work, 2012, 2015	OECD, Survey of Adult Skills[2] (PIAAC)
How much are basic digital skills used?	Individuals using the Internet, total population (%), 2020 or latest available year	World Bank Database
How intensively do firms rely on practices that foster skills usage in the workplace?	Reliance on professional management, 2018	World Economic Forum, Global Competitiveness Index
Is skills use stimulated by innovation?	Global Innovation Index, 2022	Cornell University, INSEAD and WIPO
Strengthening the governance of the skills system		
To what extent are conditions for co-ordination across government present?	Policy co-ordination across government, 2022	Bertelsmann Stiftung, BTI
To what extent are conditions for stakeholder engagement present?	Civil society traditions, 2022	Bertelsmann Stiftung, BTI
	Civil society participation, 2022	Bertelsmann Stiftung, BTI
To what extent are conditions for information accessibility present?	Publicised laws and government data, 2021	World Justice Project, Rule of Law Index
	Right to information, 2021	World Justice Project, Rule of Law Index
To what extent are resources effectively invested in skills development?	Efficiency of government spending, 2018	World Economic Forum, Global Competitiveness Index

Note: Indicators without a specific source between brackets are OECD indicators from OECD Data (https://data.oecd.org/home/).
1. Programme for International Student Assessment (PISA).
2. Survey of Adult Skills, a product of the Programme for the International Assessment of Adult Competencies (PIAAC).
Acronyms and abbreviations used in this table: ESCS: Economic, social and cultural status; "5-year p.p. change" refers to 5-year percentage points change; UIS: UNESCO Institute for Statistics; LFS: Labour Force Survey; ILO: International Labour Organization; INSEAD: Institut européen d'administration des affaires; WIPO: World Intellectual Property Organization; BTI: Bertelsmann Transformation Index.

Annex 1.B. Overview of recommendations

Dimension 1: Developing relevant skills over the life course (Chapter 3)

Opportunity 1: Broadening access to skills development

Annex Table 1.B.1. Opportunity 1: Broadening access to skills development

Policy directions	High-level recommendations
Improving access to early childhood education and care and compulsory education for disadvantaged groups	**1.1. Establish strong monitoring systems to detect children who have failed to enter the education system, as well as those who are at risk of dropping out.** Regularly collect school level data on various individual characteristics that are associated with lack of access and dropouts, such as sex, age, socio-economic background (e.g. parental occupation) and location, among others, to identify children who are at risk of not entering education and leaving education early. Co ordinate with relevant ministries and government agencies, as well as other stakeholders, to gather as much administrative data on these risk factors as possible, especially in countries where data capacity may be limited, to identify areas where potential intervention might be needed. Ensure that in-school well-being services are available to support children who are struggling to access education, and put in place additional guidance services (e.g. remedial classes, personalised tutoring) for those who are falling behind in learning. Moreover, create opportunities to meet with parents to discuss home situations and how they may impact children's schooling, and offer alternative and flexible learning pathways for children in difficult socio-economic situations to facilitate entry into school as well as completion. **1.2. Support provision of learning materials parents can use at home.** Offer students from disadvantaged families financial assistance, such as vouchers or income support, specifically earmarked for purchasing books, toys and other playthings. Ensure that such learning materials are available at every level of education and that parents may easily access such financial assistance measures (e.g. through an online portal). Offer targeted policy options to low-income households by raising awareness about such initiatives and how they may be easily accessed. Moreover, promote private-sector and civil-society-led initiatives that sell learning materials, such as books, at more affordable prices and bring them closer to children and their families through community and school-based measures, such as family reading events or book fairs. **1.3. Strengthen digital infrastructure, digital education platforms, and digital literacy to broaden access to skills development opportunities, especially among disadvantaged groups and during times of disruption.** Invest in infrastructure for Internet connectivity and the distribution of digital learning devices (e.g. digital blackboards, laptops, tablets), especially among disadvantaged learners, such as those from low-income households or rural areas. Additionally, invest in digital education platforms to facilitate the implementation of blended learning strategies that could help ensure the continuity of learning in the face of global disruptions, such as the COVID 19 pandemic. Ensure that investments in digital infrastructure are coupled with initiatives to increase digital literacy among students and teachers, such as providing digital upskilling opportunities and making online resources readily available and accessible.
Promoting access to skills development after compulsory education	**1.4 Adopt a comprehensive policy strategy to address both supply- and demand-side barriers to technical and vocational education and training participation.** On the supply side, encourage the provision of work-based learning opportunities by employers through providing a wide range of financial incentives that subsidise the cost of provision, as well as opportunities for strengthening TVET institutions-industry partnerships (see Opportunity 3). Moreover, pay close policy attention to smaller firms who have less capacity by providing them with resources on pedagogical skills to facilitate their provision of work-based learning opportunities, such as internships and apprenticeships. On the demand side, provide financial support options to learners from low-income households in the form of monthly stipends or affordable loans to reduce financial barriers to participation. Additionally, conduct public awareness campaigns about the new progression opportunities in TVET, including accessing tertiary education, and the types of professional development offers available to graduates. **1.5 Facilitate access to tertiary education by reducing the most significant financial barriers, both in terms of tuition fees and the cost of learning materials.** Adopt a multi-pronged approach to alleviating the costs of tertiary education for disadvantaged groups and make use of a combination of affordable tuition policies and financial aid programmes, such as needs-based grants and income-contingent loans that consider factors such as household income and location. Ensure that such financial instruments are easily accessible and financially viable for students coming from low-income households. Moreover, help students cover the cost of learning materials by providing subsidies or loans when purchasing textbooks, digital learning devices, Internet connection subscriptions and other materials they may need to finish their schooling.

Policy directions	High-level recommendations
	1.6 **Create a comprehensive national adult learning strategy that targets disadvantaged groups and facilitates their participation.** Establish a comprehensive national adult learning strategy with all relevant actors (e.g. ministries, levels of government and stakeholders) to identify priorities, goals and actions. Actions should specifically target disadvantaged groups that often have lower adult learning participation rates, such as the unemployed, low-skilled workers, older adults and workers in the informal economy. The strategy should raise awareness among the public about the benefits of adult learning, promote affordable and easy-to-access skills development offers, and disseminate information about adult learning opportunities (e.g. an online portal that consolidates various training offers). The adult learning strategy should also have measures that provide financial and logistical support for potential learners, so that they can attend programmes. Data on adult learning provision and participation, as well as on the outcomes of adult learning programmes, should be collected and consolidated in an integrated data base to inform adult learning policy and programme design and implementation.

Opportunity 2: Increasing excellence and equity in skills development

Annex Table 1.B.2. Opportunity 2: Increasing excellence and equity in skills development

Policy directions	High-level recommendations
Improving the quality of human resources in schools	1.7. **Invest in professional development opportunities for teachers to equip them with better pedagogical skills.** Provide schools with resources to train teachers in differentiated instructional techniques that would help them better respond to the diverse needs of learners and manage large classroom sizes (e.g. peer-learning techniques, differentiated instruction). Ensure that digital literacy training opportunities are also available to equip teachers with the skills they need to use ICT in the classroom. It is possible to offer such upskilling opportunities outside of schools through external training institutes that provide free or subsidised course offerings that teachers could easily access and provide incentives to encourage increased uptake. Moreover, make sure that counselling support services are available to ensure the well-being of teachers and school staff, especially during times of disruptions and abrupt changes, to help them cope with increased challenges in the classroom. 1.8. **Consult regularly with school leaders about their various needs in terms of resources and upskilling.** In line with increased responsibilities for school administration and budget management, provide opportunities for school leaders to upskill in terms of financial management, strategic thinking, instructional leadership and stakeholder engagement, and other skills that would allow them to carry out their roles effectively. Provide concrete avenues (e.g. statutory consultation processes) for government officials to regularly consult with school leaders and identify the kinds of support that could be provided through national and local policies, such as increased funding for classroom facilities and educational materials. Ensure that such consultations with school leaders reflect the broader interests of the school community by setting up formal consultation mechanisms between them and the school staff, allowing school leaders to transmit detailed information on the various administrative needs of schools.
Strengthening funding and student assessment in schools to improve equity	1.9. **Improve the financial management skills of school leaders and personnel.** Accompany the administration of school grants and other educational funding with training opportunities that equip school leaders and personnel with improved skills in various aspects of financial management in schools, such as budget preparation, budget execution, accounting and monitoring, and reporting. Make resources (e.g. handbooks on financial management) on these topics easily accessible to school personnel, such as through distributing physical materials to schools or through a consolidated and user-friendly online portal. Ensure that these resources are updated often and that they are specifically adapted to the various funding strategies used by national governments to allocate funding to sub-governments or schools. 1.10. **Establish avenues for relevant stakeholders to collaborate on improving student assessment systems.** To effectively improve the administration of student assessments and use their results, provide fora for stakeholders from the school system, such as teachers and school leaders, to openly discuss difficulties they face with the administration of tests and the processing of data, including lack of security, insufficient technical capacity to interpret results, or inadequate infrastructure, and jointly agree on concrete steps on how to address these challenges. Provide opportunities for policy makers to meet with researchers and analysts and interpret results from student assessment exercises, as well as for local school representatives to provide in-depth insights into classroom-level challenges that may help explain these results. Furthermore, regularly examine the ability of student assessment exercises to provide credible insight into the needs of students and schools, as well as their relevance to national educational objectives. At the regional level, the sharing of best practices in designing, implementing and using student assessments could also be expanded.

Opportunity 3: Developing skills that matter

Annex Table 1.B.3. Opportunity 3: Developing skills that matter

Policy directions	High-level recommendations
Improving the alignment between skills development offers and labour market demand	**1.11. Increase the involvement of relevant government agencies and industry partners in reviewing the curricula of skills development offers in technical and vocational education and training and tertiary education.** Conduct regular and systematic reviews of emerging skilling needs and establish mechanisms to involve industry representatives (e.g. programme advisory committees) in the design (e.g. of curricula), delivery (e.g. of work-based learning) and certification of educational opportunities. With these industry experts, identify current and future trends in technologies, emerging occupations over a specified period, the specific skills and knowledge needed to effectively carry out these occupations and shortages in the current supply of skills being developed in the educational system (e.g. indicators on graduation rates in relevant programmes identified in the review) (see also Chapter 5). Provide incentives, such as tax exemptions, to TVET providers and employers that offer work-based learning opportunities that are in line with the needs of the labour market, as well as to tertiary education institutions that offer programmes or courses in areas of skills shortage. **1.12. Increase the provision of on-the-job training opportunities, especially among workers in smaller firms and in the informal economy.** Continue support for the establishment of private-sector-led initiatives that expand the provision of training opportunities for SMEs, such as the provision of free, easily accessible and industry-relevant course offerings (e.g. ASEAN SME Academy). Explore the use of different policy options to ease the financial burden of employee training on SMEs, such as the adoption of tax-based exemptions that allow the state to offset the costs of training (whether fully or partially), as well as the provision of training vouchers that employees could use to pursue skills development offers in training institutions pre-selected and quality assured by the government. Moreover, expand the mandate of vocational training institutions to include the provision of education to workers in the informal economy, such as offering affordable or free course offerings with low admission requirements (e.g. making completion of primary school optional). More importantly, provide ways for workers in the informal economy to certify skills that were developed informally to recognise the value of their competencies and boost their transition into formal labour markets.
Steering skills development choices towards labour market needs	**1.13. Provide regular training to guidance counsellors and make updated labour market data more accessible to inform their work.** Offer training programmes to career guidance professionals who work in schools and companies, where they could be provided with information on the latest employment trends and labour market developments. Such information could also be made available by establishing online portals that consolidate labour market information and make it easier for guidance counsellors to access and use updated data in their work. In schools where the supply of guidance counsellors is low, teachers could be given additional training on how to provide career counselling and information on how to access and use public employment services, which they could impart to their students. **1.14. Expand financial incentives for individuals and institutions to encourage the uptake of skills development in strategic industries, especially among disadvantaged groups.** Provide financial incentives, such as performance-based funding, targeted towards institutions universities, TVET institutions and other training providers that would incentivise them to develop programmes or course offerings that address skills shortage areas. Performance-based funding may be based on the ability of institutions to achieve key labour market objectives (e.g. number of graduates in key economic sectors). Furthermore, provide a wide range of financial incentives, such as subsidies (e.g. scholarships), tax incentives, loans, time accounts and training/study leave, targeted towards individuals in educational programmes related to economic sectors that are identified as a priority in the country's national development plan or strategy, or in sectors where there is a shortage of workers. Allot slots in the provision of such financial incentives for individuals from disadvantaged groups, such as women, to facilitate their participation, helping make skills development systems more equitable.

Dimension 2: Using skills effectively in work and society (Chapter 4)

Opportunity 1: Promoting participation in the formal labour market

Annex Table 1.B.4. Opportunity 1: Promoting participation in the labour market

Policy directions	High-level recommendations
Reducing barriers to employment for disadvantaged groups	**2.1. Facilitate women's participation in the labour market through the promotion of a more equitable distribution of housework and encouraging flexible work arrangements.** Governments should promote a more equitable distribution of housework to ensure women have the time and energy to participate more fully in the formal labour market. Social campaigns and awareness-raising training should be provided to change perceptions about gender roles and overcome prejudices against female participation in the formal labour market. Furthermore, governments should promote flexible work arrangements, such as flexible working hours, part-time work and remote working, to encourage and facilitate the participation of women in the formal labour market. This can be done, for example, by reviewing and adjusting regulatory and legal frameworks where necessary to ensure that they do not discourage flexible forms of employment, including part-time work, through excessive restrictions. Governments could also provide incentives to SMEs (e.g. tax breaks, subsidies, grants) to adopt the infrastructure (e.g. work laptops, software, Internet connections) and flexible working practices needed to allow employees to work from home. **2.2. Support youth employment through tailored and online employment services.** Employment service providers across Southeast Asian countries should use digital solutions to improve the tailoring of employment services for youth. Digital solutions, such as AI and advanced algorithms, leverage big data to identify the specific skills profile of job seekers among youth, compare them with all available job vacancies in real-time and find the best possible match. Based on the proposed matches tailored to each youth job seeker, the employment service providers can prioritise and decide which kinds of support (e.g. re-skilling training solutions, job application support, employment incentives) would best match clients' needs to increase their employment chances. Furthermore, since youth are typically more used to online solutions than older adults, online employment services could be particularly well-suited to reach and engage youth. Typical employment services that could also be provided on line include career guidance, mental counselling, support with preparing resumes and CVs, mock interviews, skills profiling and training, among others. Employment service providers can use a range of online communication tools, portals, platforms, apps and texting to interact with youth. **2.3. Enhance migrant employment possibilities through job search support, legal counselling and language training from specialised institutions for migrants.** Southeast Asian countries should create and expand specialised institutions, such as the MRCs, to support migrant workers in finding employment. Such institutions provide migrants with relevant employment information to support job searches, legal counselling and language training. Furthermore, such institutions could support employers with any administrative procedures needed to hire migrants. In addition, awareness about the services from such migrant-specialised institutions should be raised by reaching out to migrants through migrant civil society organisations that can communicate with migrants in their own languages, and which may already also provide other complementary services, such as food and shelter. Finally, given the large intra-regional migration flow, regional co-operation in migration policies should be strengthened to improve cross-border recruitment and integration services.
Facilitating the transition of workers from the informal to the formal labour market	**2.4. Facilitate the registration of workers and businesses by making online business registration platforms more user-friendly and simplifying registration procedures.** Governments should improve online registration platforms to make navigating and uploading necessary documents easier. In addition, alternative channels should be provided to register (i.e. websites, mobile applications, one-stop-shops for SMEs) so that people can use the channel most convenient for them. Governments should also eliminate unnecessary or repetitive administrative steps and streamline registration procedures to reduce the time needed to process and confirm registration. **2.5. Improve the effectiveness and efficiency of labour inspection by adopting new technologies to ease the verification of workers' employment status.** Governments should adopt digital tools that facilitate labour inspection to strengthen the enforcement of laws and labour regulations. This could be done, for example, by providing inspectors with tablets linked to employment and tax databases. Such technologies can help inspectors to more easily verify whether businesses and workers are registered and are working formally during field inspections. In addition, with the same labour inspection technology provide the option for inspectors to immediately report employers who are committing infractions (e.g. unregistered workers, failure to pay taxes) and pursue the appropriate penalties and interventions.

Opportunity 2: Making intensive use of skills in work and society

Annex Table 1.B.5. Opportunity 2: Making intensive use of skills in work and society

Policy directions	High-level recommendations
Promoting skills use in the workplace through the greater adoption of high-performance workplace practices	**2.6. Create a single portal in each country to efficiently disseminate comprehensive information on high-performance workplace practices to firms, especially SMEs.** Governments should centralise the currently fragmented provision of information on HPWPs for firms in a single portal. The portal should inform, guide and support firms to benchmark their performance and locate relevant support programmes. This could include, for example, making diagnostic tools available to businesses to support them in identifying their business needs, challenges and opportunities. The information provided on the portal should be made available in a business-friendly manner, for example, by sharing concise information on good practice and success stories. To help firms navigate the portal, simple guides on how to implement specific HPWPs would be helpful. The portal could be part of a broader campaign to raise awareness about the benefits of adopting HPWPs for businesses. **2.7. Improve the managerial skills in SMEs by providing networking and mentoring opportunities.** Governments should encourage and support network and mentoring opportunities to facilitate sharing of good managerial practices and lessons between SMEs and larger firms. Such networking and mentoring opportunities for SMEs could be formalised through the formation of consortiums as well as be financially supported. Furthermore, to provide quality and relevant mentorship experiences, mentors for SMEs should be provided with diverse training offers that equip them with the tools and techniques they need to guide their mentees effectively.
Promoting skills use in everyday life through civic engagement and leisure activities	**2.8. Make volunteering activities available as part of the school curricula to encourage young people to contribute their skills to society from an early age.** Schools can promote a civic engagement culture by facilitating community volunteering opportunities and organising discussions on political and social issues. Ministries could also consider awarding grants to schools to support students' participation in national or overseas community service. **2.9. Raise awareness about the benefits of using skills in society and personal life.** Build awareness about the benefits of active and engaged citizenship and leisure activities from a young age. Governments should introduce promotional campaigns to provide information about the benefits of using one's skills in civic and social life and encourage civic engagement and leisure activities, for example, through volunteering, reading and recreational activities. In addition, governments should provide centralised and comprehensive information about civic engagement opportunities and relevant associations to facilitate active participation. **2.10. Provide financial incentives to encourage adults to use skills in civil society.** Governments could provide subsidies and/or tax deductions to encourage participation in community and voluntary organisations. Subsidies can cover the cost of individual membership in such community and voluntary organisations. Governments could also introduce tax deductions or credits for participation in community and volunteer organisations. These schemes would allow individuals to claim the time spent on community and voluntary work against taxes owed. Financial incentives could be targeted at disadvantaged groups, such as the unemployed and people with disabilities, to support their increased engagement and participation in society, prevent their skills from atrophying, and in recognition that they face tighter income constraints. For example, additional benefits or a supplement, in addition to social assistance payments, could be provided to unemployed or inactive people who engage in volunteer activities.

Opportunity 3: Increasing demand for higher-level skills

Annex Table 1.B.6. Opportunity 3: Increasing demand for higher-level skills

Policy directions	High-level recommendations
Promoting innovation to increase demand for high-level skills	**2.11. Increase expenditure on research and development through direct grant support and tax incentives.** Southeast Asian countries should consider increasing direct grant support and subsidies to support long-term research, especially in areas with particularly high potential spillover benefits. Governments could help increase R&D in areas with high social returns but low prospects for profits, such as green technology and social innovation. They could target their support especially to innovative small and young firms that often have difficulty securing financing for R&D. Governments should also consider providing and increasing indirect financial support to encourage R&D activities. For example, they could offer and increase credits against income and payroll taxes for expenditures on investments for R&D.

Policy directions	High-level recommendations
	2.12. Foster collaboration between institutions of higher education and industry. Southeast Asian countries should facilitate co-operation and networking between higher education and firms. Governments should support the development of networks of intermediary organisations and platforms, such as R&D centres, innovation agencies, technology transfer offices and business incubators, to facilitate knowledge transfer between higher education and industry. They could be established as autonomous agencies or units within a specific university. Such organisations should interact with each other on a regular basis to promote knowledge "co-creation" involving multiple stakeholders from industry, research institutions and government.
Fostering entrepreneurship	**2.13. Improve access to finance for female entrepreneurs by providing targeted financial services combined with financial training.** Governments and financial institutions should improve access to loan programmes targeted at women. For example, they could provide guaranteed loans or microfinancing to women entrepreneurs with high growth potential. Such financial programmes could be offered and combined with other services, such as counselling and financial training. To be effective, the application process for such financial services should be adapted to women's literacy levels to ensure they are easy to understand and apply for. **2.14. Facilitate the transfer of entrepreneurial knowledge and skills to women by supporting unions for female workers and business associations for women.** Governments should establish and support networks of women's enterprise centres. These networks could provide business development support to women entrepreneurs and build a women-friendly business environment. In addition, governments could strengthen the role of women entrepreneurs in business and industry associations by encouraging chambers of commerce and SME associations to establish businesswomen committees or women entrepreneur working groups.

Dimension 3: Strengthening the governance of skills systems (Chapter 5)

Opportunity 1: Promoting a whole-of-government approach

Annex Table 1.B.7. Opportunity 1: Promoting a whole-of-government approach

Policy directions	High-level recommendations
Strengthening horizontal co-ordination	**3.1. Support skills-related inter-ministerial governance bodies in their engagement of all relevant ministries.** The mandates, scope and composition of bodies should be clarified and co-ordinated relative to each other to minimise unnecessary overlap, confusion and ineffective co-ordination. Each body should have clear terms of reference specifying the roles and responsibilities. These terms should be based on the specific body's mandate, capacity and expertise. To raise the effectiveness of and ensure continuity between governance body meetings, members of the body could form smaller working groups on specific issues, brief new members, discuss relevant issues in advance, prepare input for the main meetings, document the outcomes of the meetings and follow up on specific decisions. Each body should have sufficient financial and human resources so that all related administrative tasks and logistical arrangements of the governance bodies can be covered. **3.2. Promote a shared skills goal among relevant ministries through strategic documents, such as national development plans and skills-related policy documents.** Strategic documents should provide an overarching vision for skills outcomes that all relevant ministries share and can contribute to. The strategic documents should require relevant ministries to co-ordinate with one another in implementing skills policies. The process of developing these strategic documents should include all relevant ministries from their inception, throughout their development and implementation, as well as their evaluation. When relevant ministries are fully engaged and have sufficient opportunities to provide input and contribute, they have greater ownership of the final document and hence greater commitment to implementing the tasks laid out in the document. These engagement efforts are particularly important when one ministry is leading the drafting process of the plan.
Strengthening vertical co-ordination	**3.3. Support subnational governments in implementing skills policies by providing additional human and financial resources and capacity-building support.** Through these various mechanisms, best practices and insights can be shared vertically between subnational and national governments and horizontally across subnational governments. The co ordination mechanisms should clearly define the respective roles and responsibilities of national and subnational actors and ensure that the allocation of resources matches the responsibilities assigned to subnational governments. When there are capacity constraints in subnational governments, additional human and financial resources should be provided to them, so that they can effectively engage in these mechanisms and follow through with any decisions made through them. Subnational governments could also benefit from their participation in international forums such as the UCLG, which hosts a learning platform to increase the capacity of subnational governments.

Opportunity 2: Promoting a whole-of-society approach

Annex Table 1.B.8. Opportunity 2: Promoting a whole-of-society approach

Policy directions	High-level recommendations
Identifying and engaging relevant labour market actors	**3.4. Establish legal frameworks to strengthen engagement with actors in the labour market.** Since many countries in Southeast Asia do not have national legislation in place to formally recognise the importance of employers' organisations and trade unions and guide their corresponding roles in skills policies, adopting reforms to address this gap is crucial to building effective long-term partnerships between governments, workers, trade unions and employers in skills policies. A starting point could be to facilitate recognition agreements, which are formal legal frameworks between employers and trade unions, and which would lay the foundation for consultations and negotiations on a variety of skills issues. Legal frameworks should also clearly define the respective roles and responsibilities of employers and workers in skills policies to facilitate identifying areas for collaboration and developing partnerships. **3.5. Strengthen the effectiveness of governance bodies engaging labour market actors.** Governance bodies should allow labour markets to provide input into the agenda of governance meetings and promote bottom-up initiatives. While having too many actors involved can make it difficult to have real deliberations during meetings, it is important to ensure that economically less influential groups, such as the large number of informal and temporary workers across Southeast Asian countries, also have a seat at a table. Governance bodies require a sufficiently high level of political support and enough financial resources, so that the decisions made by the bodies are carried out in practice. A well-functioning secretariat should prepare the governance bodies' meetings, document the meetings' main outcomes, and implement and monitor the actions. Labour market actors should also be actively engaged in skills policies through their representations at the regional level (e.g. ASEAN Confederation of Employers and ASEAN Trade Union Council) and the international level (e.g. International Organisation of Employers and International Trade Union Confederation).
Identifying and engaging relevant civil society actors	**3.6. Provide financial, technical and networking resources to facilitate the participation of women, as well as the organisations that represent them, in governance.** Increase women's participation across all levels of government through comprehensive measures, such as mentoring schemes, media training and financial support to campaigns. These measures can help build the capacity, networks and resources to help women run for political office and engage in policy dialogue at subnational and national levels. Quotas for ensuring a minimum level of women's representation across levels of government in elected and non-elected positions should also be considered. However, such quotas need accountability and monitoring mechanisms to ensure their implementation. Furthermore, to facilitate the participation of women's organisations and professional associations in policy dialogue, encourage them to form a national umbrella organisation that could help overcome fragmentation issues and more effectively represent women's concerns in skills-related issues at the national and international level. **3.7. Strengthen youth's input in official governance bodies and development of youth strategies.** Provide national youth organisations seats in official governance bodies, so that youth can directly provide their perspectives on and influence skills policies. Their input should be used to enhance the relevance and responsiveness of skills policies to their specific needs. For countries without a youth strategy or with a dated youth strategy, it would be beneficial to develop a new youth strategy given the recent challenges youth faced due to COVID-19 and the uncertain future they face post-COVID. During the development, implementation and monitoring of a youth strategy, it would be critical to include youth representatives throughout, so that they can propose their own ideas and provide input into the actions featured in the strategy. **3.8. Support migrant organisations' active participation in governance bodies and influence in skills policies.** Since the needs of migrants may vary depending on their home country, context of migration and background (e.g. legal status, education level), it could be relevant to engage multiple migration organisations in governance bodies. In such bodies, meetings with diverse migrant organisations should occur regularly, so that they can provide ongoing input into skills policies. Governments could also collaborate with migrant organisations in determining the types of services migrants need and providing those together. Initiatives, such as MRCs, which are delivered through partnerships between government institutions, trade unions and migrant organisations in countries of origin and destination to support migrants and advocate for them, should be expanded in Southeast Asian countries where they do not yet exist. Migrant organisations should play an important role in monitoring their host countries' compliance with regional policy frameworks, such as the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers, and pressure governments to raise workplace standards for migrant workers.

Opportunity 3: Building integrated information systems

Annex Table 1.B.9. Opportunity 3: Building integrated information systems

Policy directions	High-level recommendations
Improving data collection	**3.9. Implement robust national data collection processes to address data gaps.** Southeast Asian countries should prioritise filling data gaps, including, for example, for specific vulnerable groups (e.g. out-of-school children, migrants, individuals with disabilities, individuals living in rural and remote areas, individuals active in the informal economy) for certain forms of learning (e.g. adult learning, non-formal learning), as well certain skills aspects (e.g. skills use at work). To strengthen the capacity of national statistical agencies to effectively co-ordinate with other data-collecting agencies and ensure that data are comprehensive, consistent, valid and compatible following standardised definitions, they should be provided with sufficient funding and capacity development opportunities (e.g. through peer learning within and outside the region). **3.10. Support participation in international surveys to generate internationally comparable data.** Southeast Asian countries should continue to seek and receive technical assistance and support to participate in international surveys. The existing forums in ASEAN, such as the ASEAN Community Statistical System Committee, should foster exchanges across ASEAN member countries in their experiences, including the challenges and benefits, of participating in international surveys. Best practices of how to overcome participation challenges and reap the most benefits from participation should be shared. Southeast Asian countries should also play an active role in working with international survey administrators to sufficiently adapt the instruments to their context.
Improving the management and use of skills data	**3.11. Establish the institutional and legal groundwork for integrating data management systems.** Countries in Southeast Asia can kick off their integration processes by formulating strategies and policies that identify relevant data sources at the national, subnational and school levels. Afterwards, it is important to establish data-sharing agreements between these different sources to facilitate data transfer from one actor to another. Such data-sharing practices must align with countries' data protection provisions, especially for information that may be deemed sensitive and private, such as academic performance, qualifications and wages. Governments must deliberate on what raw data on skills could be accessed by the public through agencies' statistical portals and what information must be restricted due to data privacy concerns. Countries in the region must directly address such issues in their data strategies and legislation and set clear guidelines on how government agencies process personal data and use them as evidence for skills policies. **3.12. Regularly conduct skills assessment and anticipation exercises to design and update skills policies.** Governments must support the collection of comprehensive and up-to-date skills data sources and the management of such data sources in an integrated skills information system in order to make robust skills assessment and anticipation exercises possible. Sufficient funding and human resources should be dedicated for such exercises. Bilateral partnerships (e.g. development agency) and multilateral partnerships (e.g. ASEAN) can support the development and implementation of such exercises. Best practices and lessons learned from using such exercises for skills policy making should be disseminated across Southeast Asian countries.

Opportunity 4: Aligning and co-ordinating financial arrangements

Annex Table 1.B.10. Opportunity 4: Aligning and co-ordinating financial arrangements

Policy directions	High-level recommendations
Diversifying financial resources	**3.13. Promote the use of levies among employers to encourage skills development and mobilise financial resources for training.** Engage employers in the design and implementation of levy schemes, consulting them regarding decisions on training priorities and mechanisms for allocating financial resources. Establish compulsory payroll levies at the national level to ensure a steady stream of funds that could be used for skills development offers in line with the identified training priorities at the country level. Design these levy schemes in such a way that allocates additional resources to disadvantaged groups, for instance, by earmarking a greater proportion of levy-financed training funds specifically for workers in SMEs and dedicating a portion to workers in the informal economy. Moreover, on top of national levy schemes, consider establishing levies at the sectoral level in partnership with industry representatives in order to align funding with the immediate needs of employers, enabling a more rapid response to sector-specific labour market demands.

Policy directions	High-level recommendations
Allocating financial resources equitably and effectively	**3.14. Design a funding formula that allocates adequate financial resources to disadvantaged learners.** In accordance with skills policy priorities, identify target groups of students or schools that most need resources and include their specific characteristics (e.g. gender, socio-economic background, special education needs, ethnic minority status) in the funding formula. Assign greater weights to their characteristics to allocate more funding to these groups. Ensure that such formulas capture the different per-student costs of various types of learners and that the resulting educational budgets account for individual characteristics that compound on each other (e.g. greater allocation for students with disabilities in rural schools in comparison to students without disabilities in the same school). **3.15. Establish strong monitoring and evaluation systems to ensure the effectiveness of allocation arrangements.** Set up mechanisms for the routine collection of information on expenditure at the school level, such as through the submission of financial reports. Ensure that such reports clearly cover spending on various elements of the entire school system, such as staff compensation, the purchase of learning materials, utility costs and infrastructure maintenance costs, among others. Using the information gathered through continuous monitoring, conduct evaluation exercises that determine whether spending has contributed to improving student outcomes and achieving skills policy objectives in general. This could be done in co-ordination with auditing bodies (whether internal or external), as well as with a wide variety of stakeholders, such as through school boards.

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2 Responding to the skills implications of megatrends and COVID-19 in Southeast Asia

Megatrends in the form of globalisation, technological progress, demographic changes, migration and climate change, as well as unforeseen shocks, such as the COVID-19 crisis, are affecting the skills people need to face uncertainty and 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 challenges into opportunities and help shape the world for the better. This chapter examines the implications of globalisation, technological progress, demographic changes, migration, climate change and the COVID-19 crisis for the skills systems of Southeast Asia.

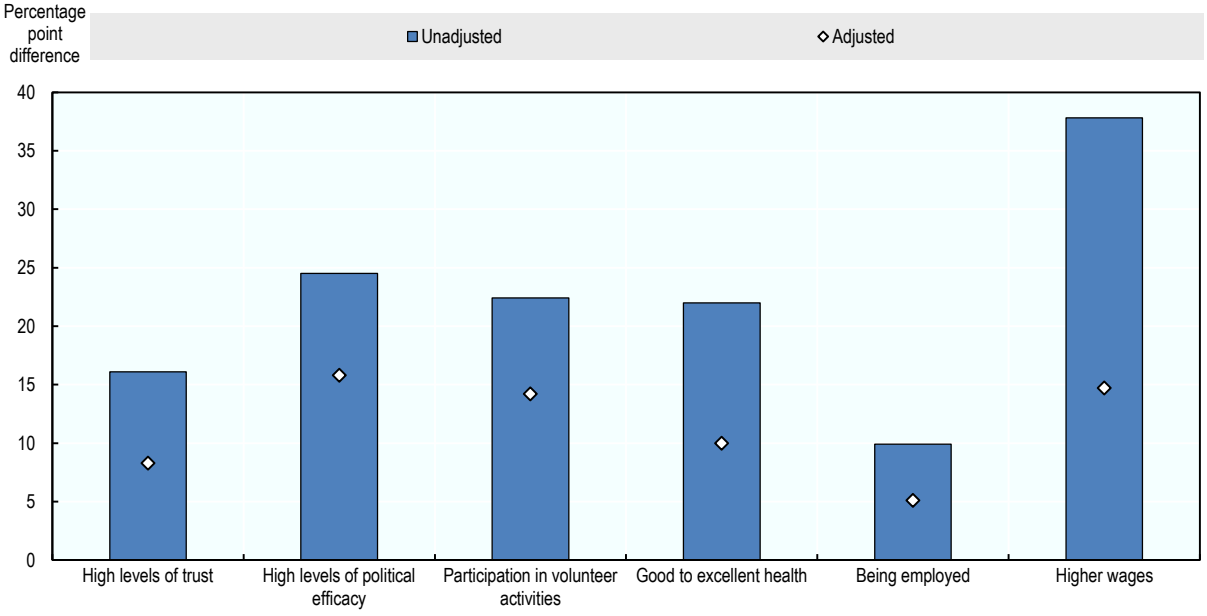
The world is changing rapidly, transforming the skills needed for success for today and tomorrow

Southeast Asian countries, like other countries in other regions, are facing a rapidly changing world. Megatrends – globalisation, technological progress, demographic changes, migration and climate change – as well as unforeseen shocks, such as the coronavirus (COVID-19) pandemic, affect how people work, how people obtain skills and how people interact. They transform the nature of jobs and change skills needed to thrive at work and in society. They disrupt labour markets in Southeast Asia and displace workers in some sectors while spurring demand for new and/or more high-level skills. Due to the rapid pace of change and uncertainty, individuals need to develop new skills and continue to reskill and upskill throughout life and use them effectively.

Developing the right skills and using them effectively is central to the success of individuals and societies. When individuals are more highly skilled, they tend to have higher chances of being employed and, if employed, earn higher wages (Figure 2.1). Similarly, more highly skilled individuals are more likely to have higher levels of trust, participate more actively in the democratic process and community life and enjoy better health (OECD, 2016[1]). In addition, a more highly and equitably skilled population supports sustainable economic growth and promotes cohesion in society.

Figure 2.1. Literacy proficiency and positive economic and social outcomes

OECD average, adjusted and unadjusted difference between the percentage of adults with high proficiency (Level 4 or 5) and the percentage of adults with low proficiency (Level 1 or below) who reported high levels of trust and political efficacy, good to excellent



Note: All differences are statistically significant. Adjusted differences are based on a regression model and take account of differences associated with the following variables: age, gender, education, immigrant and language background and parents' educational attainment.
How to read this figure: Higher proficiency in literacy is associated with a greater likelihood of engaging in voluntary work. On average, the chances of participating in volunteer activities are 22 percentage points higher among people who scored 4 or 5 than those who scored at or below Level 1 in literacy. The relationship remains strong even after accounting for socio-demographic characteristics.
Source: Adapted from OECD (2018[2]), *Survey of Adults Skills database (PIAAC) (2012, 2015)*, www.oecd.org/skills/piaac/.

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This chapter explores the skills implications of megatrends and the COVID-19 crisis in Southeast Asian countries. The following sections examine, in turn, the implications of globalisation, technological progress, demographic changes, migration, climate change and the COVID-19 pandemic. Each section presents a set of indicators of how megatrends and COVID-19 affect Southeast Asian countries and examines their skills implications.

Megatrends

Globalisation

In today's world, firms are increasingly organising their production globally. Trade liberalisation, lower transportation costs, and information and communication technologies have enabled global value chains (GVCs) that allow different parts of the production processes to be performed in different geographical locations (OECD, 2019[3]). This process can increase demand for certain skills while decreasing demand for others as new economic activities are introduced and others are offshored. In the long term, globalisation could bring productivity gains to participating countries, but potential gains are dependent on skills available in countries (OECD, 2017[4]).

Southeast Asia countries also actively participate in GVCs. Many Southeast Asian countries are now major players in the world market, both as exporters and importers. As a share of gross domestic product (GDP), international trade has risen across Southeast Asian countries in recent decades (Figure 2.2). The major trading partners of Southeast Asian countries include the People's Republic of China (hereafter "China"), the European Union, Japan, Korea and the United States. Intra-regional trade is also substantial, with Singapore and Malaysia being particularly important regional trading partners (World Bank, 2019[5]). While in some Southeast Asian countries, GVC investments in manufacturing are concentrated in labour-intensive and low-skilled sectors, such as garment production, in other Southeast Asian countries, such investments are increasingly in high-tech sectors, such as automotive and electronics production.

Southeast Asia's participation in GVCs has been supported by a rise in free trade agreements (FTAs) and foreign direct investment (FDI). As Southeast Asian countries sign FTAs individually or collectively, they benefit from reduced costs for importing and exporting, improved customs clearances and higher tax deductions. FTAs make it easier for multinationals to engage local firms as part of their GVCs, which raises the demand for local skills. In January 2022, the Regional Comprehensive Economic Partnership (RCEP) entered into force, bringing together the Association of Southeast Asian Nations (ASEAN) member states and Australia, China, Japan, Korea and New Zealand. It is the largest free trade area in the world, covering 2.3 billion people (30% of the global population) and accounts for USD 12.7 trillion (25%) of global trade in goods and services (European Parliament, 2021[6]).

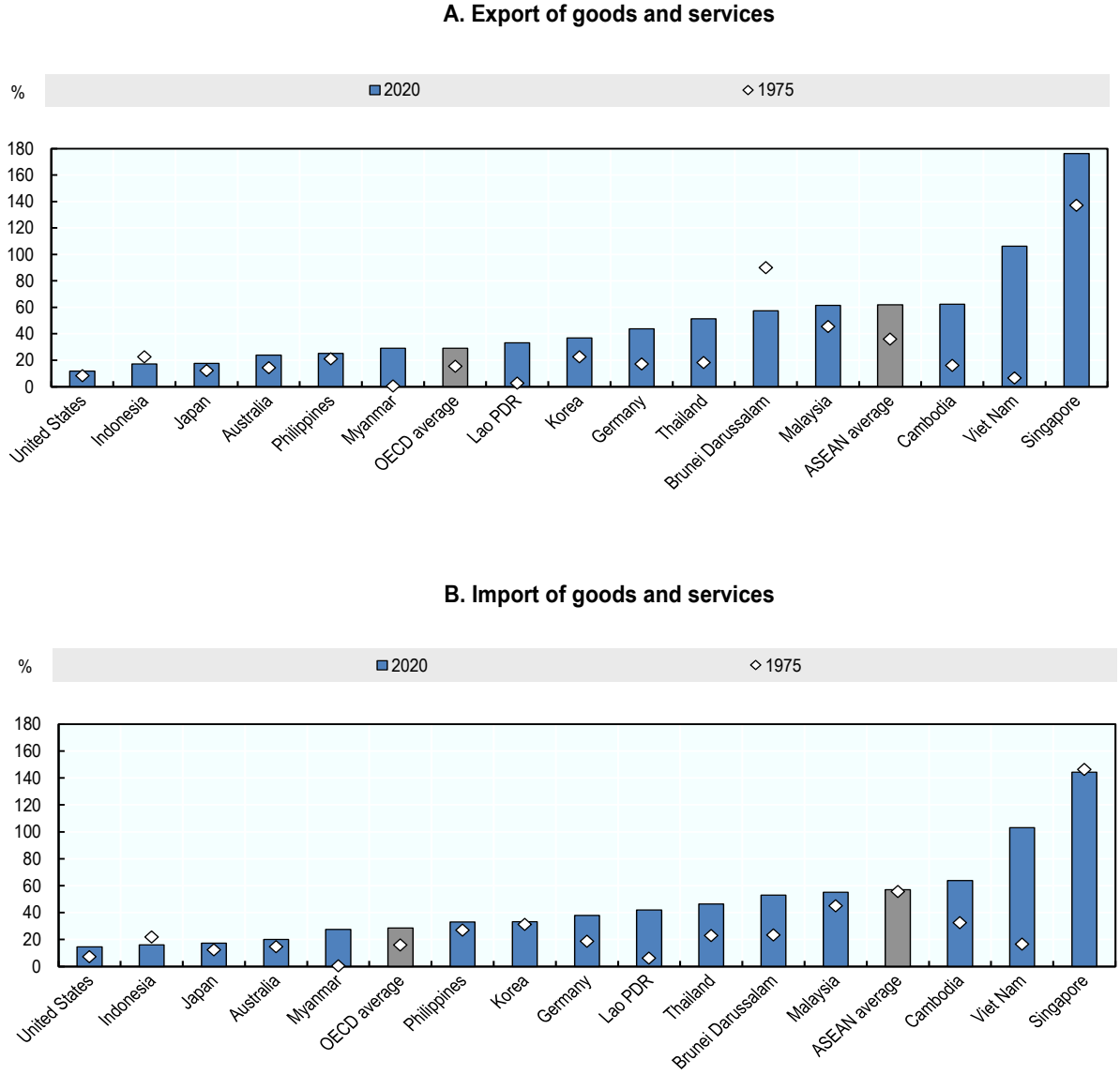
Similarly, in Southeast Asian countries, FDI, which for example, refers to a multinational firm gaining controlling ownership of a local firm, is often accompanied by a transfer of technology to the local firm and can lead to beneficial spillover effects (e.g. transfer of know-how, management approaches, marketing strategies) (OECD, 2019[7]; Andrenelli et al., 2019[8]). FDI may thus increase skills use and overall productivity in local firms, while an increased level of skills and relatively low costs of those skills in local firms helps attract even more FDI (Blomström and Kokko, 2003[9]). FDI inflows into Southeast Asia increased in 2019 to an all-time level of USD 182 billion, representing 11.9% of global FDI (ASEAN Secretariat and UNCTAD, 2019[10]; 2021[11]).

However, the future of Southeast Asia's participation in GVCs is uncertain. On the one hand, as some emerging economies, most notably China, move up GVCs, the internationalisation of production could expand to other countries, especially in Southeast Asia (OECD, 2017[4]). Moreover, the recent United States-China trade war starting in 2018 has incentivised Chinese exporters and suppliers to the United States to find production locations in Southeast Asia, such as Thailand and Viet Nam, to avoid tariffs, which could boost economic activity and demand for skills in the region (Lauria, 2019[12]). On the

other hand, other analyses argue that given how Southeast Asian countries have historically been susceptible to shocks in Asia-Pacific trade, the consequences of an ongoing trade war could lead to overall GVC activity decreases in the region (Coxhead, 2022[13]).

Figure 2.2. International trade of goods and services, 1975 and 2020

Percentage of GDP



Note: Due to a lack of data in both figures, a different baseline year was used for Lao PDR (1974), Viet Nam (1986 for imports), Cambodia (1993) and Myanmar (2000), while different end-line years were used for Lao PDR (2016), Japan (2019), OECD average (2019) and United States (2019).
Source: World Bank (2021[14]), *World Development Indicators*, https://databank.worldbank.org/source/world-development-indicators.

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The COVID-19 pandemic added to the uncertainty through significant disruptions in GVCs. The pandemic and preventive measures, such as lockdowns and limits on the mobility of people, have significantly

disrupted GVCs around the world by, for example, reducing available air cargo and containers and increasing the time and cost of trade processes, such as the unloading of shipments and physical inspection of goods (OECD, 2020[15]; UN, 2021[16]). The prolonged supply chain disruptions from COVID-19 may encourage multinational firms to consider reshoring some or all of their production from Southeast Asia to their home countries to reduce the risks of such events. These changes could lessen the skills demand in Southeast Asian countries.

Skills implications of globalisation

Southeast Asian countries' position in GVCs depends on their available skills. When Southeast Asian countries have a highly skilled workforce, this enables them to participate in the higher end of the global production chain, characterised by high-skilled activities (Chor, 2010[17]). Such high-skilled activities could, for example, be in technologically advanced manufacturing industries and sophisticated business services. To move towards the higher end of GVCs, Southeast Asian countries have been investing heavily in raising the education level of their populations, which has led to an overall rise in tertiary attainment levels. However, it is also important that the skills acquired in such education programmes align well with evolving labour market needs. Such alignment can be supported through high-quality vocational and professional education and training that includes a strong work-based learning component and policies that foster closer collaboration between employers, tertiary education institutions and research institutions (OECD, 2017[4]).

Southeast Asian countries' performance in GVCs depends on how well their skills are being used. Skills can enable countries to perform well within GVCs, but only if people work in firms and industries that are a good match and make the best use of their skills. Southeast Asian countries need to ensure that people are well matched to their jobs by providing career guidance services, developing comprehensive skills assessments, and promoting qualifications that reliably reflect individuals' skills. As the skills demands of firms in GVCs continuously evolve, workers also need to be able to move easily between jobs and careers. Countries can design employment protection legislation and regulate non-compete clauses that balance the flexibility and security of workers (OECD, 2017[4]). Firms in Southeast Asia, in particular small- and medium-sized enterprises (SMEs), should be provided with targeted management training to introduce effective management and workplace practices that make the best use of workers' skills and support workers in adapting to the procedures and processes of multinational companies.

Skills policies can address the potential negative impacts of participation in GVCs. As Southeast Asian countries move up GVCs over time, this could mean that lower-end production processes pursued until then could be relocated elsewhere. While such transitions can create higher skills demands, they could lead to job losses for some workers in the short term. Workers at risk of such displacement are often individuals with lower education levels, older individuals and individuals performing routine intensive tasks (OECD, 2017[4]). It is thus critical to provide such individuals with sufficient opportunities to continuously develop their skills, so that they can evolve with the changing skills requirements of their jobs or transition to new jobs at the higher end of GVCs. Participation in such skills development opportunities can be facilitated through subsidising or completely covering the cost of participating in such programmes and guiding such individuals in identifying the programmes most suitable for them.

Technological progress

Like the impact of globalisation, the way individuals learn, work, communicate and consume is also being transformed by advances in technological progress. New technologies, such as artificial intelligence (AI), automation, robotics and machine learning, bring numerous opportunities and new challenges. While technological advances help workers improve their productivity and create new job opportunities, they are also changing the types of skills required in the labour market. As governments go digital to improve the effectiveness and efficiency of services, people also need increasingly digital skills to access basic public

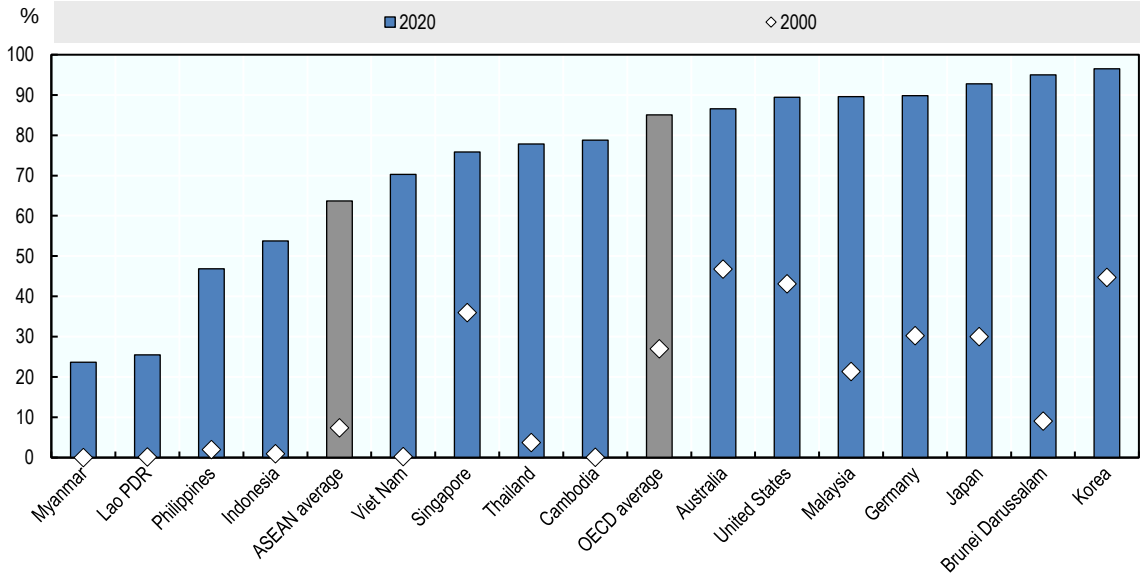
services. This transition creates demand for new sets of skills, such as those for non-routine tasks and digital skills, while making certain sets of skills obsolete, such as those for routine tasks (OECD, 2019[18]). Individuals, firms and countries that can harness this new wave of technological progress stand to benefit greatly, as it enriches lives, boosts productivity and makes learning easier (OECD, 2019[18]). However, those who fail to harness such changes may be left behind, resulting in widened inequalities.

New technologies are spreading rapidly throughout Southeast Asian countries. Many Southeast Asian countries attract new technologies to accelerate industrialisation and economic development. The region is projected to be one of the world's fastest-growing data centre markets in the next few years, exceeding the growth in North America and the rest of Asia-Pacific (ASEAN Secretariat and UNCTAD, 2019[10]). The market for AI in ASEAN countries is expected to grow at about 8% per year from 2019 and reach USD 5 billion by 2025 (ASEAN Secretariat and UNCTAD, 2021[11]). The use of industrial robots used to be confined to manual tasks but are now increasingly used for cognitive tasks, including in Southeast Asia (ADB, 2019[19]), being used in the automotive, electronics and metal and machinery industries (ASEAN Secretariat and UNCTAD, 2021[11]).

The COVID-19 pandemic has accelerated the shift towards digitalisation and the adoption of new technologies and platforms in Southeast Asia. The adoption of new digital solutions and the use of digital skills had already been on the rise before the pandemic (Figure 2.3), but it has increased rapidly since then. The fear of the spread of the virus and the implementation of social-distancing measures have made online interactions at work and in everyday life more common. In 2020 alone, 40 million new Internet users were added, bringing the region's online population to 400 million (63.7%) (Figure 2.3). In a survey recently conducted in Southeast Asia by EY, only 15% of respondents would prefer to work from the office full time, 32% would prefer to work anywhere, 29% would prefer to work remotely full time, and 23% would prefer to work in a hybrid work arrangement (i.e. mix of in-office and remote working) (EY Indonesia, 2021[20]).

Figure 2.3. Connectivity among individuals in Southeast Asia and selected OECD countries, 2000 and 2020

Individuals using the internet (% of population)

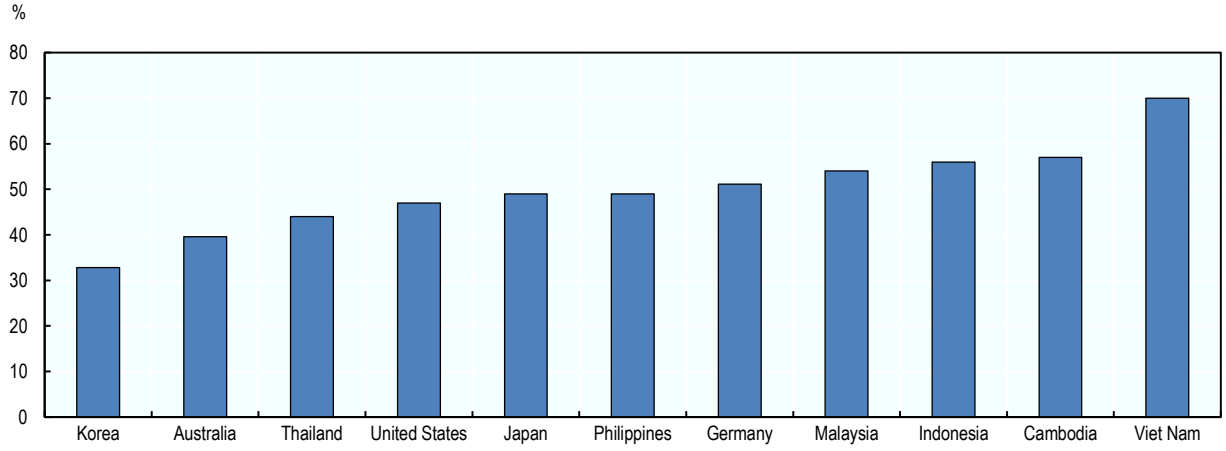


Note: Due to lack of data, the latest available year was used for the following countries: Myanmar (2001); Australia, Lao PDR, Myanmar (2017); Brunei Darussalam, Japan, OECD countries, the Philippines and the United States (2019).
Source: World Bank (2021[14]), *World Development Indicators*, https://databank.worldbank.org/source/world-development-indicators.

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Compared to OECD countries, Southeast Asian countries have a greater share of jobs at risk of automation or significant change. The share of jobs at risk of automation or significant change is particularly high in Viet Nam (70%), followed by Cambodia (57%) and Indonesia (56%) (Figure 2.4). The sectors that are most highly affected by automation include manufacturing, construction, wholesale, retail, hotels and restaurants. Examples of impacted 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[21]). The probability of being 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.

Figure 2.4. Share of jobs at risk of automation or with a probability of significant change in Southeast Asia and selected OECD countries, 2017



Note: The bars represent occupation-based estimates for the risk of automation, based on (Frey and Osborne, 2017[22]).
Source: OECD (2020[23]), *OECD Economic Surveys: Thailand: Economic Assessment*, https://doi.org/10.1787/ad2e50fa-en.

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However, the long-term repercussions of technological progress are uncertain. Many factors could limit technology adoption, depending on the relative price of, and attitudes towards, technology (Nedelkoska and Quintini, 2018[24]). While certain jobs may disappear, others will emerge. A sharp decline in overall employment is unlikely (OECD, 2019[7]). Job automation could also bring large benefits to the economy. For example, it can help achieve higher productivity, create new job opportunities, and improve working conditions as certain hazardous jobs can be automated. A study suggests that enhanced connectivity and application of technology are expected to generate about USD 150 billion in additional revenue potential across key industries (i.e. agriculture, services and manufacturing) for ASEAN countries by 2025, which could lead to substantial job creation in such industries (ASEAN Secretariat and UNCTAD, 2019[10]). Furthermore, technological progress could also help overcome labour shortages in the face of an ageing population (OECD, 2020[23]). The extent to which Southeast Asian countries can benefit from technological progress will depend on their skills policies.

Skills implications of technological progress

Skills allow workers to adapt to changing labour markets due to technological progress. In order for workers in Southeast Asia to thrive in a world undergoing rapid technological change, they will need not only digital skills but a broad mix of skills, including transferrable cognitive skills (e.g. problem solving) and socio-emotional skills (e.g. communication, teamwork) (OECD, 2019[18]). Additionally, critical thinking

skills are equally important to develop, as they would allow individuals to make informed decisions about vast amounts of information in an increasingly digital world of work (Cunningham et al., 2022[25]). Skills development opportunities that focus on developing these skills are essential to allow workers to transition from jobs at high risk of being automated to new and higher-quality jobs, including those higher up the GVC (as discussed above). As labour markets evolve in response to technological progress, governments in Southeast Asia need to find the right balance between policies that support labour market flexibility enabling transitions across jobs and those that support job stability protecting vulnerable workers who cannot easily transition across jobs.

Furthermore, skills play an important role in bridging the digital divide. Due to technological progress, there is an increasing trend of job polarisation. On the one hand, individuals who are more highly skilled are increasingly more in demand, as they can benefit more from the changes brought about by technological progress, with their skills (e.g. skills for non-routine tasks) being complementary to technology. On the other hand, individuals with lower levels of skills are more likely to work in jobs at risk of automation, are less likely to be able to adapt to new technologies and working practices, and have fewer opportunities to acquire the necessary skills (OECD, 2019[3]). Similarly, many SMEs in Southeast Asia struggle to adopt and use digital tools compared with larger companies (ERIA, 2020[26]). Skills policies targeting individuals with lower skill levels and those working in SMEs can ensure that all individuals are able to benefit from technological progress.

Technological progress can lead to a higher sense of well-being if individuals possess the relevant skills. Digital skills allow individuals to benefit from new technologies in spending their leisure time, finding information, participating in political processes, buying goods and services, interacting with others and learning. All these activities can lead to a higher sense of well-being. A good level of cognitive and socio-emotional skills increases individuals' likelihood of protecting their privacy and security on line, navigating effectively through online platforms and knowing how to interpret information from online sources (OECD, 2019[18]). Without such skills, individuals could be more likely to be exposed to online bullying and harassment or become trapped in digital echo chambers. The level of skills individuals possess directly impacts the extent of such activities and their well-being outcomes (Scheerder, van Deursen and van Dijk, 2017[27]).

Demographic changes

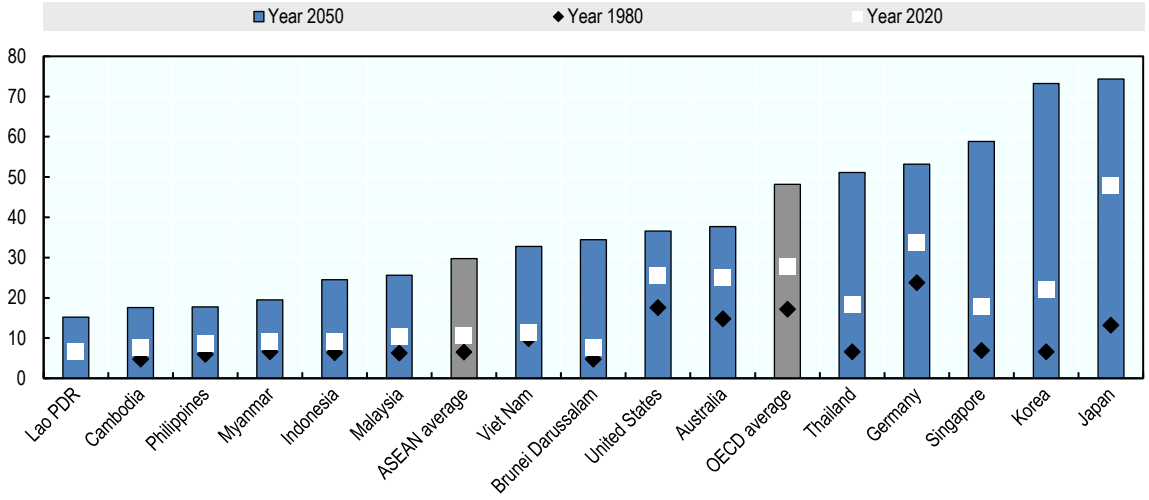
While technological progress is about changes of the context people live in, demographic changes are about the age-related changes of the people themselves. Demographic changes result from declining fertility rates and increasing life expectancy. Older people tend to have lower employment rates than younger people, so an ageing society means that the total size of the labour force is decreasing. To maintain or grow an economy further, a smaller labour force needs to be offset by an increase in productivity. Therefore, in countries with ageing populations, it will be even more important to invest in the skills of both the current and future workforce, especially in skills that promote productivity and innovation. However, as population ageing requires higher investment in healthcare and pension systems, it can create financial pressure on other policy areas, such as those relating to education and active labour market policies (OECD, 2019[3]). Demographic changes also impact consumption and, by extension, skills demand, investments and job opportunities. Consumption will likely shift from durable goods, such as cars, towards services, such as healthcare and leisure (UN DESA, 2020[28]), increasing skills demand related to those sectors. As the service sector often requires high social and interpersonal skills, acquiring such skills becomes increasingly important (OECD, 2019[3]).

Southeast Asian countries continue to experience significant demographic changes, albeit at different speeds. The speed of population ageing from a global perspective is fastest in East and Southeast Asia, which are projected to have the largest increase in the size of the older population (aged 65+) between 2020 and 2050 (UN DESA, 2019[29]). The dependency ratio, which is the ratio of older people

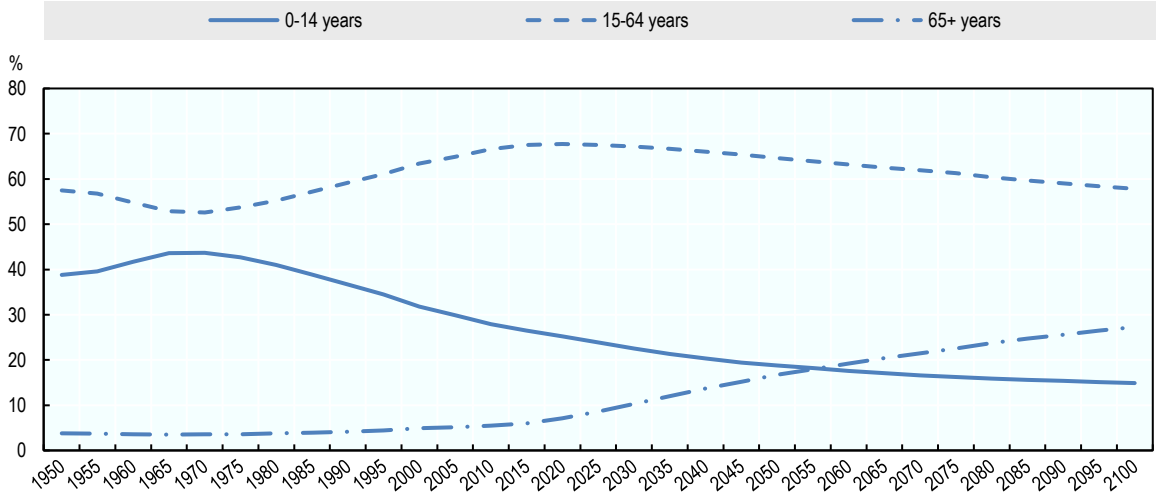
(aged 65+) over the working-age population (aged 16-64), is projected to at least double in all Southeast Asian countries during the period, with some countries, such as Singapore, Thailand and Brunei Darussalam, increasing exceptionally fast (Figure 2.5, Panel A). This trend is projected to accelerate over the next decades. The share of older people over 65 in total population is projected to be over 27.3% in Southeast Asia by 2100 (Figure 2.5, Panel B).

Figure 2.5. Demographic changes over time in Southeast Asia and selected OECD countries

A. Old-age dependency ratio, 1980 vs. 2020 vs. 2050



B. Historical data and projections of Southeast Asia population share, by age group, 1990-2100



Source: UN Department of Economic and Social Affairs (2019[30]), *World Population Prospects 2019*, https://population.un.org/wpp/.

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The age structure of the population varies substantially across Southeast Asian countries. Singapore and Thailand, and to a lesser extent Brunei Darussalam and Viet Nam, have a relatively higher share of older populations and are expected to face the challenges of an ageing society in the coming decades (UN DESA, 2019[29]). In these countries with rapidly ageing populations, labour shortages may arise as the number of retiring older workers rises relative to the number of younger people entering the labour market (OECD, 2020[23]). In contrast, countries like the Philippines and Indonesia remain at an early stage of this demographic transition. These countries could potentially still benefit from a demographic dividend over the next decades. Greater investment in the skills of youth in these countries can dramatically improve their skills profiles, increasing their productivity and competitiveness, and, by extension, help them move up the GVC in the longer term.

Skills implications of demographic changes

As individuals work and live longer due to increased life expectancy and improved health, it is critical to support lifelong learning opportunities allowing all individuals to continuously upgrade their skills. Providing a strong skills foundation early in life is critical and will pay dividends across the whole lifecycle, especially for those from socio-economically disadvantaged backgrounds, who require closer and targeted policy attention in order to facilitate their access to skills development opportunities that would allow them to succeed in work and life (OECD, 2021[31]). Since firms may be less willing to invest in older workers due to lower expected returns over an older worker's remaining career, governments have an important role to play to either provide financial incentives for firms to provide older workers with training or offer alternative skills development options for older workers. Continuously upgrading skills in later life also matters for participating fully in society. For example, older individuals who lack basic digital skills may face barriers to accessing basic commercial services for daily life (e.g. online shopping, telemedicine), connecting with others and benefiting from government services, which are increasingly provided on line.

As populations age, further economic growth will depend increasingly on more people making their skills available in the labour market. Southeast Asian countries need to ensure that more individuals, particularly women and older individuals, make their skills available in the labour market by participating in the labour force. Women with children could be incentivised to participate in the labour market through expanding early childhood and care options and part-time and flex-time work options. Older individuals could also be incentivised to stay longer in the labour market by raising the retirement age and introducing flexible retirement transitions allowing the combination of part-time work with pension receipt before or after the standard retirement age. Women and older individuals should also receive sufficient guidance and counselling about possible labour market opportunities, so that they can be best matched with the jobs for which they possess the necessary skills (Adalet McGowan and Andrews, 2015[32]). Increasing the labour supply by attracting and retaining migrants could be another option, as discussed further in the next section.

Besides increasing labour market participation, it is also critical to use the skills of workers more effectively so they can become more productive. Firms can raise the use of their workers' skills – and by extension, productivity levels – through introducing and disseminating productivity-enhancing technologies and innovative ways of working (Hanushek and Woessmann, 2010[33]), such as high-performance workplace practices. These include a wide variety of workplace-based measures, such as a flexible work environment, knowledge-sharing activities with colleagues, participation in professional development and performance-based incentives (Belt, Giles and CIPD, 2009[34]; Posthuma et al., 2013[35]; Sung and Ashton, 2005[36]). Management skills also play an important role in raising productivity, as managers can either be enablers or bottlenecks affecting how fully workers use their skills. Effective management practices include goal setting, providing incentives, regular monitoring and resolving conflict. These practices also increase worker satisfaction and reduce worker turnover (Criscuolo et al., 2021[37]).

Migration

Like demographic changes, migration is an important factor affecting the supply of skills in countries. Migrants increase the supply of skills and can contribute to economic growth in their host country if their skills are well used. Migrants can fill important niches in fast-growing sectors, where educating and training the required workers nationally would either take too much time or not be enough to meet labour market demand. Migrants can also fill niches in declining sectors by temporarily providing the required skills and in areas where national skills development efforts would not be worthwhile due to the lack of long-term prospects (OECD, 2019[3]).

Migration also has important implications for the origin countries. When individuals with high skills emigrate, this can be a loss to the origin country, as the investment in educating them cannot be recuperated, and this might increase labour shortages in important sectors. When individuals with low skills emigrate, this may alleviate unemployment pressures in the origin country. If the emigrants return to their origin country at some point, they may bring back useful know-how, skills and networks that can spur innovation and economic growth in their origin countries (OECD, 2019[3]).

Southeast Asian countries are major sources of both migrant inflows and outflows. Migration, both within and outside of the Southeast Asia region, is substantial and increasing over time. Remittances constitute a significant portion of the economy of some Southeast Asian countries. For example, the Philippines is one of the world's top five remittance-receiving countries, where remittances amounted to USD 35.2 billion in 2019, nearly 10% of GDP. Remittance accounted for a significant share of GDP in 2020 in many other Southeast Asian countries, such as Viet Nam (5%), Cambodia (5%), Myanmar (3%) and Thailand (1.6%). In 2019, about USD 78 billion were sent as remittances to eight Southeast Asian countries with available data (World Bank, 2017[38]). The remittances can be an important source for families to finance access to basic services and skills development opportunities.

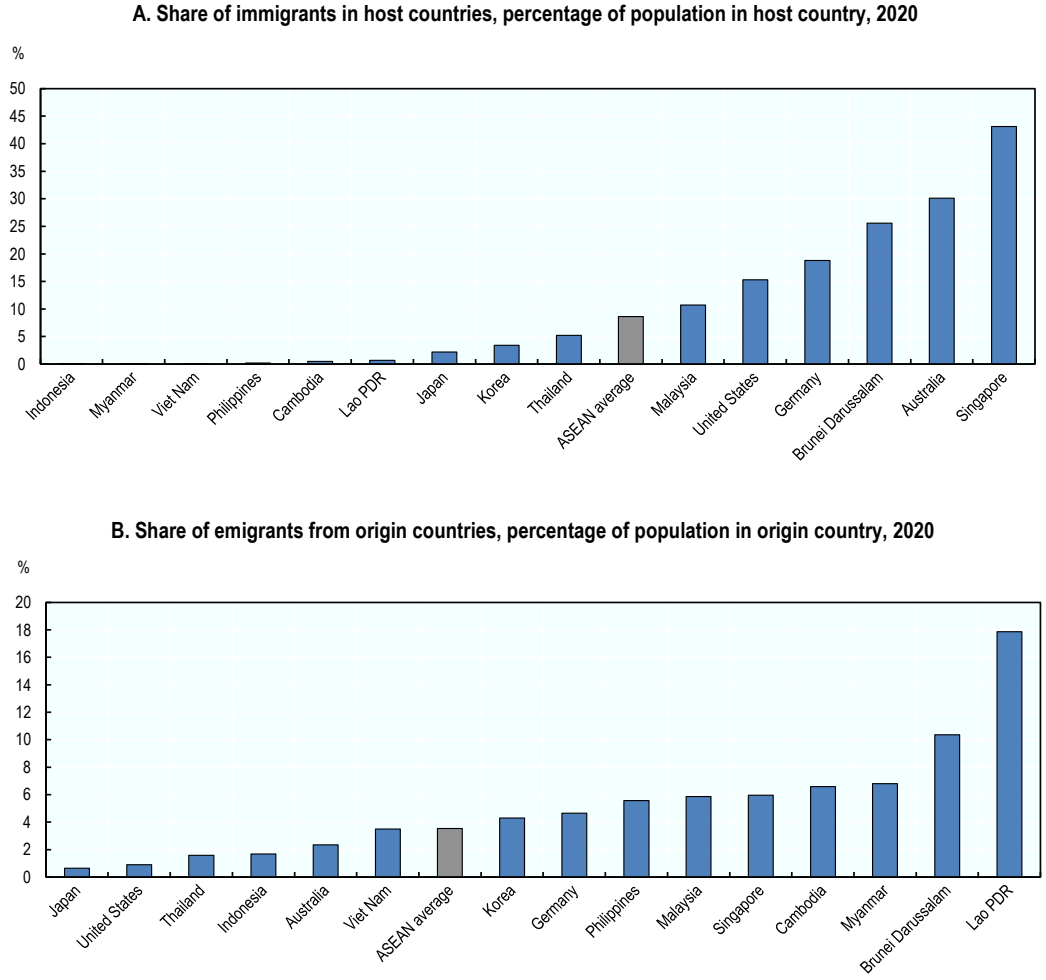
There is substantial variation across Southeast Asian countries in the share of immigrants and emigrants to the countries. Brunei Darussalam, Malaysia, Singapore and Thailand are countries with net migrant inflows, while Cambodia, Indonesia, the Lao People's Democratic Republic (hereafter "Lao PDR"), Myanmar, the Philippines, and Viet Nam have net migrant outflows (Migration Policy Institute, 2020[39]). Singapore is a host to many foreign residents (43.1% of its population), followed by Brunei Darussalam (25.6%) and Malaysia (10.7%). The share of immigrants in the population varies significantly across countries (Figure 2.6, Panel A). The share of emigrants in comparison to the total population of the origin country is relatively high in Lao PDR (17.9%), Brunei Darussalam (10.4%) and Myanmar (6.8%) (Figure 2.6, Panel B). The top destination regions for Southeast Asian emigrants outside of Southeast Asia are North America, the Middle East, East Asia and Europe. Some of the labour gaps produced by emigrating Southeast Asian workers are filled by immigrants mainly from South Asia (e.g. Bangladesh, Nepal and Pakistan).

Intra-regional migration across Southeast Asia increased substantially over recent decades. It tripled from 2.1 million in 1995 to 6.8 million in 2017, turning Malaysia, Singapore and Thailand into regional migration hubs, receiving 6.5 million migrants – 96% of the total number of migrant workers in Southeast Asia (ADB, 2019[19]). Labour mobility within Southeast Asia is concentrated within the Greater Mekong Subregion (GMS) – migrants from Cambodia, Lao PDR and Myanmar to Thailand – as well as from Indonesia to Malaysia and Malaysia to Singapore (ILOSTAT, 2018[40]; Statista, 2019[41]). The Philippines, one of the largest migrant source countries globally, plays a very limited role in migration flows within Southeast Asia. The share of migrants from Viet Nam is also small and declining. Most migrants from the Philippines and Viet Nam live and work outside Southeast Asia, primarily in the United States, the Middle East, and other Asian countries and economies (ADB, 2019[19]).

Most immigrants in Southeast Asia have relatively low skill levels and are compelled to search for economic opportunities, mainly in the construction, plantation and domestic services sectors. While higher-wage jobs

may be available in the region, many immigrant workers cannot take advantage of these opportunities due to their insufficient skill levels. There is a growing interest within the region to facilitate and foster mobility of more highly skilled labour, which has become more important as many Southeast Asian countries aim to pursue more high-value-added manufacturing and transform themselves into knowledge-based economies (ADB, 2019[19]; World Bank, 2017[42]).

Figure 2.6. Migration to and from Southeast Asian countries, 2020



Source: UN Department of Economic and Social Affairs (2019[43]), *International migrant stock 2019*, www.un.org/en/development/desa/population/migration/data/estimates2/estimates19.asp; Migration Data Portal (2020[44]), *International migrant stock as a percentage of the total population at mid-year 2020*, www.migrationdataportal.org/international-data?i=stock_perc_&t=2020; UN Population Division (2019[30]), *World Population Prospects 2019*, https://population.un.org/wpp/DataQuery/.

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Migration slowed considerably during COVID-19, but countries have begun to open their borders. Nationwide lockdowns, border entry restrictions (e.g. enhanced border surveillance, the suspension of visas, the interruption of international flights and extensive testing and quarantines) and a relatively slow vaccine roll-out in Southeast Asian countries have affected migration flows. Many countries have been slow to reopen borders due to the fear of the virus spreading and the global economic downturn, which depressed demand for skills. Some countries were more affected by the pandemic than others. For example, in Singapore, where reported cases of infection were high, especially among migrant workers,

the decline in the number of migrant workers was significant, falling by more than 5% (70 000 fewer migrant workers) in the first half of 2020. The decline was greatest (8.5%) among work permit holders in jobs other than domestic work and construction (ADB Institute, OECD and ILO, 2021[45]). As of the third quarter of 2022, border entry restrictions have been either fully or partially lifted in all Southeast Asian countries, depending on the vaccination status of migrants. Moreover, countries such as Indonesia and Malaysia have begun to offer new labour migration policy options, such as a nomad visa programme, to attract labour migrants – especially those who are highly skilled – into the country and simultaneously boost local tourism industries (Bangkok Post, 2022[46]).

Skills implications of migration

Effective skills policies are needed to allow migrants to smoothly enter the education system and labour market. Migrant adults and their children benefit from effective skills assessment and recognition procedures, which make it possible for their formal education received so far, any acquired foreign qualifications, and informally acquired skills to be formally recognised (OECD, 2017[47]). Formal recognition in the host country can open doors in fulfilling admission requirements for further studies and, in the case of adults, enhance employment chances. The results of migrants' skills assessments can also be used to develop tailor-made skills development programmes for different migrant groups. For example, the methods, materials and content used in language training may differ depending on a migrant's mother tongue, level of literacy in the mother tongue and cultural background. Afterwards, for a smooth transition into the labour market, migrants require guidance and counselling to identify jobs that match their skills, information about documents to prepare in an application and how to participate in an interview. Where migrants want to start a business, they would benefit from entrepreneurial support, such as connecting migrants with a business network, giving legal advice in registering a firm, providing guidance in meeting regulatory requirements, helping develop and execute a business idea and providing access to investment, among others (OECD, 2010[48]).

Skills policies are also essential to support migrants' integration into society. Migrants, who sufficiently speak the host country's language and have the necessary cultural skills, are able to benefit from a variety of services (e.g. government services, healthcare), fulfil basic requirements to acquire the nationality of the host country and are more likely to be well integrated into society. Well-integrated migrants may participate in a variety of forms of civic engagement (e.g. volunteering and participating in political parties and religious groups) and leisure activities (e.g. sports and recreational groups, reading books). These activities allow migrants to continuously develop and use their skills in informal ways and build a broad network of personal relationships. Well-integrated migrants are more likely to feel part of the host society, have a greater sense of belonging and enjoy higher levels of life satisfaction. Adult migrants' successful integration into society also positively affects their migrant children. Such migrant parents can support their children in adjusting to the new education system, cultivating a broad circle of friends, exposing them to diverse cultural activities, and guiding them in their lives and career choices (OECD, 2018[49]).

Given the cross-border nature of migration, it needs to be carefully managed across countries. Countries in Southeast Asia would benefit from strengthened labour migration governance that makes the flow of workers regular and safer. Cross-border partnerships on migration are needed to support formal employment, reduce exploitative and discriminatory labour practices, promote access to benefits (e.g. social security benefits, skills development opportunities), facilitate tax collection and simplify remittance procedures (OECD/European Union, 2014[50]). As each Southeast Asian country has different demographic profiles, with the size of workforces growing in some and declining in others, more circular migration in the region could benefit all. In addition, managing migration better can boost workers' welfare and accelerate economic integration.

Climate change

Besides the megatrends covered so far, climate change, noticeable through an increasing number of natural hazards and extreme temperatures, also has important skills implications. Available data shows that millions of people were affected by natural hazards in Southeast Asian countries in 2019 alone. Myanmar, the Philippines and Indonesia suffered particularly severe losses, with hundreds to thousands of lives lost to natural hazards. Natural hazards are leading to significant displacements of people, with 4.1 million new displacements in the Philippines, 463 000 in Indonesia and 270 000 in Myanmar in 2019 (Internal Displacement Monitoring Centre, 2020[51]). The closure of schools or workplaces, damages to relevant infrastructure (e.g. roads and bridges to commute), and the relocation of families due to climate change impacts interrupt skills development and skills use (UNICEF, 2019[52]). The demand and supply of skills also change as people move away from regions damaged by extreme weather events into bigger cities, increasing supply in those areas (ADB, 2017[53]). Many countries in Southeast Asia are expected to experience severe coastal degradation due to climate change, affecting the livelihoods and skills usage of communities dependent on marine ecosystems and marine tourism.

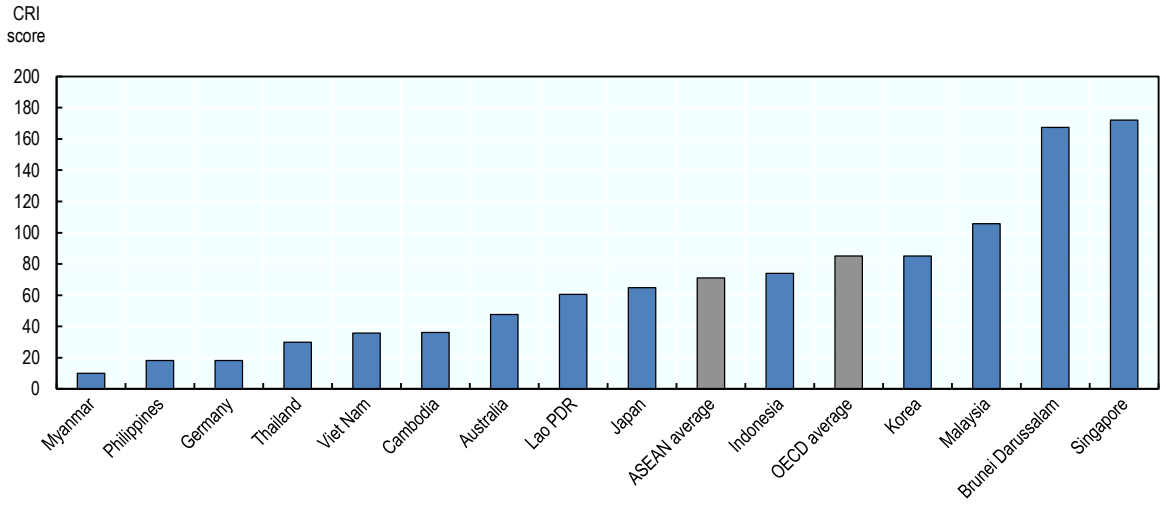
Climate change affects public health and raises the burden of disease in Southeast Asia, affecting economic productivity and individuals' well-being. Skills development is disrupted due to the onset of various health issues among communities, as climate change exacerbates under-nutrition due to adverse effects on agricultural output and increases infectious disease outbreaks due to higher transmission rates in warmer climates (ADB, 2017[53]; Horvath and Borgonovi, 2022[54]). The additional deaths of, and health burdens on, children due to under-nutrition are estimated to be even greater, posing major consequences for future educational and productivity outcomes among the Southeast Asian workforce (ASEAN, UNICEF and WHO, 2016[55]; WHO, 2014[56]). Projections show that climate change will lead to an additional 800 deaths in Southeast Asia by 2030 caused by diarrheal diseases alone (Horvath and Borgonovi, 2022[54]).

Some Southeast Asian countries are particularly vulnerable to climate change due to poor infrastructure and lower coping capacity (Eckstein, Künzel and Schäfer, 2021[57]). According to the Global Climate Risk Index, Myanmar, the Philippines and Thailand are among the top ten countries most affected by extreme weather events between 2000 and 2019 among 180 countries analysed (Figure 2.7). Viet Nam, Cambodia, Lao PDR and Indonesia are also found to have relatively higher risks and vulnerability than the OECD average. In many cases, these vulnerable Southeast Asian countries also need further strengthening of their natural hazard preparedness and risk reduction strategies, which would allow them to mitigate infrastructure and human losses caused by extreme weather events. On the other hand, other countries in the region, namely Singapore, Brunei Darussalam and Malaysia, are relatively resilient to climate shocks (Figure 2.7).

Evidence suggests that many Southeast Asian economies would suffer economically due to climate change (Figure 2.8). The projected adverse impacts on GDP due to climate change are relatively high in Southeast Asian countries, where GDP is projected to fall by 3.13% by 2047 on average. In contrast, it is projected that OECD countries, in general, would not experience any adverse impacts of climate change on their economic growth and even slight, positive impacts of 0.03% growth on average. The fall in GDP is projected to be particularly high in the Philippines (-4.1%), followed by Indonesia (-4%), Cambodia (-3.8%), Malaysia (-3.6%) and Lao PDR (-3.3%). This highlights the economic consequences that climate change has on vulnerable countries in Southeast Asia, particularly through falling incomes, lower consumption and employment cuts associated with GDP falls. These raise serious policy concerns in countries in the region, many of which already have sizeable proportions of socio-economically vulnerable groups to begin with. Climate-change-induced drops in GDP severely affect the ability of ASEAN member states to sustainably develop individually and as a collective block (Christian Aid, 2021[58]).

Figure 2.7. Global Climate Risk Index, 2021

Global Climate Risk Index (CRI) score

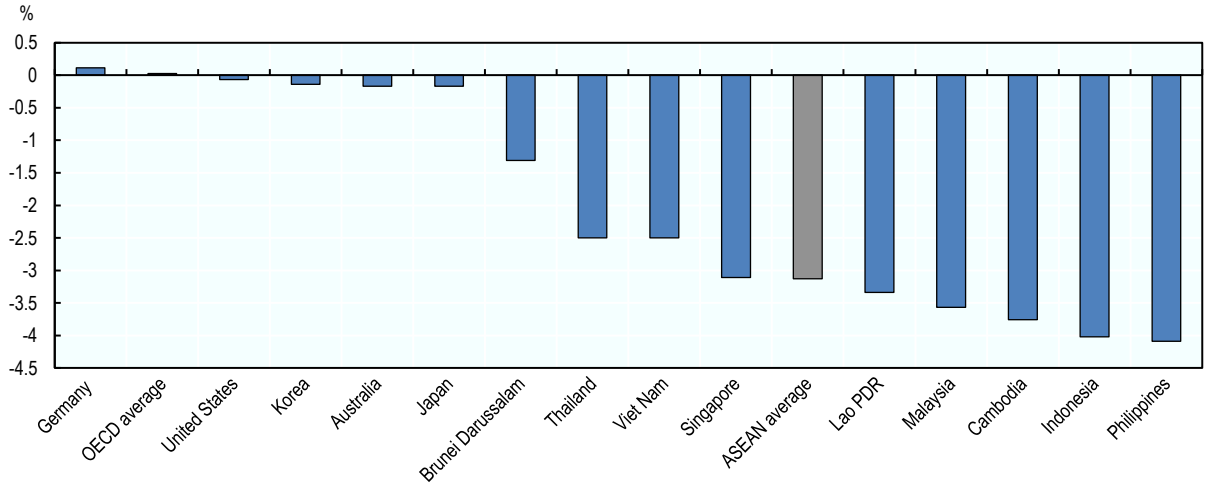


Note: The Global Climate Risk Index indicates a level of exposure and vulnerability to extreme weather events, such as storms, floods and heatwaves. The index reflects the death and economic losses due to hazardous climate events. A lower CRI score indicates higher vulnerability.
Source: Eckstein, Künzel and Schäfer (2021[57]), *Global Climate Risk Index 2021*, www.germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_2.pdf.

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Figure 2.8. The projected effect of climate change on GDP by 2047 in selected OECD and ASEAN countries

Percent change in GDP compared to baseline, 2017 and 2047



Note: Computations use the value of GDP in 2017 from the International Monetary Fund as the baseline year.
Source: Adapted from Kompas, Pham and Che (2018[59]), *The Effects of Climate Change on GDP by Country and the Global Economic Gains from Complying with the Paris Climate Accord*, https://doi.org/10.1029/2018EF000922.

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Southeast Asian countries are making efforts to respond effectively to climate change. For example, ASEAN member countries issued a joint declaration in 2016, committing to promoting green jobs to ensure inclusive and sustainable growth. The declaration promotes technical and vocational education and training 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 the demand and supply of green skills and encourage inter-sectoral collaboration in developing and using green skills (ASEAN, 2016[60]).

Skills implications of climate change

Climate change has significant negative impacts on how skills are being developed. Exposure to air pollution and high temperatures can impair the central nervous system, cognitive acuity and attentional and behavioural processes. In addition, the exacerbation of respiratory and other illnesses from air pollution may lead to increased school absences for students. To minimise negative impacts on skills development due to climate change, it would be important to consider a variety of actions ranging from system-level policies to classroom-level adaptations to reduce the impact of temperature extremes and air pollution on learning and cognitive development. These include, for example, installing clean energy-powered air filtration, air purifying systems and air conditioning units in schools, homes and the workplace, re-organising school curriculums and pedagogical formats to avoid exposure, and ensuring equal access to environmental information (Horvath and Borgonovi, 2022[54]).

Climate change also affects the types of skills that are increasing in demand. All ASEAN member states have established macroeconomic development plans that integrate climate change concerns and signal a shift towards greener industries (ASEAN and ILO, 2021[61]). As countries implement these economic plans, the introduction of market and regulatory changes seeking to preserve or restore the environment will influence investment decisions, production processes and the adoption of technology, which together lead to changing skills needs (OECD, 2021[31]). There will be increasing interest and skills demand for green economy and sustainable technologies, while demand for environmentally destructive activities, such as mining and logging, may decrease. A variety of sectors would be affected by rising climate concerns, including manufacturing, construction, environmental services, transportation, energy, and agriculture, among others.

Sufficient skills development opportunities are necessary to support the green transition. Green skills are all the skills individuals need to adapt products, services and processes to climate change and the related environmental requirements and regulations. The development of green skills needs to be integrated into the wider skills development programmes, as green skills are needed across sectors and at all levels of the workforce. The private sector plays a significant role in shifting towards greener modes of production and providing work-based opportunities for acquiring green skills. For individuals who are in declining sectors, they need support to acquire the necessary skills for transitioning to rising sectors in the green economy (ILO, 2019[62]).

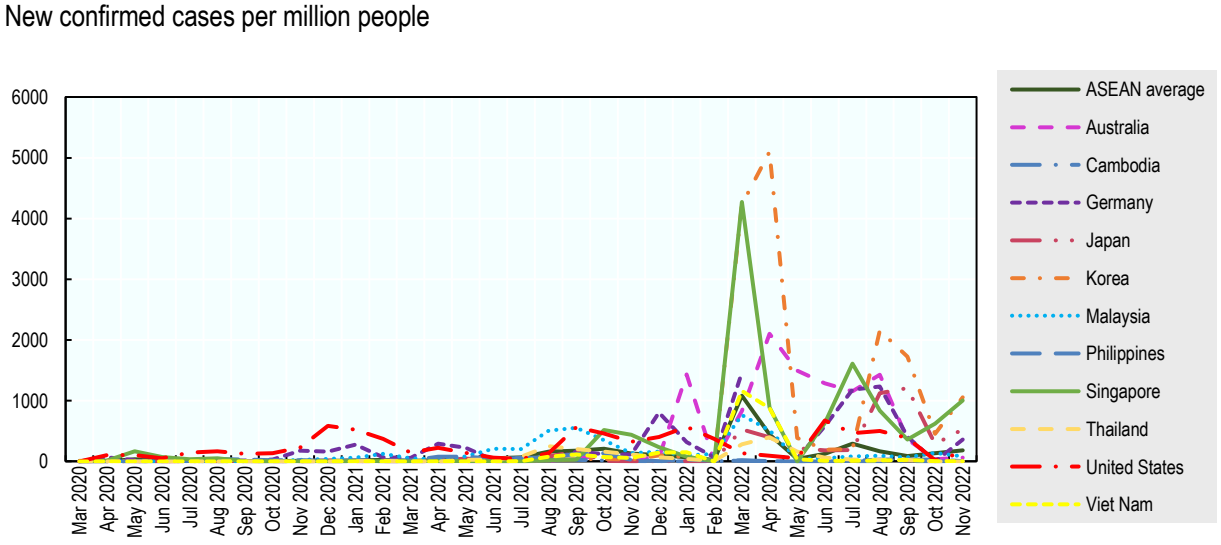
COVID-19

The COVID-19 pandemic has had a significant impact on Southeast Asia, with widespread impacts on economic development, education systems and the welfare of people. It has strained healthcare systems, resulted in millions of deaths globally, and caused the most severe economic recession since the 1920s. In addition, the pandemic and its preventive measures (i.e. social distancing) have significantly impacted the development and use of skills in work and society.

At the beginning of the pandemic, many Southeast Asian governments adopted effective responses to the initial spread of COVID-19, and the spread of the virus was relatively slow in 2020. However, since mid-2021, with the emergence of COVID variants and particularly B.1.617.2 (Delta)

variant, the situation has drastically changed, and COVID cases have risen rapidly in the region (Figure 2.9). Vaccination against COVID-19 has been a game-changing tool to effectively control the spread of the virus in some countries. Vaccination rates in Southeast Asia have grown rapidly since the start of the vaccine roll-out, with countries such as Brunei Darussalam, Cambodia, Malaysia, Singapore, and Viet Nam having fully vaccinated (defined as having received the last dose of the primary series) more than 80% of their populations as of November 2022. However, countries such as Indonesia and the Philippines have fully vaccinated only over 60% of their populations, and Myanmar only about 50%, which may have implications on the ability of countries to fully resume learning and work activities even after over two years of adapting to the pandemic (WHO, 2022[63]).

Figure 2.9. Daily new confirmed COVID 19 cases per million people in Southeast Asia and selected OECD countries, March-November 2022



Note: Data were taken for the first day of each month. Due to limited testing, the number of confirmed cases may be lower than the actual number of cases. Cases reported follow the definition and testing strategies in the affected countries. The figure may not depict the accurate evolution of the epidemic due to the limited data availability and different testing policies per country.
Source: Our World in Data (2022[64]), *Coronavirus Pandemic (COVID-19)*, https://ourworldindata.org/coronavirus.

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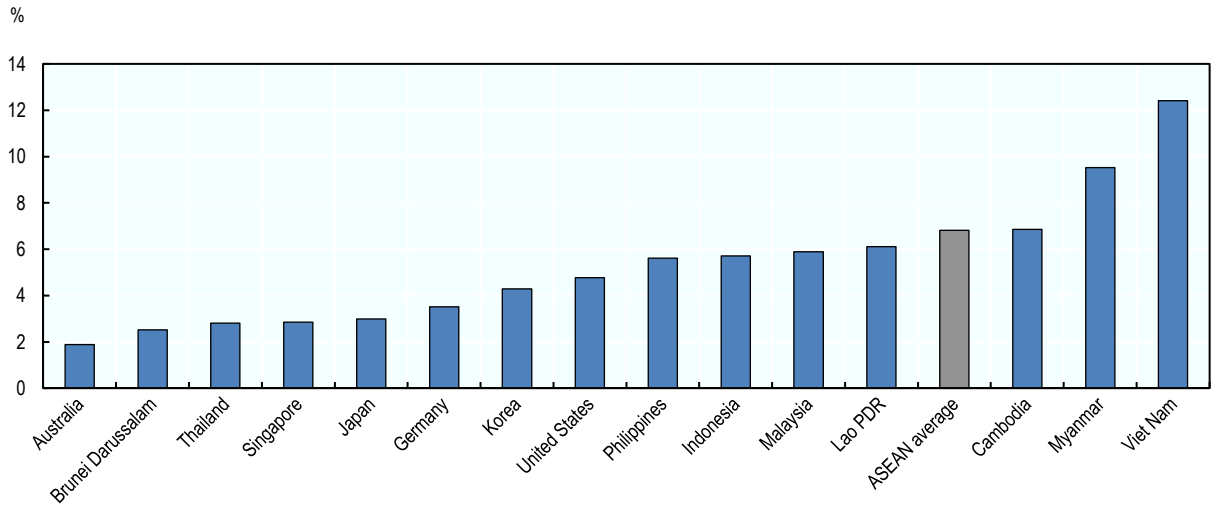
The pandemic has greatly affected how skills are developed in Southeast Asia (Chookajorn et al., 2021[65]). School shutdowns and social-distancing measures have significantly increased the amount of learning taking place on line, making the effectiveness of learning for students dependent on the home environment and levels of parental engagement. Students without access to reliable and fast Internet, digital devices and conducive home learning environments were exposed to a greater risk of falling behind. This could exacerbate inequalities in learning opportunities. Moreover, the provision of work-based learning programmes, such as internships and apprenticeships, was reduced as they were often more difficult to provide and assess at a distance. Adult learning, especially non-formal education and informal learning on the job, suffered setbacks, as employers historically cut back on training during economic recessions (OECD, 2020[66]). However, as of the third quarter of 2022, governments have begun to lift restrictions on mobility, facilitating the resumption of skills development activities. For instance, schools have started to gradually resume cross-country exchange programmes (Teng, 2022[67]), while companies are offering reskilling and upskilling opportunities to prepare their employees for re-entry into the

workplace. Furthermore, more flexible working arrangements are allowing workers to enjoy extra uninterrupted time to learn new skills (Chan, 2022[68]).

COVID-19 has also disrupted the extent to which people's skills are being used. Due to the restrictions on mobility, factory closures, disrupted supply chains and depressed demand in the economy, many firms have had to furlough or lay off workers. Engaging in social activities also became more difficult due to social-distancing measures and increased pressure associated with people needing to work and study from home. Recent data show a significant share of working hours was lost in 2021 across many Southeast Asian countries, particularly in Myanmar and Viet Nam (Figure 2.10). According to International Labour Organization (ILO) estimates, working-age populations worked about 14.5% fewer hours in Myanmar, and about 8% fewer in Cambodia and Viet Nam in 2021, compared to pre-pandemic time. The loss is relatively high in most Southeast Asian countries compared to OECD countries with available data, including Australia, Germany, Japan and Korea. It is concerning as employment is expected to continue lagging behind the economic recovery. It means skills use can be disrupted for a longer period in Southeast Asia.

Figure 2.10. Working hours lost due to COVID 19 in Southeast Asia and selected OECD countries, 2021

Percentage of hours lost



Note: The indicator measures the percentage of working hours lost compared to the baseline (the latest pre-crisis quarter, i.e. the fourth quarter of 2019, seasonally adjusted), adjusting for population aged 15 to 64.
Source: ILOSTAT (2021[69]), *COVID-19 and labour statistics*, https://ilostat.ilo.org/topics/covid-19/.

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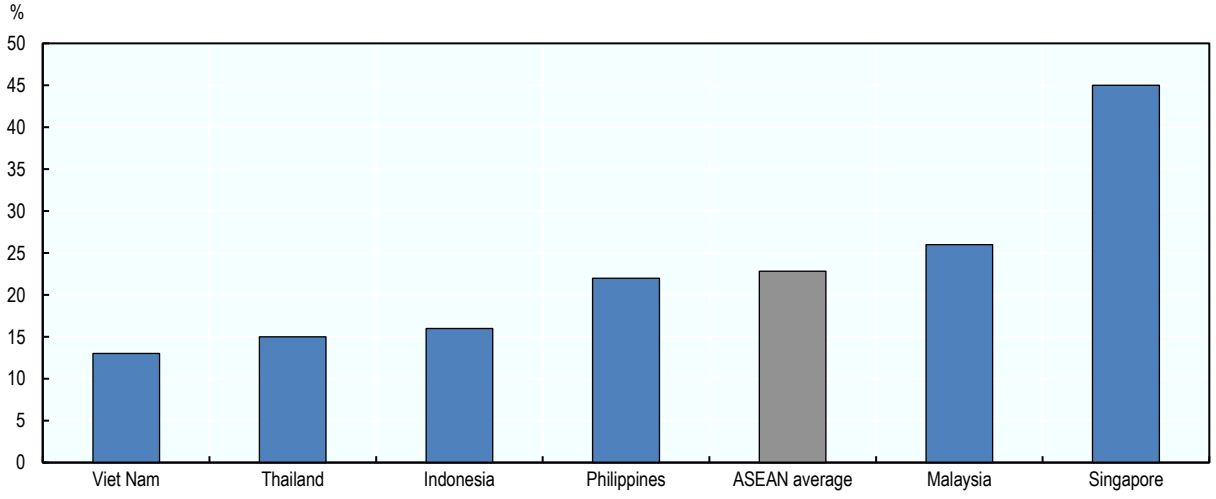
The pandemic has also changed how skills are used and the intensity of skills use. Evidence suggests that potentially some 47.8 million people are able to possibly switch to remote working since 2020 across six Southeast Asian countries analysed (Indonesia, Malaysia, Singapore, the Philippines, Thailand and Viet Nam) (Deloitte Singapore, 2020[70]). Singapore (45%) and Malaysia (26%) have a particularly high share of the workforce potentially able to work remotely (Figure 2.11). While teleworking has the potential to increase productivity, improve work-life balance and reduce emissions, its overall impact is ambiguous (OECD, 2020[71]). For example, employees in Japan reported a mixture of positive and negative impacts of teleworking on productivity experienced during the pandemic. Four out of five teleworkers highlighted not needing to commute as a key benefit, but only 14% of respondents felt that teleworking makes it easier

to generate new ideas. Around one-third of respondents reported difficulty consulting and communicating within the company and with partners as key challenges of teleworking during the pandemic. There is some evidence that teleworking can be associated with longer working hours and more frequent work in the evening and during weekends (Eurofound and ILO, 2017[72]; Messenger, 2019[73]), which may negatively impact employees' well-being (and potentially their productivity).

The ability to effectively respond to and recover from COVID-19 depends on available financial resources, but relatively high government debt levels in some Southeast Asian countries may be a constraint (Figure 2.12). It would be important to prioritise budget allocation to policies that help prompt recovery from COVID-19 and provide sufficient government financial support to concerted health policies, vaccination campaigns and responsive skills policies. Effective skills governance arrangements are also essential to achieve the best outcomes. They require collaboration across relevant ministries, across levels of government, and with a wide range of stakeholders, such as employers, unions, academics and non-governmental organisations, among others. Such strong skills policies are more crucial than ever, as economic recovery from the COVID-19 pandemic has been reversed by the Russian Federation's invasion of Ukraine, slowing down global growth and increasing inflation. Global GDP is stagnating more than expected, and annual growth is projected to decline to 3% in 2022 before further slowing down in 2023 to just 2.2% (OECD, 2022[74]).

Figure 2.11. Potential workforce transition to remote working arrangements among ASEAN countries, 2020

Percentage of workforce

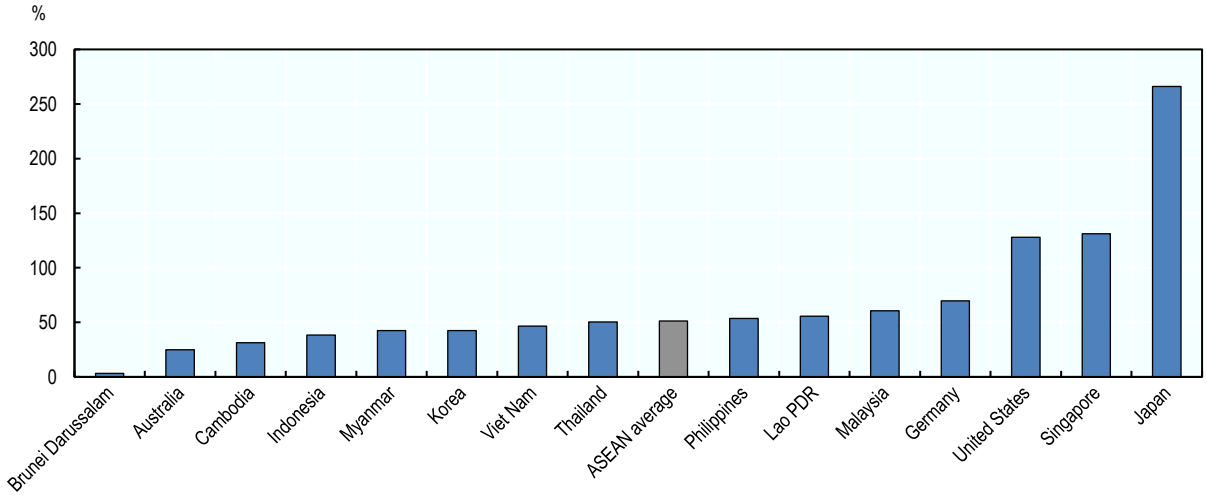


Note: ASEAN figures account for jobs where teleworking is feasible.
Source: Deloitte Singapore (2020[70]), *Remote work: A temporary bug becomes a permanent 'feature'*, www2.deloitte.com/content/dam/Deloitte/sg/Documents/human-capital/sg-hc-remote-work.pdf.

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Figure 2.12. Government debt levels in Southeast Asia and selected OECD countries, December 2020

Percentage of GDP



Source: Trading Economics (2020[75]), *Government Debt to GDP*, https://tradingeconomics.com/country-list/government-debt-to-gdp.

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UN DESA (2019), *World Population Ageing 2019*, UN DESA, New York. [29]

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3 Developing relevant skills over the life course in Southeast Asia

The development of skills is central to individuals' personal improvement and well-being, as well as to countries' economic growth and social cohesion. Skills development takes place in schools, homes, communities and workplaces. It entails the interaction of learners with a wide variety of actors, including teachers, principals, peers, parents and employers, among others. This chapter examines the importance of developing relevant skills over the life course in Southeast Asia and how lifelong learning could support a competitive workforce, promote inclusive growth and support Southeast Asian countries' national development objectives. It then explores three opportunities to improve the region's education and training systems: 1) broadening access to skills development; 2) increasing excellence and equity in skills development; and 3) developing skills that matter.

The importance of developing relevant skills over the life course

The development of skills over the life course has many benefits, both at the level of individuals and societies. Learning is a fulfilling endeavour for many individuals, and meaningful education has been associated with better health outcomes, positive effects on well-being, increased social cohesion and increased engagement in civic life (Raghupathi and Raghupathi, 2020[1]; Watson et al., 2018[2]). The development of relevant skills also yields high returns on investment, benefitting firm productivity and increasing rates of employment and employee earnings (OECD, 2016[3]; 2013[4]).

Recognising the many benefits of skills development, countries in Southeast Asia have adopted policies to improve their education and training systems over the years. Investments in education and intensive skills development through the decades have played a central role in the development of countries in the region, rapidly transforming Association of Southeast Asian Nations (ASEAN) member states into some of the most competitive economies in Asia. Policies to expand access to education and increase enrolment rates, especially at the secondary and tertiary levels, have helped transform individual countries from low-cost production economies to innovative knowledge hubs and boosted the region up the global value chain (OECD, 2013[5]; Prakash and Isono, 2012[6]).

Given this strong historical commitment to skills, Southeast Asian countries are well placed to adapt to global megatrends and to disruptions such as the coronavirus (COVID-19) pandemic, which are currently changing the world. With a population of more than 650 million, Southeast Asia currently plays a significant role in intra-Asia and global trade. Emerging economies from the region have transformed into important hubs for services, manufacturing and investments, with their value-added contributions to global value chains having increased significantly over the past few years (Prakash and Isono, 2012[6]; Zhong and Su, 2021[7]). To ensure continued growth in the post-pandemic economy, investments in improving the skills of the Southeast Asian workforce are central to remaining competitive and adapting to the changing demands of the labour market. Global megatrends are interacting with each other, along with the impacts of COVID-19, to make lifelong learning imperative. The traditional approach of “front-end loading” of skills development is becoming increasingly untenable in a world of rapid technological, economic and social change. Lifelong learning is essential to helping citizens become full and active participants in the economy and society (OECD, 2021[8]).

Southeast Asian countries recognise that a highly skilled, resilient and competitive workforce is needed not only to adapt to global megatrends and presently to COVID-19 but also to fuel their national socio-economic development in the long term. Many countries in the region have made education and training the foundation of their national development plans and adopted their policies on lifelong learning. ASEAN also recognises skills development as one of its key areas of co-operation and mobilises its network and resources to actively promote lifelong learning throughout the region (ASEAN, 2020[9]).

While Southeast Asian countries have made great progress, there are still numerous challenges in fully developing relevant skills over the life course. These challenges include difficulties in sustaining enrolment rates at higher levels of education, high drop-out rates among students, a generally low quality of education, poor educational facilities, insufficient digital infrastructure to help learners prepare for tomorrow’s world of work, and lack of work-based skills development offers, among others. Certain disadvantaged groups in the region, such as learners from socio-economically disadvantaged backgrounds, women, migrants and individuals from ethnic and linguistic minorities, are disproportionately affected. Without adequate access to skills development, workers in Southeast Asia’s widespread informal economy, who have low levels of skills to begin with, also risk slipping even lower into poverty.

Given these challenges, this chapter aims to suggest future directions for Southeast Asia’s policies for lifelong skills development based on an analysis of the current performance of the region’s education and training systems. It starts with an overview of the current governance arrangements to deliver skills development throughout the life course, as well as an assessment of Southeast Asian countries’

performance on key indicators on education and training. Building on this assessment, the chapter then presents three opportunities for the region to improve the development of relevant skills over the life course: 1) broadening access to skills development; 2) increasing excellence and equity in skills development; and 3) developing skills that matter. Each opportunity addresses current challenges faced by the region and proposes concrete and evidence-based policy recommendations.

Summary of recommendations

The policy recommendations presented throughout this chapter are summarised as follows.

Summary of policy recommendations for Southeast Asia to develop relevant skills over the life course

Opportunity 1: Broadening access to skills development

Improving access to early childhood education and care and compulsory education for disadvantaged groups

1.1. Establish strong monitoring systems to detect children who have failed to enter the education system, as well as those who are at risk of dropping out

1.2. Support provision of learning materials parents can use at home

1.3. Strengthen digital infrastructure, digital education platforms, and digital literacy to broaden access to skills development opportunities, especially among disadvantaged groups and during times of disruption

Promoting access to skills development after compulsory education

1.4. Adopt a comprehensive policy strategy to address both supply- and demand-side barriers to technical and vocational education and training participation

1.5. Facilitate access to tertiary education by reducing the most significant financial barriers, both in terms of tuition fees and the cost of learning materials

1.6. Create a comprehensive national adult learning strategy that targets disadvantaged groups and facilitates their participation

Opportunity 2: Increasing excellence and equity in skills development

Improving the quality of human resources in schools

1.7. Invest in professional development opportunities for teachers to equip them with better pedagogical skills

1.8. Consult regularly with school leaders about their various needs in terms of resources and upskilling

Strengthening funding and student assessment in schools to improve equity

1.9. Improve the financial management skills of school leaders and personnel.

1.10. Establish avenues for relevant stakeholders to collaborate on improving student assessment systems

Opportunity 3: Developing skills that matter

Improving the alignment between skills development offers and labour market demand

1.11. Increase the involvement of relevant government agencies and industry partners in reviewing the curricula of skills development offers in technical and vocational education and training and tertiary education

1.12. Increase the provision of on-the-job training opportunities, especially among workers in smaller firms and in the informal economy

Steering skills development choices towards labour market needs

1.13. Provide regular training to guidance counsellors and make updated labour market data more accessible to inform their work

1.14. Expand financial incentives for individuals and institutions to encourage the uptake of skills development in strategic industries, especially among disadvantaged groups

Overview and performance

Overview of Southeast Asia's governance arrangements for developing relevant skills over the life course

The development of relevant skills over the life course requires the provision of high-quality education and training offers at different stages of life. Skills systems are composed of different types of skills development offers, each having different objectives and focusing on the acquisition of different skills as an individual progresses through life. While these components of skills development systems may be guided by a formal educational curriculum, they may also cover informal and non-formal learning. Specific definitions of these components vary from one country to another, although common elements are described in Box 3.1.

Box 3.1. Definitions of skills development offers over the life course

- **Early childhood education and care (ECEC)**: General care services that aim to provide a holistic approach to supporting children's early cognitive, language, physical and social development. ECEC is offered from birth until entry into primary school (i.e. usually at the age of six years old in Southeast Asia, except in Myanmar [five years old] and Indonesia [seven years old]). It includes the provision of pre-primary education, which is the initial stage of organised instruction that is designed to introduce very young children to their first school experiences.
- **Compulsory education**: A period of schooling wherein children are legally obliged to attend, usually defined in terms of several grades or an age range, or both. In all countries in Southeast Asia, compulsory education usually encompasses the entirety of the primary level and some parts of the secondary level. Many governments guarantee free schooling at certain levels of compulsory education, but exceptions remain (e.g. lower secondary education in Viet Nam, which is compulsory but not free). In some countries, despite making education compulsory, barriers to achieving universal enrolment persist, such as low quality of education, access to schools in rural areas and low socio-economic background of students.

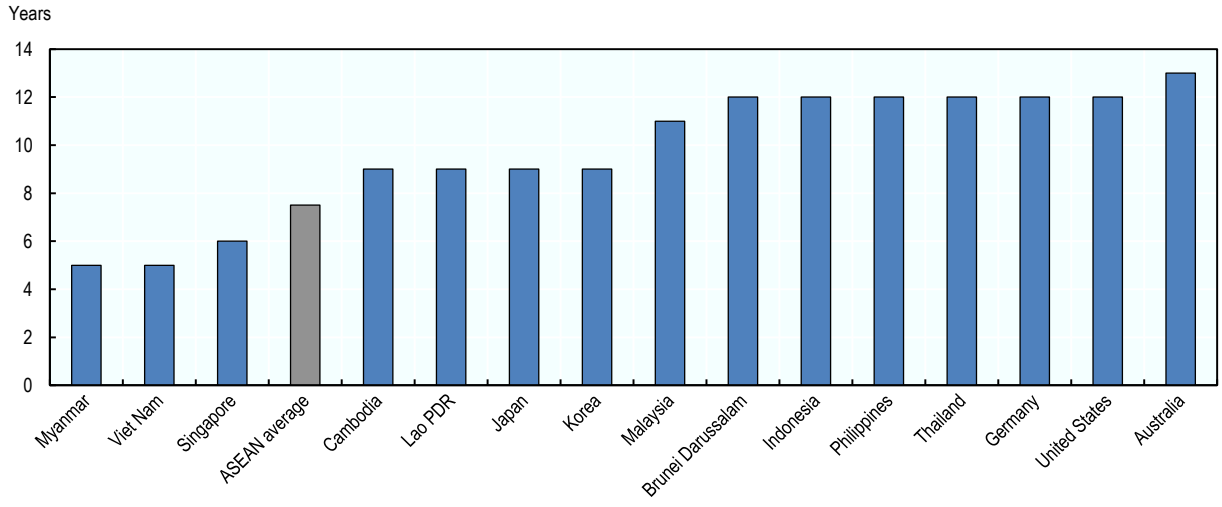
- **Technical and vocational education and training (TVET)**: Education, training and skills development that relates to a wide range of occupational fields and provides work-based learning. TVET often begins at the upper secondary level in Southeast Asia and may lead to continuing education at the tertiary and graduate levels.
- **Tertiary education**: Builds on the completion of secondary education and provides more complex learning activities in specialised fields of study, whether academic, vocational or professional in nature. Tertiary education leads to qualifications such as certificates, diplomas and academic degrees.
- **Adult learning**: Learning that is pursued after completion of initial education. Adult learning includes formal education (e.g. occurs in a structured environment and leads to a certification recognised by the national educational classification); non-formal education (e.g. occurs in a structured environment and does not lead to a certification recognised by the national educational classification); and informal learning (e.g. unstructured learning activities that do not lead to certification). In Southeast Asia, adult learning may also be referred to as "continuing education" or "complementary education".

Source: OECD (2003[10]), *Pre-primary education (ISCED 0),* https://stats.oecd.org/glossary/detail.asp?ID=5409 - :~:text=Pre-primary education (ISCED 0) is defined as the,and a school-based atmosphere; OECD, (2015[11]), *ICSED 2011 Operational Manual: Guidelines for Classifying National Education Programmes and Related Qualifications*, https://doi.org/10.1787/9789264228368-en; UNESCO (2006[12]), *Compulsory Education*, https://learningportal.iiep.unesco.org/en/glossary/compulsory-education; UNESCO (2018[13]), *Adult education*, https://uis.unesco.org/en/glossary-term/adult-education; UNESCO (2014[14]), *Education systems in ASEAN+6 Countries: A Comparative Analysis of Selected Educational Issues*, www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/UNESCO_Education_Systems_in_Asia_Comparative_Analysis_2014.pdf; UNESCO (2020[15]), *Technical and vocational education and training (TVET)*, https://unevoc.unesco.org/home/TVETipedia+Glossary/filt=all/id=474; World Bank (2022[16]), *Primary school starting age (years)*, https://data.worldbank.org/indicator/SE.PRM.AGES?locations=BN-KH-ID-LA-MY-MM-SG-TH-VN.

As of 2020, all Southeast Asian countries guarantee free and compulsory education in their legal frameworks. However, the number of school years covered by law varies across countries, as shown in Figure 3.1. The coverage of such legal frameworks can be limited to as few as five years of schooling in Myanmar and Viet Nam, guaranteeing education only at the primary level. On the other hand, education is compulsory for up to 12 years in Brunei Darussalam, Indonesia, the Philippines and Thailand. Legal frameworks guarantee free and compulsory education until the end of lower secondary in Brunei Darussalam and Indonesia. In the Philippines and Thailand, education is compulsory and free until the upper secondary level, where students can also choose TVET as an optional (i.e. not compulsory) pathway instead of the academic pathway.

Southeast Asian countries monitor skills development over the life course through specific governance bodies. In most countries, policy oversight for the different components of the skills development system falls under different government bodies (Table 3.1). In many cases, the Ministry of Education governs ECEC, compulsory education and tertiary education. However, some countries have separate specialised agencies that govern ECEC and tertiary education (e.g. Singapore's Early Childhood Development Agency, the Philippines' Commission on Higher Education). Governance of TVET is often delegated to a separate specialised agency (e.g. Office of the Vocational Education Commission in Thailand). In Southeast Asia, the governance of adult learning relative to other levels of education is more fragmented and less established, and the mandate of overseeing adult learning programmes, while often led by the Ministry of Education, is usually shared with other ministries and agencies.

Figure 3.1. Number of years of free and compulsory education guaranteed in legal frameworks in Southeast Asia and selected OECD countries, 2022



Source: Adapted from Brunei Darussalam (2018[17]), *Primary Education*, www.moe.gov.bn/SitePages/Primary%20Education.aspx; UNESCO (2022[18]), *SDG4 Indicator Dashboard*, http://sdg4-data.uis.unesco.org/; Singapore Ministry of Education (2021[19]), *Overview of compulsory education*, www.moe.gov.sg/primary/compulsory-education/overview.

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Table 3.1. Overview of Southeast Asian government agencies responsible for education and training

Country	ECEC	Compulsory education	TVET	Tertiary education	Adult learning (main ministry)
Brunei Darussalam	Ministry of Education (MoE)	MoE	MoE	MoE	MoE
Cambodia	Early Childhood Education Department under the Ministry of Education, Youth and Sports (MOEYS)	MOEYS	Ministry of Labour and Vocational Training (MoLVT)	Directorate General for Higher Education under the MOEYS	MOEYS
Indonesia	Directorate General of Early Childhood Education and Community Education under the Ministry of Education and Culture (MoECRT)	MoECRT	Directorate of Technical and Vocational Education under the MoECRT	Directorate General of Higher Education under the MoECRT	MoECRT and the Ministry of Manpower and Transmigration
Lao PDR	Ministry of Education and Sports (MoES)	MoES	MoES and the National Training Council (NTC)	MoES	Department of Non-Formal Education, MoES
Malaysia	Ministry of Education (MOE)	MOE	MOE	Ministry of Higher Education (MOHE)	TalentCorp, Ministry of Human Resources (MOHR)
Myanmar	Ministry of Social Welfare, Relief and Resettlement	Ministry of Education	Ministry of Education	Department of Higher Education under the Ministry of Education	Non-Formal Education Committee

Country	ECEC	Compulsory education	TVET	Tertiary education	Adult learning (main ministry)
Philippines	Early Childhood Care and Development (ECCD) Council	Department of Education (DepEd)	Technical Education and Skills Development Authority (TESDA)	Commission on Higher Education (CHED)	CHED and the Department of Education (DepEd)
Singapore	Early Childhood Development Agency (ECDA)	Ministry of Education (MOE)	Higher Education Group (HEG) under the Ministry of Education (MOE)	Higher Education Group (HEG) under the Ministry of Education (MOE)	Ministry of Education and SkillsFuture Singapore
Thailand	Ministry of Education (MOE)	MOE	Office of the Vocational Education Commission under the MOE	Ministry of Higher Education, Science, Research and Innovation	Department of Non-Formal Education, MOE
Viet Nam	Ministry of Education and Training (MOET)	MOET	Ministry of Labour, Invalids and Social Affairs (MOLISA)	MOET	MOET

Note: Entries for the column on adult learning are not exhaustive, as the management of adult learning activities often falls under multiple government ministries depending on the industry (see Chapter 5). Entries are based on the ministry in charge of the main policies covering adult learning or are the focal point for inter-ministerial co-ordination.

Regional governance bodies are also present to foster cross-country co-operation in skills development policies. ASEAN member states co-ordinate their actions through ASEAN Ministerial Bodies, namely the ASEAN Education Ministers Meeting (ASED) and the ASEAN Senior Officials Meeting on Education (SOM-ED). Additional mechanisms for broader educational co-operation with neighbouring non-ASEAN countries include the ASEAN Plus Three Education Ministers Meeting (APT EMM) and the East Asia Education Ministers Meeting (EAS EMM). ASEAN Working Groups exist to address thematic areas of education, including the strengthening of education for out-of-school children (OOSC) and youth, the promotion of higher education mobility and quality assurance (ASEAN, 2020[9]). In addition to ASEAN bodies, the Southeast Asian Ministers of Education Organization (SEAMEO) is a regional organisation that convenes the ten ASEAN member states along with Timor-Leste to promote co-operation in education, science and culture. SEAMEO has 26 specialised institutions that undertake research programmes on various aspects of education and skills development throughout the life course, including community education, teacher quality, special education and sustainable development (SEAMEO, 2022[20]).

Initiatives at the regional level recognise the importance of ensuring access to high-quality lifelong learning for all, especially those from disadvantaged groups. Key declarations, such as the Bangkok Declaration on Advancing Partnership in Education for the 2030 Agenda for Sustainable Development in ASEAN and the Kuala Lumpur Declaration on Higher Education, signal Southeast Asian governments' political commitment to skills development over the life course. Many of these declarations also make specific references to learners from disadvantaged groups, such as OOSC and youth, learners with special needs, workers in the informal economy and those coming from disadvantaged socio-economic backgrounds and remote areas (ASEAN, 2016[21]; 2016[22]; 2019[23]). Additionally, the Vientiane Declaration on Transition from Informal Employment to Formal Employment towards Decent Work Promotion in ASEAN recognises the prevalence of the informal sector in the region. It emphasises the importance of access to skills development in facilitating workers' access to decent employment (ASEAN, 2016[22]).

Co-ordination mechanisms at the regional level have been instrumental to individual countries' response to COVID-19 and their efforts to recover from the impacts of the pandemic. Such regional governance mechanisms were key to helping ASEAN member states to expand access to online learning, build the capacity of teachers to provide distance education, facilitate the exchange of best policy practices and lessons learned and explore future collaborations with partners to support the recovery of education systems across Southeast Asia (ASEAN, 2020[24]). In 2021, ASEAN also released the *ASEAN Policy Brief on Safe School Reopening, Learning Recovery and Continuity* to provide member states with key

strategies to ensure that all learners continue to have access to education, as well as to reduce the learning inequalities exacerbated by the COVID-19 pandemic (ASEAN Secretariat, 2021[25]).

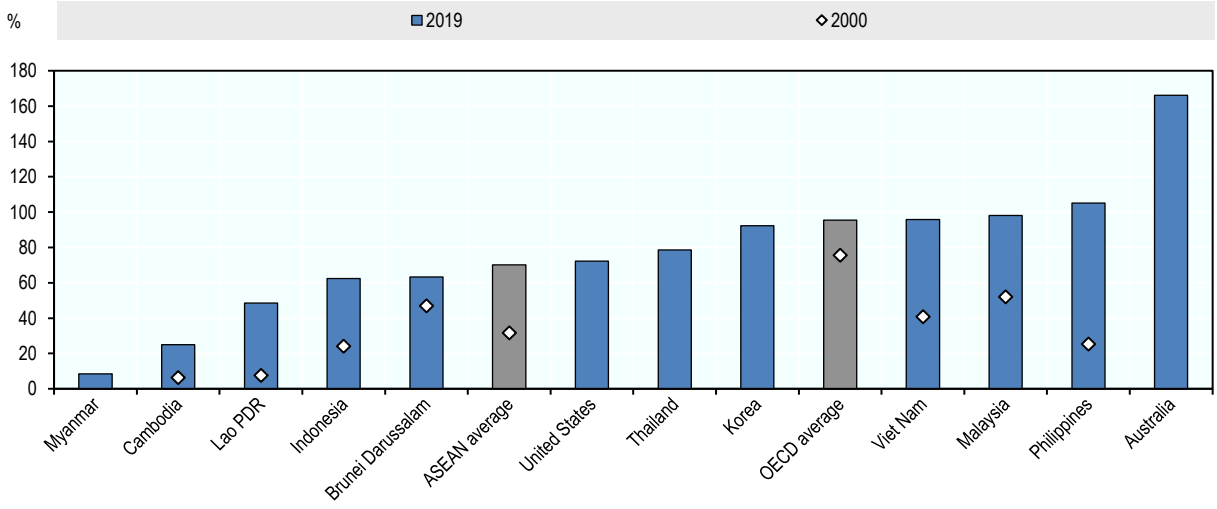
Southeast Asia's performance in developing relevant skills over the life course

Through the decades, Southeast Asia has seen steady improvements in various indicators relating to the development of skills over the life course. With all countries having seen increases in gross enrolment rates at different levels of education during the last two decades, access to skills development has improved significantly in the region. Moreover, improving the quality of education has also received considerable policy attention; however, only Singapore has ranked among the strong performers in international surveys of student performance, such as the OECD's Programme for International Student Assessment (PISA). Furthermore, considerable work remains to be done to achieve universal enrolment at all levels of education, reach the most disadvantaged and excluded learners, and strengthen the role of skills development in reducing informal employment and eliminating inequities across groups.

Access to learning opportunities has grown steadily over the decades, but there is still a need to extend access to all segments of the population

Southeast Asia's average pre-primary gross enrolment rate has increased significantly over the last two decades. Pre-primary education is the initial stage of organised instruction and forms part of ECEC, thereby often serving as an indicator for participation in broader ECEC services. ECEC and pre-primary education have received greater policy attention from Southeast Asian countries over the past years, aiming to provide integrated learning experiences and childcare services before official entry into primary school and ensure the holistic development of children (ASEAN, 2015[26]). Owing to increased policy attention and various educational reforms, gross enrolment rates at the pre-primary level have risen by 40 percentage points across Southeast Asian countries, increasing from 31.7% in 2000 to 70.1% in 2019 (Figure 3.2). Due to this substantial increase from 2000 to 2019, the gap in the average enrolment rates between ASEAN countries and OECD countries has narrowed from 44 to 25.5 percentage points. Despite these improvements, however, the variation in gross enrolment rates across the region remains substantial, ranging widely from 8.5% in Myanmar to 105.1% in the Philippines[1] in 2019.

Figure 3.2. Gross enrolment rates in pre-primary education in Southeast Asia and selected OECD countries, 2000 and 2019

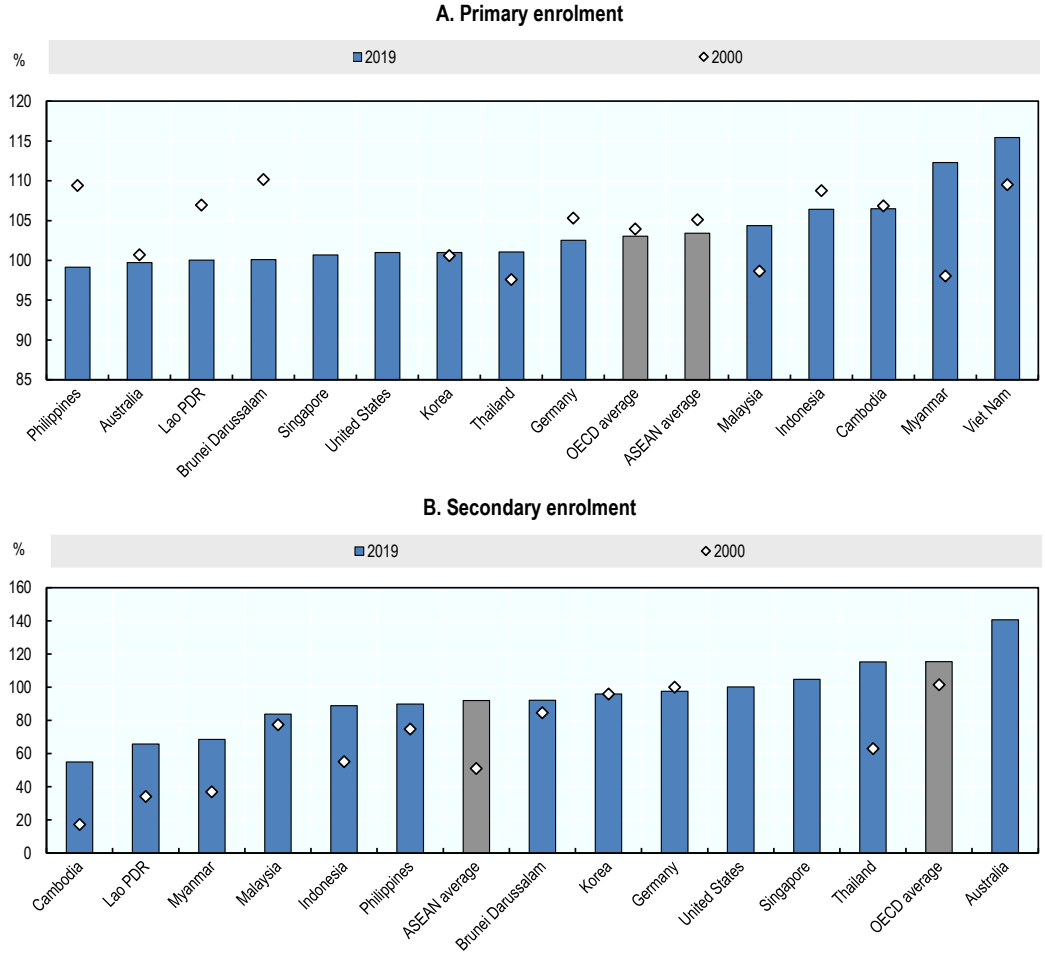


Note: The figure reports gross enrolment rates in pre-primary education in 2019, except for Lao PDR and Myanmar in 2018. Gross enrolment rates account for students of all ages, including those whose age exceeds the official age group for the specified level of education. Therefore, if there is early enrolment, late enrolment or grade repetition, gross enrolment can exceed 100%.
Source: UNESCO Institute for Statistics (2021[27]), *Education*, http://data.uis.unesco.org/.

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Gross enrolment rates have been universal or near-universal at the primary level over the last two decades in Southeast Asia, although participation begins to decline at the secondary level. Panel A of Figure 3.3 shows that in 2019, the performance of ASEAN countries (103.4%) was very close to that of OECD countries (103.1%). Gross enrolment rates were higher in 2000 than in 2019 in the Philippines and Cambodia, as these countries succeeded in reducing repetition rates at the primary level over the time period (Trading Economics, 2022[28]).[2] Panel B of Figure 3.3 shows that gross enrolment rates tend to be lower at the secondary level than at the primary level. However, the regional average has improved over the last two decades, nearly doubling from 44.3% in 2000 to 84.3% in 2019. Nonetheless, despite these improvements over time, average gross enrolment rates in the region are still lower than those in OECD countries (115.4%). Moreover, the intra-ASEAN gap remains substantial, with 2019 gross enrolment rates at the secondary level ranging from 65.8% in the Lao People's Democratic Republic (hereafter "Lao PDR") to 115.2% in Thailand.

Figure 3.3. Gross enrolment rates in primary and secondary education in Southeast Asia and selected OECD countries, 2000 and 2019



Note: At the primary level, data is not available for 2000 for Singapore and the United States. For Myanmar and Indonesia data for 2019 is not available and data for 2018 is used. At the secondary level, data are not available for 2000 for Australia, Singapore, and the United States, and for the Philippines and Thailand data from 2001 is used. For Cambodia, Indonesia and Myanmar data for 2019 is not available and data for 2018 is used. Data for both years for Viet Nam are not available at the secondary level. ASEAN and OECD averages are the mean values of gross enrolment rates for the member countries available in a given year. ASEAN-OECD mean difference is significant in 2000 ($p<0.001$) and 2019 ($p<0.01$).

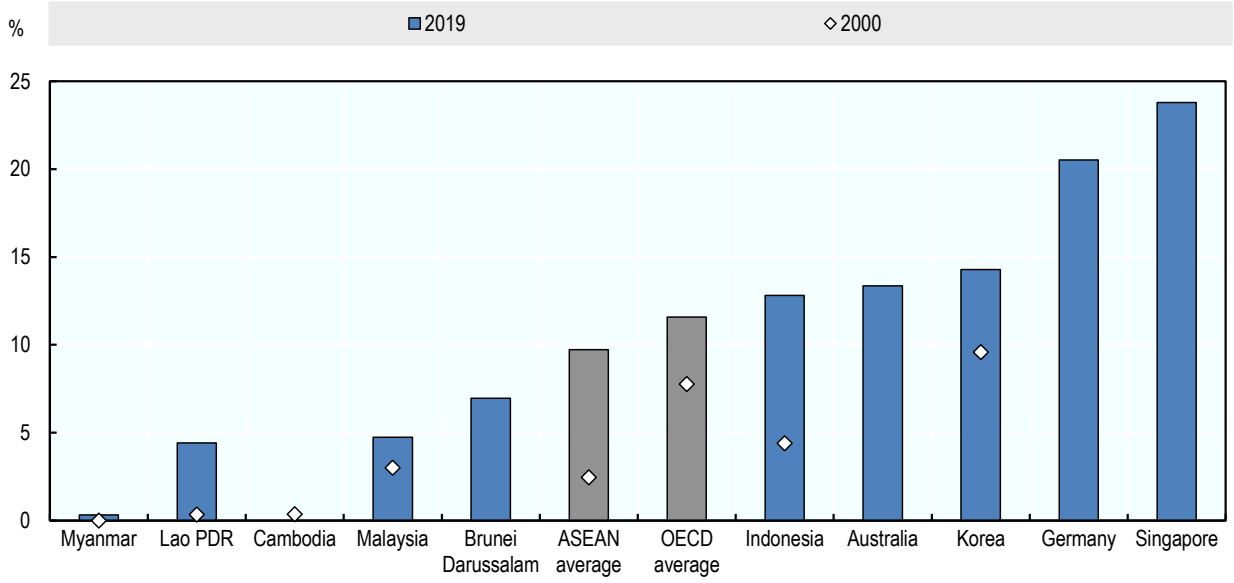
Source: World Bank (2021[29]), *World Bank Development Indicators*, https://databank.worldbank.org/source/world-development-indicators.

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Similarly, enrolment in TVET programmes in Southeast Asia has also been on the rise in the last two decades, rising about 6.4 percentage points from 2000 to 2019 for countries with available data. The increase in the enrolment rate in TVET in Southeast Asia has exceeded that of the OECD (3.8 percentage points) over the same period (Figure 3.4). TVET, which often starts at the secondary level, has been collectively identified by Southeast Asian countries' ministries of education as one of the seven priority areas for educational development and a crucial way for countries to meet their current and future skill needs (ASEAN, 2020[30]; SEAMEO, 2016[31]). Strong political commitment over the years has helped increase the TVET participation rate in Southeast Asia, with Indonesia experiencing the greatest increase by 8.4 percentage points.

Figure 3.4. Enrolment rates in technical and vocational programmes in Southeast Asia and selected OECD countries, 2000 and 2019

Percentage (in relation to the youth population aged 15-24)

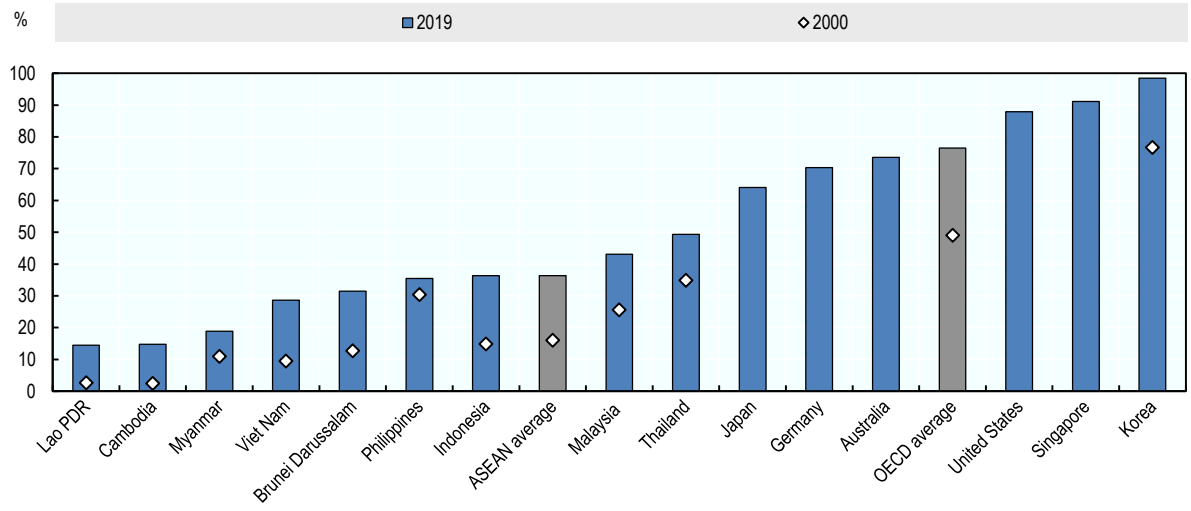


Note: ASEAN average includes countries with available data: Cambodia, Indonesia, Lao PDR, Malaysia and Myanmar for 2000, and Brunei Darussalam, Indonesia, Lao PDR, Malaysia, Myanmar and Singapore for 2019. Data from 2000 are not available for Australia, Brunei Darussalam, Germany, and Singapore, while data from 2019 is not available for Cambodia.
Source: World Bank (2020[32]), *Education Statistics - All Indicators*, https://databank.worldbank.org/indicator/SE.TER.ENRL?id=c755d342&report_name=EdStats_Indicators_Report&popularitype=series#.

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Gross enrolment rates at the tertiary level have also increased substantially for all Southeast Asian countries, with the ASEAN average having more than doubled from 16% in 2000 to 36.3% in 2019. Individual countries have also seen impressive improvements, with countries such as Indonesia observing an even bigger jump than the regional average, with an increase of 21.4 percentage points from 2000 to 2019 (Figure 3.5). However, in 2019, Southeast Asia still lagged behind OECD countries, with the 2019 average gross enrolment rate of ASEAN countries (36.3%) being less than half that of the OECD (76.5%). Moreover, Southeast Asian countries that had low levels of enrolment at the tertiary level in 2019, such as Lao PDR (14.4%), Cambodia (14.7%) and Myanmar (18.6%), also did so at the primary and secondary levels, suggesting that learners in these countries do not participate adequately at all levels of education.

Figure 3.5. Gross enrolment rates in tertiary education, Southeast Asia and selected OECD countries, 2000 and 2019



Note: The indicator refers to the percentage of the population enrolled in tertiary educational institutions aged a maximum of five years after the official age group for upper secondary education. The OECD average is based on 28 to 33 countries from 2000 to 2014 (varying across the years) and 35+ countries in 2015 and onwards. The ASEAN average is based on 6 to 7 countries available each year.
Source: UNESCO Institute for Statistics (2021[27]), *Education*, http://data.uis.unesco.org/.

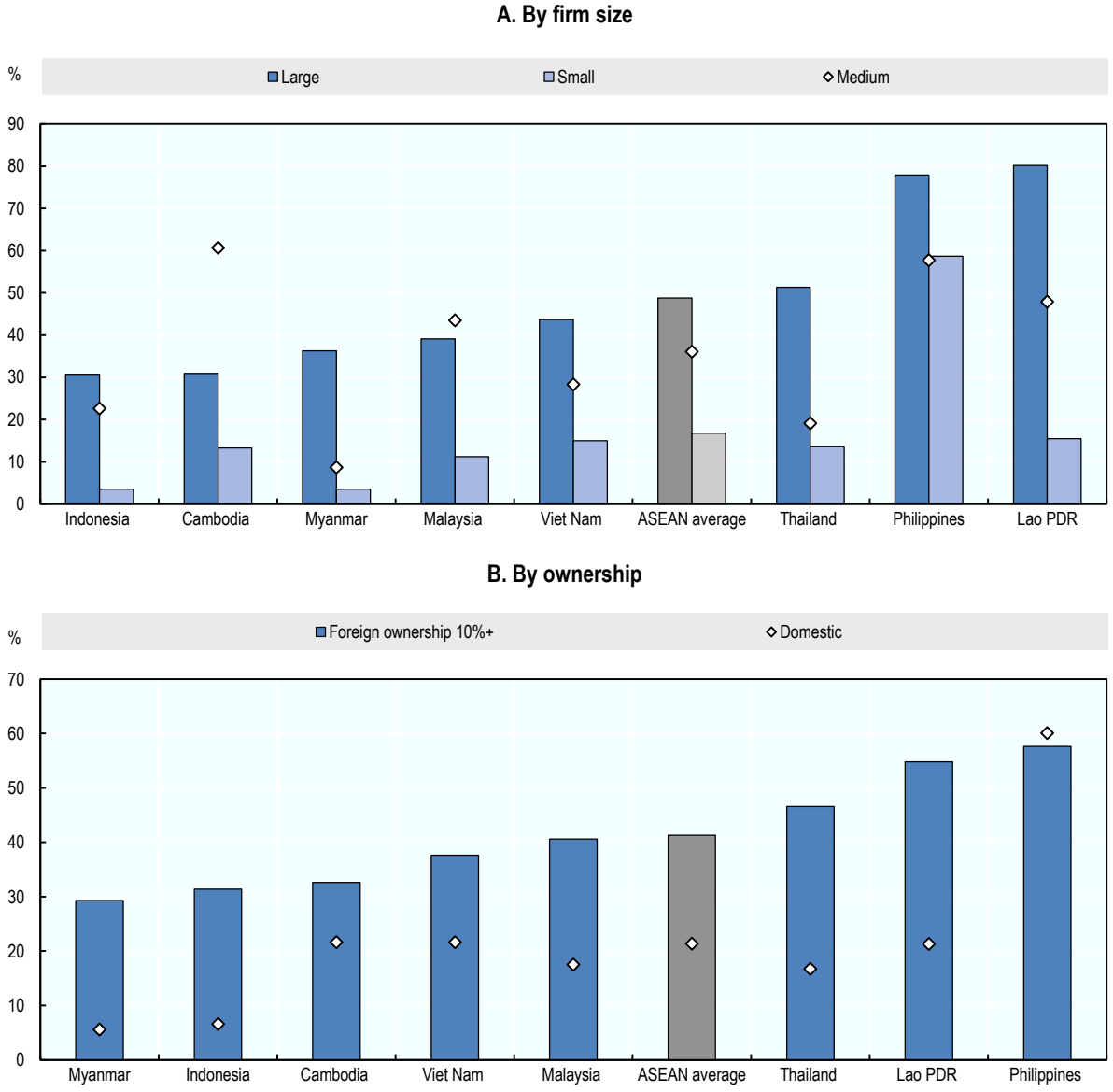
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The availability of formal training offers for adult workers varies widely across Southeast Asian countries. On average, throughout the region, employees working for large firms (48.8%) have the most access to training, while medium-sized (36.1%) and small-sized (16.8%) firms generally have less access (Figure 3.6). Cross-country differences are nonetheless significant regardless of firm size. For instance, 58.7% of small-sized firms in the Philippines offer training to their employees, while only 3.5% can do so in Cambodia and Indonesia. By ownership type, workers in firms with foreign ownership (41.31%) have, on average, more access to skills development offers than those in domestically owned firms (21.4%). Well over half of the domestic firms in the Philippines (60.1%) offer training to their employees, while only a few in Myanmar (5.6%) and Indonesia (6.6%) can do so.

In Southeast Asia, access to skills development has been limited due to the COVID-19 pandemic (see Chapter 2), especially among learners from disadvantaged groups. Without contingency plans in place, countries in the region faced challenges in trying to provide continued learning opportunities for all students using different modalities. While the Internet has alleviated some of the bottlenecks in educational service delivery, those living in rural and isolated areas or those living with a disability, those who do not have Internet connectivity and online learning devices, and those who have limited levels of digital literacy struggled to access skills development during the pandemic. Instructional materials were also inadequate for learners with disabilities and those who speak minority languages. With these challenges, there is a significant risk that learners with disadvantaged backgrounds may either not return to school at all or return with significant delays (UNICEF and UNESCO, 2021[33]).

Figure 3.6. Access to formal training provided by employers by firm size and ownership in Southeast Asia, latest available year

Percentage of employers



Note: Only training with a structured and defined curriculum (e.g., classroom work, seminars, lectures, workshops, and audio-visual presentations and demonstrations) is included. The average is not weighted. Large, medium, and small firms refer to companies with 100 or more workers, 20 to 99 workers, and 5 to 19 workers, respectively.
Source: World Bank (2020[34]), *Enterprise Surveys*, www.enterprisesurveys.org/en/enterprisesurveys.

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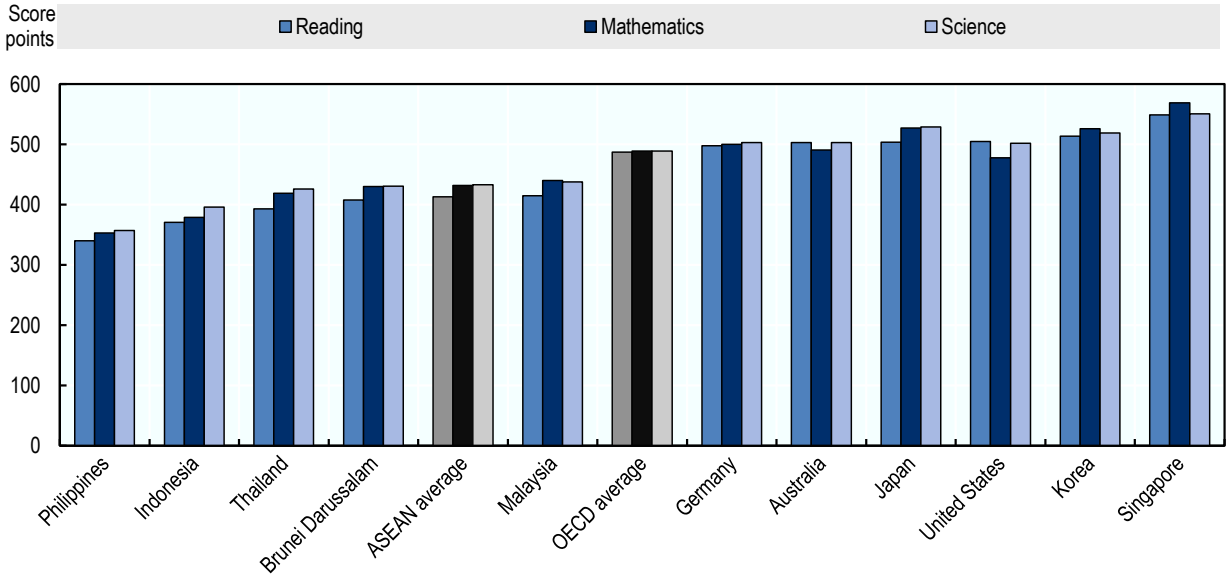
Steady improvements in educational quality have been achieved, but many students across different Southeast Asian countries still perform poorly

Apart from ensuring access to skills development over the life course, Southeast Asian countries have also prioritised improving the quality of education at all levels and enhancing learners' performance. Policy measures to address issues in educational quality across the region have included a wide variety of

interventions, including the expansion of teacher training, the upgrading of educational facilities, the establishment of national quality assurance agencies to evaluate the performance of educational institutions, the regular conduct of curriculum reviews, and the improvement of links between education and industry. Increased policy focus has been given to improving the quality of education in remote and disadvantaged regions, as well as to strengthening independent learning programmes, competency-based training and community-based vocational training that target informal workers (ASEAN, 2022[35]; Lee, 2016[36]).

Despite significant efforts to improve educational quality, all Southeast Asian countries, except for Singapore, perform poorly in international assessments of student performance. In the latest round of PISA in 2018, 15-year-olds in Southeast Asia showed a relatively low overall performance in reading, mathematics and science, with five out of six participating countries performing well below the OECD average in all three subject areas (Figure 3.7). These results point to an important area for policy intervention, as performance in key skills such as reading at age 15 is a potential predictor of literacy in adulthood (OECD, 2019[37]). While Southeast Asian learners – except those from Singapore – performed relatively poorly in the 2018 PISA round, the gender gap in more than half of the participating countries (i.e. Brunei Darussalam, Indonesia, Malaysia and the Philippines) was still lower than that of the OECD (OECD, 2019[38]). While scores between boys and girls in these Southeast Asian countries do not differ much, socio-economic status appears to be a significant predictor of student performance. For instance, students in Singapore were, on average, top performers in reading, but four times as many advantaged students achieved that level of performance in comparison to disadvantaged students, suggesting that even in countries with high-quality educational systems, social inequities are significant (OECD, 2019[38]).

Figure 3.7. Average performance in reading, mathematics and science for 15-year-old students in Southeast Asia and selected OECD countries, 2018



Source: OECD (2019[39]), *PISA 2018 Database*, www.oecd.org/pisa/data/2018database/.

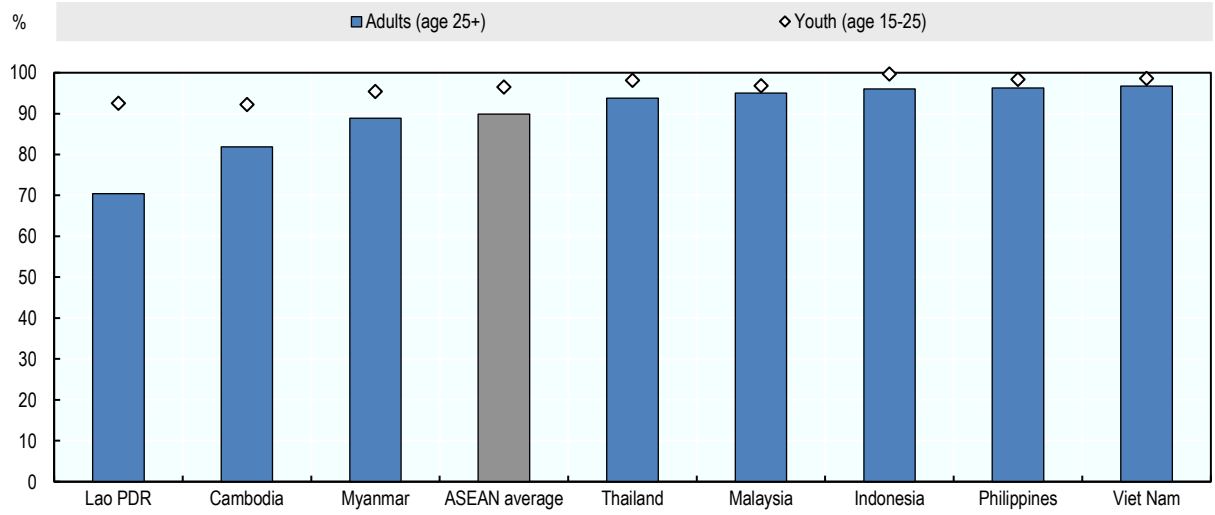
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While Southeast Asia has seen great progress in the development of foundation skills, such as literacy, over the last three decades, basic literacy – whether for youth or adults – still has not been achieved in many countries in the region. The average regional literacy rate among youth aged 15 to 24 years old

(96.4%) is generally higher than among adults aged over 25 (89.9%) (Figure 3.8), suggesting that proficiency in literacy has improved over a generation. Nonetheless, there is significant room to increase literacy skills, especially among adults, in countries that remain below the regional average, such as Lao PDR (70.4%), Cambodia (81.9%) and Myanmar (88.9%).

Figure 3.8. Literacy rates among youth and adults in Southeast Asia, latest available year

Percentage of people who can both read and write, understanding a short, simple statement about everyday life



Note: Due to a lack of available data, the following years were used: 2015 for Lao PDR and Malaysia; 2018 for Brunei Darussalam, Cambodia and Myanmar; and 2019 for Indonesia, the Philippines, Singapore, Thailand and Viet Nam. Measuring literacy involves different methodologies across countries, including self-reports, using educational attainment data as a proxy, or administering a direct reading test of literacy skills.
Source: World Bank (2022[40]), *Literacy rate, adult total (% of people aged 15 and above)*, https://data.worldbank.org/indicator/SE.ADT.LITR.ZS.

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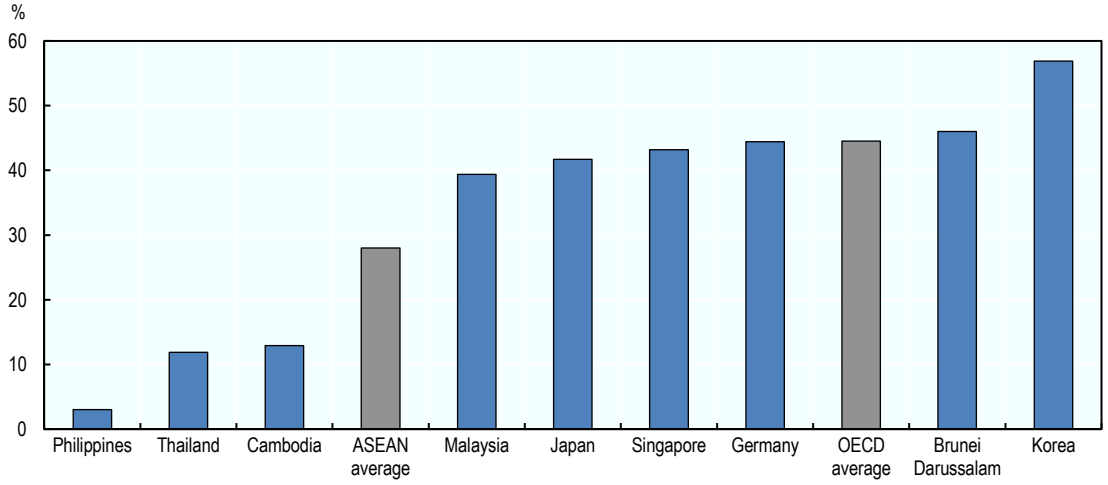
In addition to literacy, digital skills are another domain in which Southeast Asian countries have room to further improve, especially as economic activities become more dependent on technology. Data from 2019 showed that the everyday usage of digital skills in ASEAN countries is relatively low. On average, youth and adults aged 15 to 75 in six ASEAN countries (28%) are less likely than their counterparts in OECD countries (44.5%) to have certain digital skills (e.g. copying or moving a file or folder, sending e-mails with attached files, using basic arithmetic formulas in a spreadsheet) (Figure 3.9). Cross-country differences remain large, ranging from 3% in the Philippines to 46% in Brunei Darussalam, which is the only Southeast Asian country that performs above the OECD average. Moreover, in a 2019 survey of Indonesia, Malaysia, the Philippines, Singapore and Viet Nam, youth aged 15-35 identified their weakest skills in science, technology, engineering and mathematics (STEM) areas, including programming and data analytics (World Economic Forum, 2019[41]).

The development of soft skills is also central to the ability of Southeast Asia to adapt to rapidly changing economies. Soft skills capture a broad array of generic skills that are useful in the workplace regardless of industry or specialisation, such as communication, teamwork, problem solving and self-management, among others, and, as uniquely human skills, are harder to replace or automate in the future as economies evolve (ADB, 2015[42]; OECD, 2021[43]). In a survey of 56 000 young ASEAN citizens, the youth recognised the increasing importance of developing soft skills, and a greater share reported in self-assessments that they are more proficient in soft skills (e.g. resilience and adaptability, technology use, emotional

intelligence and communication) than hard skills (e.g. data analytics, software programming) (World Economic Forum, 2019[41]).

Figure 3.9. Youth and adults aged 15 or over with digital skills in Southeast Asia and selected OECD countries, 2019

Percentage of youths and adults



Note: Values are averaged across the nine types of digital skills: 1) copying or moving a file or folder; 2) using copy and paste tools to duplicate or move information within a document; 3) sending e-mails with attached files (e.g. document, picture, video); 4) using basic arithmetic formulas in a spreadsheet; 5) connecting and installing new devices (e.g. a modem, camera, printer); 6) finding, downloading, installing and configuring software; 7) creating electronic presentations with presentation software (including images, sound, video or charts); 8) transferring files between a computer and other devices; and 9) writing a computer programme using a specialised programming language. Data for the Philippines is missing for indicators 1 and 5, and data for Japan is missing for indicator 1. Due to lack of available data, the latest available year was used for the following countries: Germany (2014 for indicator 5); Indonesia (2017 for all indicators); Cambodia (2018 for indicator 8); and Japan (2018 for indicator 9).
Source: Adapted from UNESCO Institute for Statistics (2021[27]), *Education*, http://data.uis.unesco.org/.

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Opportunities to improve the development of relevant skills over the life course

Developing relevant skills over the life course is central to the ability of Southeast Asian countries to build a competitive and resilient workforce. Based on an assessment of the performance of countries in the region, the following opportunities have been identified for improving the development of relevant skills over the life course:

1. broadening access to skills development
2. increasing excellence and equity in skills development
3. developing skills that matter.

Opportunity 1: Broadening access to skills development

Over the past 20 years, Southeast Asian countries have been successful in widening access across levels of education, but many barriers remain (UNICEF-SEAMEO, 2020[44]; OECD, 2021[45]). Countries have adopted various policies to strengthen educational opportunities over the life course, recognising education

as a key priority area, and affirming governments' obligation to make it accessible to all learners regardless of gender, socio-economic background, location, ethnicity and other characteristics (UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific, 2017[46]). However, despite these efforts, universal enrolment still has not been achieved in ECEC and at all levels of compulsory education (particularly at the secondary education level), and access to learning opportunities across the life course remains highly unequal across groups, depending on various factors, such as household income, geographic remoteness, gender, ethnic and/or linguistic minority status. Access to skills development after compulsory education, such as TVET, tertiary education and adult learning, also remains limited in many countries (OECD, 2019[47]; UN ESCAP, 2017[48]). The COVID-19 crisis has also greatly restricted access to skills development, whether in school, work or community settings (UNICEF and UNESCO, 2021[33]).

Given these challenges, two policy directions have been identified for broadening access to skills development over the life course in Southeast Asia. The first policy direction pertains to the importance of improving access to ECEC and compulsory education for disadvantaged groups. The second policy direction is concerned with promoting access to skills development after compulsory education, including in TVET, tertiary education, and adult learning. Particular attention is given to learners from disadvantaged groups, as their lack of access to education and training could exacerbate their socio-economic conditions and perpetuate informal employment throughout the region.

Improving access to early childhood education and care and compulsory education for disadvantaged groups

ECEC and compulsory education are important components of lifelong learning and are indispensable building blocks of the skills development system. As many of the skills needed in the workplace and society, such as communication, independent thinking and self-regulation, among others, rapidly develop in the early years of life, ECEC and compulsory education lay the groundwork for the acquisition of skills over the life course (OECD, 2019[49]; 2021[50]; UNICEF, 2022[51]). Moreover, attendance in high-quality ECEC and compulsory education is a crucial predictor of children's cognitive, physical, social and emotional development, as well as academic outcomes, over the long term (UNICEF-SEAMEO, 2020[44]; OECD, 2021[45]; Bakken, Brown and Downing, 2017[52]; Kusumah, 2021[53]; Trawick-Smith, 2014[54]). Building a strong foundation for skills in Southeast Asia requires action in three important areas, which are explored below: 1) increasing access to ECEC and compulsory education for disadvantaged groups; 2) creating positive learning environments at home, especially among low-income households; and 3) improving digital infrastructure throughout ASEAN countries to support the early acquisition of digital skills, especially in rural and low-income areas.

Improving access to ECEC and compulsory education for disadvantaged groups

Participation in ECEC is nearly universal in only a few Southeast Asian countries. While gross enrolment rates have increased over the last two decades in all countries, the average remains only at 70% at the ASEAN level (Figure 3.2). Half of ASEAN countries fall below this average, with Myanmar lagging significantly at 8.5%. Data from the Southeast Asia Primary Learning Metrics (SEA-PLM) have also shown that across six participating countries (Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines, Viet Nam), on average, over one in four children did not participate in ECEC opportunities at all in 2019, according to parents' self-reports (UNICEF-SEAMEO, 2020[44]). Nonetheless, countries with significantly high participation in ECEC be found in the region, such as Viet Nam (99.9%), Thailand (99.7%) and Singapore (97.1%). ECEC access also remains low for children who live in poverty, live in geographically remote communities, come from socio-demographic minorities, are exposed to internal conflicts and are susceptible to natural hazards (SEAMEO INNOTECH, 2021[55]).

In response to these challenges, countries in Southeast Asia have put in place various policy measures – both individually and at the regional level – to increase enrolment rates in ECEC. All countries in the region have recognised the benefits of ECEC in their national policies and frameworks (SEAMEO INNOTECH, 2021[55]). For instance, Viet Nam, the region's best performer in ECEC participation, has

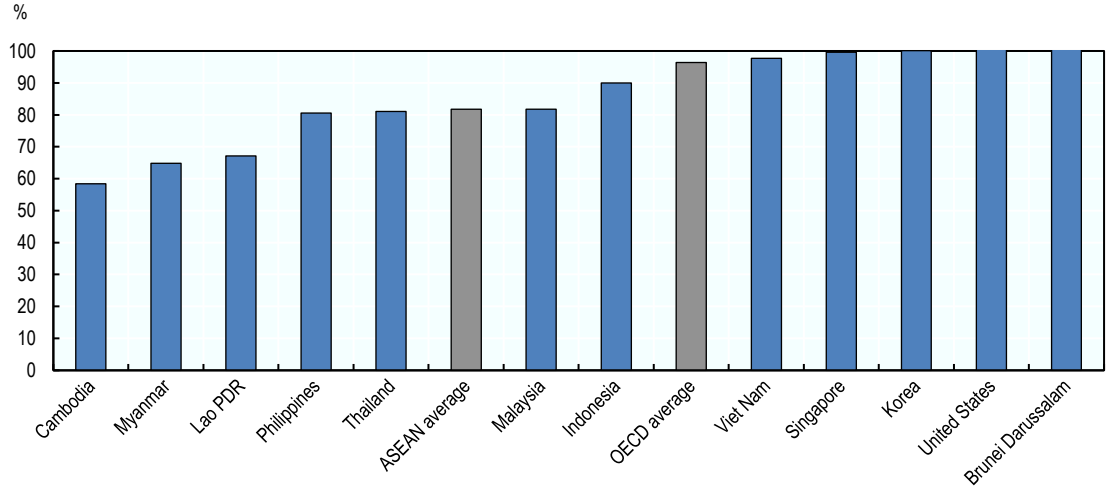
drastically increased government expenditure on pre-primary education over the last decade, and in 2013 adopted the Universal Early Childhood Education for 5-year-old Children programme to expand the coverage of ECEC and improve school readiness, especially among disadvantaged children (Abbott et al., 2019[56]; Vu, 2021[57]; World Bank, 2017[58]). At the regional level, the ASEAN Early Childhood Care, Development and Education Quality Standards were adopted in 2015 to guide member states in ensuring that ECEC services are safe, reliable and of good quality, and to set minimum standards for service provision throughout the region (ASEAN, 2015[26]).

Inequalities also exist in the completion of compulsory education in Southeast Asia. While all countries in the region have achieved significant progress in expanding gross enrolment rates at the primary and secondary levels (Figure 3.3), completion rates are still low for many countries, particularly at the secondary level (Figure 3.10). The completion rate is an important indicator of whether students who gained access to school remain in school until completion. On average, only 81.7% of learners in Southeast Asia finish secondary education compared to 96.4% of learners in OECD countries. Completion rates are especially low for Cambodia (58.4%), Myanmar (64.7%) and Lao PDR (67.1%), posing risks to the full acquisition of foundation skills needed by learners to thrive in workplaces and society.

The large number of OOSC among those of compulsory education age has been a long-standing challenge in Southeast Asia. While the exact definitions of OOSC vary across countries, they generally refer to children at the primary to lower secondary school ages who are not enrolled in formal education, either because they have dropped out or they have never been to school. Although the region has managed to decrease OOSC rates by 11.5 percentage points over the past two decades, the latest figures (i.e. 2019) for Southeast Asia remain substantially high at 11.7% – nearly four times larger than the OECD average of 3%. Cross-country differences are also substantial. For instance, more than one in five children was out of school in Lao PDR (23.2%), whereas OOSC are virtually non-existent in Singapore (0.2%) (UNESCO Institute for Statistics, 2021[59]).

Figure 3.10. Lower secondary completion rates in Southeast Asia and selected OECD countries, 2018

Percentage of persons in the relevant age group who have completed lower secondary education to the total age cohort



Note: The OECD average for lower secondary completion is calculated based on 30 countries. The OECD-ASEAN mean difference is significant ($p < 0.001$).

Source: World Bank (2021[60]), *Lower secondary completion rate, total (% of relevant age group)*, https://data.worldbank.org/indicator/SE.SEC.CMPT.LO.ZS.

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Various factors account for the likelihood of Southeast Asian learners dropping out of school. Across countries, low household income and residency in rural areas are the two major factors associated with a child's out-of-school status, reflecting the opportunity cost of education for families living in poverty and the inadequacy of education services in rural areas. Household income and rural residency often interact, posing the highest risk to children from low-income families living in rural areas. For instance, among the children living in rural areas in Indonesia, those from the poorest quintile are four times more likely to be out of school than their counterparts from the richest quintile. At the same time, there are other country-specific risk factors associated with high OOSC rates, including bullying and gender-based violence at school, the prevalence of child labour and early marriage in a given country, disability, and (un)documented status (UNICEF and UNESCO, 2021[33]; UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific, 2017[46]). In OECD countries where similar challenges exist, such as in Belgium (Flanders), innovative policy measures have been adopted to identify students at risk of dropping out (Box 3.2).

As OOSC are less likely to adequately acquire skills needed in workplaces and societies, the costs of dropping out of school are significant, highlighting the need for urgent policy action. The estimated economic cost of OOSC already reached over 1% of gross domestic product (GDP) on average in seven ASEAN countries, namely Cambodia, Indonesia, Lao PDR, the Philippines, Thailand, and Viet Nam, as well as Timor-Leste, in 2017 (UNESCO Bangkok, 2017[61]). These costs will only grow with the consequences of prolonged school closures in the region due to the COVID-19 pandemic, as children are less likely to return, the longer they stay out of school. It is estimated that the pandemic has increased Southeast Asian children's probability of dropping out of school by 0.9%, and the risks are larger for girls, those from poor households or ethnolinguistic minorities (UNICEF and UNESCO, 2021[33]). An estimated 2.7 million learners across Southeast Asia will not return to school once they are fully reopened, increasing the risk that a significant proportion of the region's future workforce will fail to adequately acquire foundation skills (Hulshof and Tapiola, 2021[62]).

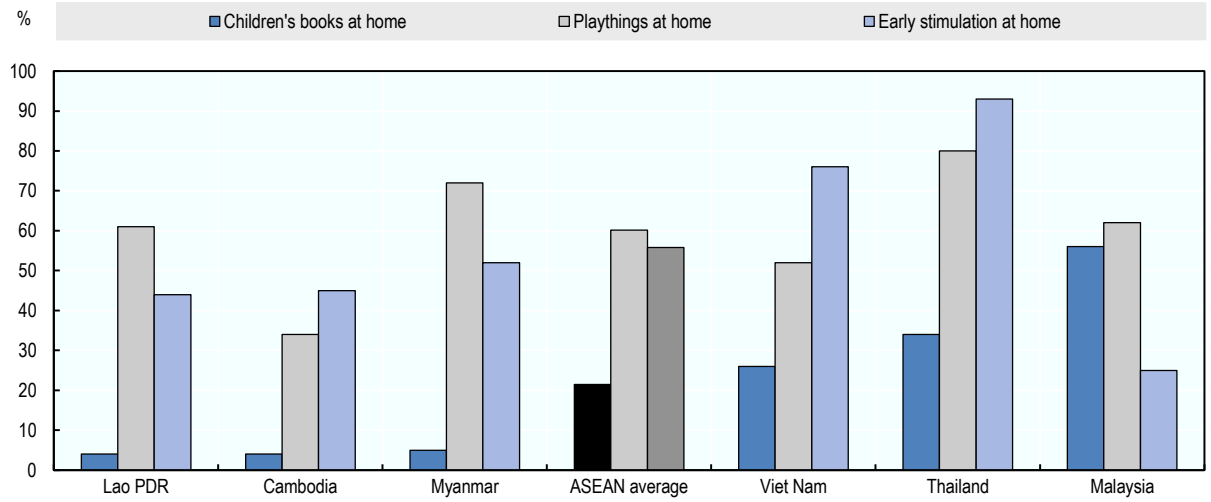
Creating positive learning environments at home, especially among low-income households

While formal education in schools is the primary way learners acquire skills, skills can also be developed in informal ways, such as in the home. There is compelling evidence that a positive and stimulating learning environment at home results in better academic and social development outcomes among children, with lasting effects throughout the life course. Home learning environments consist of different components, such as the quality of parent-child interactions, the availability of learning materials, and children's participation in learning activities (Lehrl, Evangelou and Sammons, 2020[63]). Parents may participate in developing their children's skills by helping them with homework, reading to them, playing with them, communicating with them about various political or social topics, and helping their children regulate their own expectations for their schooling (OECD, 2021[50]).

Positive learning environments at home are central to early skills development, but not all Southeast Asian children have access to these resources. Across six countries in the region, only 21.5% of children have books at home, only 60.1% have playthings, and only 55.8% experience early educational stimulation with their parents to promote learning and school readiness (Figure 3.11). The lack of resources in several countries is severe, such as in Lao PDR, Cambodia and Myanmar, where less than 5% of children have access to books at home, and nearly only half of parents read books or tell stories to their children. This poses severe limitations to the ability of Southeast Asian children to develop foundation skills, such as literacy, affecting their capacity to acquire higher-level skills at later stages of life.

Figure 3.11. Access to early learning environments at home in Southeast Asia, 2019

Percentage of children aged 0 to 59 months with access to learning materials and educational interactions at home



Note: The indicator "Children's books at home" refers to the percentage of children with three or more books at home, while "Playthings at home" refers to the percentage of children with two or more of the following playthings at home: household objects or objects found outside (sticks, rocks, animals, shells, leaves, etc.) and homemade toys or toys that came from a store. The indicator "Early stimulation at home" refers to the percentage of children with whom an adult has engaged in four or more of the following activities to promote learning and school readiness: reading books, telling stories, singing songs, taking the child outside of the home, playing, and spending time with the child naming, counting, or drawing things.

Source: UNICEF and Countdown to 2030 (2019[64]), *Country profiles for early childhood development*, https://nurturing-care.org/wp-content/uploads/2021/12/English.pdf.

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Access to positive learning environments at home is also largely influenced by various factors, such as household income. For instance, the chances of living in a supportive home environment with adequate learning materials and parental guidance are lower for children with lower household incomes. Across the six Southeast Asian countries with available data, children under age five from households in the poorest quintile are, on average, 28.2 percentage points less likely to live in a positive and stimulating home than children from a household in the wealthiest quintile. The income-related gap is the largest for Viet Nam (43.7 percentage points) and the smallest for Thailand (11.8 percentage points). High levels of poverty and material deprivation, especially in low-income countries in the region, may severely inhibit the ability of families to purchase learning materials, such as books and playthings, which would help prepare their children for school. For many adults working in the informal economy, long and unregulated working hours also affect the ability of parents to manage their domestic responsibilities, including childcare. Moreover, parents who work as migrants, especially in sender countries such as Indonesia, Myanmar and the Philippines, often have difficulties with long-distance parenting and supporting the development of their children's skills from afar (UNICEF, ILO and WIEGO, 2021[65]).

The importance of supportive home learning environments has been highlighted even more with the onset of the COVID-19 pandemic, which has led to school closures that have increased time spent learning at home. During the wake of the pandemic from March 2020 to February 2021, schools in Southeast Asia were closed for 119 out of 184 (79%) teaching days on average, affecting approximately 138 million children enrolled in pre-primary to secondary education. During the same period, school closures were more common in ASEAN countries than in OECD countries, although the difference was not statistically significant for both full and partial closures. In most ASEAN countries, schools were more likely to be fully closed than partially closed. Singapore and Viet Nam experienced the least school closures (under 20%

of school days), while Myanmar and the Philippines experienced the most (over 85% of school days), suggesting a massive disruption in the provision of education and the development of skills for children in these countries. The severe learning losses associated with the pandemic have promoted governments – both within Southeast Asia, such as in the Philippines, and in OECD countries, such as in Portugal – to launch initiatives targeted towards improving learning environments at home (Box 3.2).

Improving digital learning opportunities throughout Southeast Asia, especially in rural and low-income areas

Supporting digital learning opportunities (particularly during the COVID-19 pandemic and beyond) requires strong digital infrastructure, digital education platforms and digital literacy. In Southeast Asia, online learning has opened new opportunities for delivering education during the pandemic, as it was widely utilised as a replacement for in-person schooling and a way to ensure the continuity of learning. In response to emergency school closures, most Southeast Asian countries quickly developed strategies for online learning, primarily using online and television platforms, as well as take-home packages (e.g. paper-based learning modules and worksheets delivered to children without television or the Internet) (ADB, 2021[66]).

Digital infrastructure in Southeast Asia must be strengthened to not only ensure the continuity of learning during COVID-19, but also in response to ongoing megatrends. During the pandemic, the lack of Internet access and digital devices disrupted approximately 80 million (or 20%) of children's online learning in the East Asia and Pacific regions (UNICEF and UNESCO, 2021[33]). In 2021, only a little over 50% of 10-14 year-old learners across Southeast Asia had access to digital devices in their schools. The lack of digital infrastructure poses risks to the ability of learners to access digital learning opportunities during disruptions, such as the COVID-19 pandemic, but also to participate in the development of key skills, such as digital skills in preparation for work in increasingly digital economies (UNICEF and ASEAN, 2021[67]).

Besides digital infrastructure, digital education platforms are needed to ensure the continuity of learning. Digital education platforms include online platforms, teaching software and online classroom management systems that teachers can use to teach. In 2021, less than 20% of 10-14-year-old learners across Southeast Asia had access to digital education platforms. Moreover, only about 30% of schools across the region had remote teaching software and online management systems (UNICEF and ASEAN, 2021[67]). The lack of digital education platforms presents risks to the ability of learners to continue learning during disruptions, such as the COVID-19 pandemic, but also to develop key skills, such as digital literacy, in preparation for work in increasingly digital economies. According to OECD stakeholder consultations, several countries in the region have developed digital education platforms to implement blended learning strategies, especially with the onset of the COVID-19 pandemic. For instance, the Singapore Student Learning Space allows for flexible and self-paced teaching and learning, with schools having the flexibility to decide on how to use the platform, based on their students' needs (Singapore Ministry of Education, 2022[68]).

Southeast Asian countries have implemented measures to minimise the risks of exclusion from digital education platforms, especially for disadvantaged groups. Across ASEAN countries and OECD countries, the most common policy measures adopted were providing subsidised devices for access (e.g. personal computers [PCs], tablets) and establishing asynchronous and self-paced learning platforms (Table 3.2). There were also significant measures to support learners in remote areas, with disabilities and from low-income households by providing them with improved access to infrastructure, specialised pedagogical support, and financial aid, respectively. However, fewer countries across the ASEAN and the OECD had measures in place to support other types of disadvantaged groups, such as those speaking minority languages.

Table 3.2. Measures targeting populations at risk of exclusion from digital education platforms in Southeast Asia and selected OECD countries, 2021

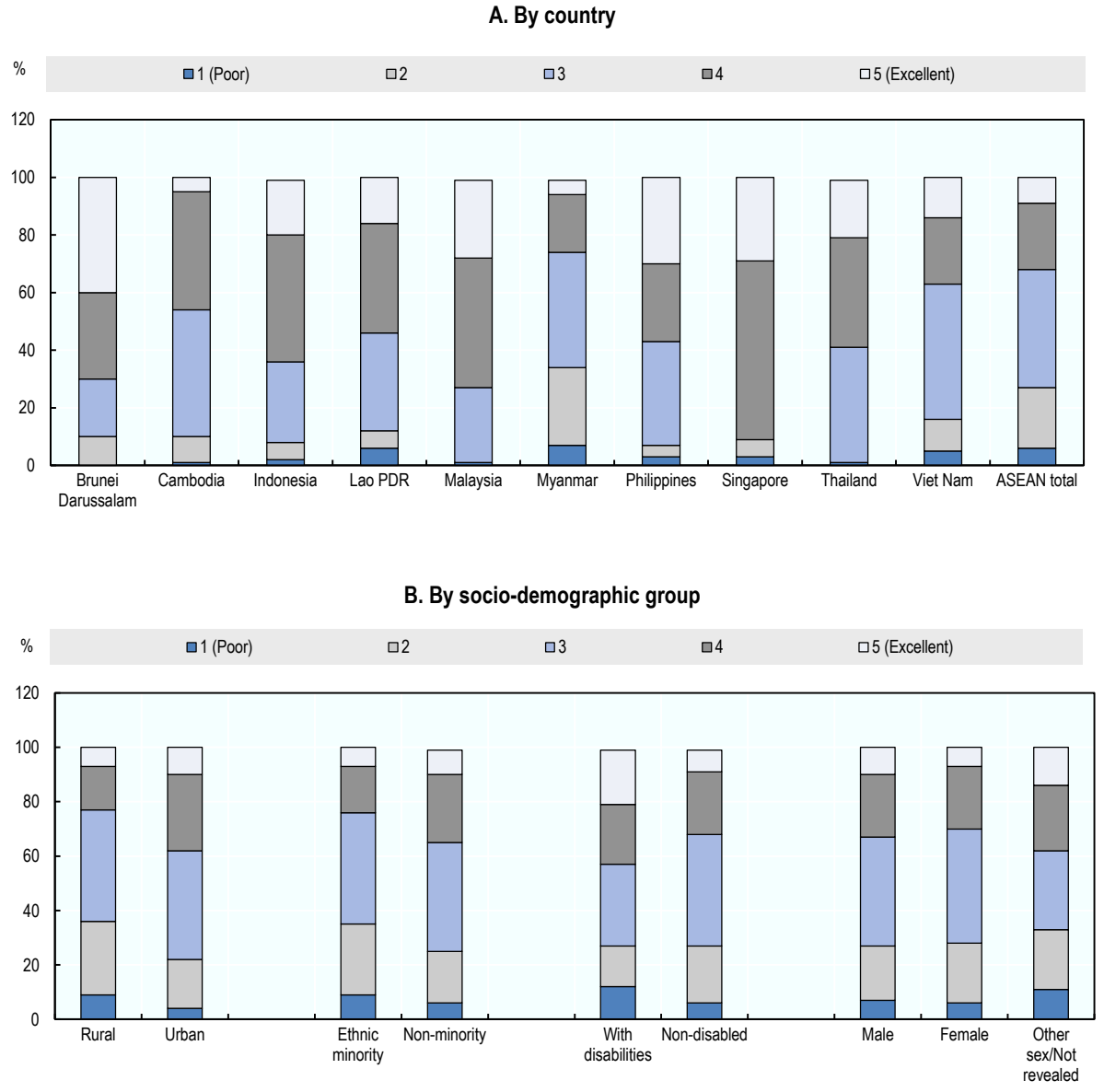
	ASEAN					OECD			
Policy measures	Cambodia	Malaysia	Myanmar	Singapore	Viet Nam	Germany	Japan	Korea	OECD total
Subsidised devices for access (PCs and/or tablets)	☒	☐	☐	☒	☒	☒	☒	☒	23
Flexible and self-paced platforms (asynchronous learning platforms)	☒	☒	☒	☒	☐	☒	☒	☒	22
Improved access to infrastructure for learners in remote areas	☒	☒	☒	☐	☒	☒	☒	☒	18
Support to learners with disabilities (e.g. sign language in online learning programmes)	☒	☒	☐	☒	☒	☐	☒	☒	16
Agreements with Global System for Mobile Communications (GSM) operators/Internet firms to remove Internet access barriers	☒	☒	☒	☐	☒	☐	☒	☒	15
Improved access to infrastructure for learners in urban high-density areas	☒	☒	☒	☐	☒	☐	☒	☐	15
Additional support to lower-income households, including economic support (i.e. take-home rations, cash-based transfers)	☒	☒	☒	☒	☐	☒	☒	☒	14
Special efforts to make online learning more accessible to migrant and displaced individuals, including those in camps	☒	☒	☐	☐	☐	☐	☒	☒	12
Design of learning materials for speakers of minority languages	☒	☐	☐	☐	☐	☐	☐	☒	7

Note: The column "OECD total" refers to the total number of OECD countries with the policy measure in place.
Source: OECD (2021[69]), *OECD Skills Strategy Southeast Asia Policy Questionnaire*; OECD (2021[70]), *The State of School Education: One Year into the COVID Pandemic*, https://doi.org/10.1787/201dde84-en.

While widening access to digital infrastructure and digital education platforms is important, strengthening digital literacy among Southeast Asian learners is equally crucial. Strengthening the digital literacy of youth has been one of the key challenges in the region, where only 32% of individuals across all ten ASEAN member states perceived themselves to have either good or excellent digital skills (Figure 3.12). Low digital literacy is especially prevalent in Myanmar, where 74% of young people perceive themselves to have only poor to moderate digital skills, as well as in Viet Nam (63%). Differences across socio-demographic groups are also stark. For instance, learners in rural areas are 15 percentage points more likely to rate themselves as having only poor to moderate digital skills than their urban counterparts, while members of ethnic minorities are 11 percentage points more likely to do so than their non-disabled counterparts. Particular attention must be paid to these groups on top of general efforts to increase access to skills development, targeting digital literacy, in preparation for an increasingly digitised world (UNICEF and ASEAN, 2021[67]). Such policy efforts are already underway in some OECD countries, such as Australia, as seen in Box 3.2, further below.

Figure 3.12. Self-reported levels of digital literacy in ASEAN countries, 2021

Percentage of respondents by self-reported level of digital literacy



Note: Respondents were given a survey and asked to provide a self-assessment of their ability to navigate the digital world using a scale from 1 (poor) to 5 (excellent).

Source: UNICEF (2021[67]), *Digital Literacy in Education Systems across ASEAN: Key Insights and Opinions of Young People*, www.unicef.org/eap/media/7766/file/Digital%20Literacy%20in%20Education%20Systems%20Across%20ASEAN%20Cover.pdf.

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Box 3.2. Country examples relative to improving access to ECEC and compulsory education

Australia's Rural Access Gap programme

The Rural Access Gap programme provides rural and remote schools with reliable Internet connectivity and digital devices (e.g. digital blackboards, laptops) to help students in rural areas close the equity gap with their metro counterparts. Designated Digital Classroom Officers are also nominated in order to support teachers and students in embedding technology into their everyday learning and are provided by the government with digital upskilling opportunities throughout the year.

Belgium's system to monitor out-of-school children

In Belgium (Flanders), an inter-ministry strategy has been designed to decrease the number of school dropouts, involving the Ministry of Education, the Minister of Welfare, Public Health and Family, and the Minister of Work Economy, Innovation and Sport. The strategy highlights the use of a comprehensive monitoring system to identify at-risk students based on data on sex, age, nationality and socio-economic background. Additionally, the strategy puts in place school-based measures to support student well-being as soon as a student shows signs of abandoning education, create links with parents, offer additional guidance services and support the development of flexible learning pathways to facilitate school completion.

Philippines' DepEd Commons Online Learning and Webinar

In March 2020, the Philippines' Department of Education (DepEd) established DepEd Commons, an online platform where public school teachers and parents can access educational materials for students from pre-primary to Grade 10. The resources are free to download and use under fair use conditions. Accessing the portal is also free through DepEd's partnership with telecommunications companies in the Philippines, with the support of the Department of Information and Communications Technology and the National Telecommunications Commission. In addition, DepEd also launched an online webinar in November 2021 amid the pandemic to provide parents with strategies and best practices on how to guide their children through online schooling. The webinar was viewed on the department's Facebook page by over 304 000 people.

Portugal's vouchers for home learning materials

In Portugal, the government aims to make home learning materials more accessible by providing vouchers for parents or registered guardians to obtain free textbooks for primary and secondary school students. Through an online portal, parents or guardians must make the request for the vouchers. Vouchers for books are available for every level of education. Parents may obtain free books for the following year upon returning textbooks from the previous year in proper condition.

Source: European Commission (2021[71]), *Preventing Early Leaving from Education and Training (ELET): Belgium-Flemish Community*, https://national-policies.eacea.ec.europa.eu/youthwiki/chapters/belgium-flemish-community/63-preventing-early-leaving-from-education-and-training-elet; New South Wales Government (2022[72]), *Rural Access Gap Program*, https://education.nsw.gov.au/about-us/strategies-and-reports/schools-digital-strategy/rural-access-gap; Philippines Department of Education (2021[73]), *DepEd empowers parents for a better home learning experience with children*; www.deped.gov.ph/2021/11/17/deped-empowers-parents-for-a-better-home-learning-experience-with-children/; Philippines Department of Education (2022[74]), *DepEd's References and Resources*, www.deped.gov.ph/cce-deped-references-and-resources/; Government of Portugal (2022[75]), *Receber vouchers para manuais escolares gratuitos*, https://eportugal.gov.pt/pt/servicos/receber-vouchers-para-manuais-escolares-gratuitos.

Recommendations for improving access to early childhood education and care and compulsory education for disadvantaged groups

- **Establish strong monitoring systems to detect children who have failed to enter the education system, as well as those who are at risk of dropping out.** Regularly collect school-level data on various individual characteristics that are associated with lack of access and dropouts, such as sex, age, socio-economic background (e.g. parental occupation) and location, among others, to identify children who are at risk of not entering education and leaving education early. Co-ordinate with relevant ministries and government agencies, as well as other stakeholders, to gather as much administrative data on these risk factors as possible, especially in countries where data capacity may be limited, to identify areas where potential intervention might be needed. Ensure that in-school well-being services are available to support children who are struggling to access education, and put in place additional guidance services (e.g. remedial classes, personalised tutoring) for those who are falling behind in learning. Moreover, create opportunities to meet with parents to discuss home situations and how they may impact children's schooling, and offer alternative and flexible learning pathways for children in difficult socio-economic situations to facilitate entry into school as well as completion.
- **Support provision of learning materials parents can use at home.** Offer students from disadvantaged families financial assistance, such as vouchers or income support, specifically earmarked for purchasing books, toys and other playthings. Ensure that such learning materials are available at every level of education and that parents may easily access such financial assistance measures (e.g. through an online portal). Offer targeted policy options to low-income households by raising awareness about such initiatives and how they may be easily accessed. Moreover, promote private-sector and civil-society-led initiatives that sell learning materials, such as books, at more affordable prices and bring them closer to children and their families through community and school-based measures, such as family reading events or book fairs.
- **Strengthen digital infrastructure, digital education platforms, and digital literacy to broaden access to skills development opportunities, especially among disadvantaged groups and during times of disruption.** Invest in infrastructure for Internet connectivity and the distribution of digital learning devices (e.g. digital blackboards, laptops, tablets), especially among disadvantaged learners, such as those from low-income households or rural areas. Additionally, invest in digital education platforms to facilitate the implementation of blended learning strategies that could help ensure the continuity of learning in the face of global disruptions, such as the COVID-19 pandemic. Ensure that investments in digital infrastructure are coupled with initiatives to increase digital literacy among students and teachers, such as providing digital upskilling opportunities and making online resources readily available and accessible.

Promoting access to skills development after compulsory education

Continued participation in education after compulsory schooling is central to lifelong learning and developing higher skills. Continuing to participate in post-compulsory education and at later stages of the life course helps individuals gain higher levels of skills and knowledge, which are associated with higher rates of employment, higher earnings and productivity, and effective transitions into formal employment among informal workers, among other benefits (ASEAN, 2022[35]; ILO, 2019[76]; OECD, 2019[77]). In Southeast Asian skills development systems, common forms of post-compulsory education include TVET, tertiary education and adult learning (see Opportunity 3). The supply of these types of post-compulsory educational offers has greatly expanded across Southeast Asia in the past two decades, but many barriers to access remain. These barriers encompass demand-side barriers, such as lack of awareness, cost and time constraints, but also supply-side barriers, mostly stemming from lack of political commitment and financial resources. In line with these barriers, three themes are explored in this policy area: 1) addressing barriers to TVET participation, such as low awareness and high costs; 2) removing

financial and location-based barriers to tertiary education; and 3) adopting a comprehensive adult learning strategy, encompassing informal workers.

Addressing barriers to TVET participation, such as low awareness and high costs

TVET is an important component of Southeast Asian skills development systems and is one of the earliest forms of post-compulsory education. In most Southeast Asian countries, TVET starts at the secondary level (as an optional pathway to the academic track) and can include post-secondary and tertiary levels. TVET refers to a wide range of skills development and training programmes in various occupational fields, often conducted through school-based and work-based learning (OECD, 2018[78]). Work-based learning through TVET is a principal way by which learners can develop industry-relevant skills, as they are exposed to real-life scenarios and guided by expert practitioners while pursuing, for example, an apprenticeship in a firm (Musset, 2019[79]). Across Southeast Asia, TVET has been an effective tool for increasing employability and earnings, as it offers learners opportunities to acquire work-relevant skills. It has also been effective at providing pathways to meaningful and productive employment among graduates from disadvantaged groups, such as women and children, and reducing informality and social exclusion (OECD, 2018[80]).

Access to TVET in Southeast Asia has risen in the last two decades, owing to the expansion of the supply of programmes through recent structural reforms. On average, gross enrolment rates in ASEAN countries have grown by 294% (i.e. nearly quadrupled) from 2000 to 2019, surpassing the rate of growth OECD countries (49%) achieved over the same period by a wide margin (Figure 3.4). TVET systems in the region have benefitted from increased involvement from the private sector, particularly through the provision of work-based learning opportunities, the supply of training levies to finance the expansion of programmes, the design of skills certification frameworks, and the improvement of job-matching strategies between schools and firms to facilitate the employment of TVET graduates (OECD, 2016[81]).

Despite recent progress in expanding access to TVET in Southeast Asia, overall regional participation is still low and highly unequal. The average TVET enrolment rate in ASEAN countries in 2019 (9.7%) remained below that of OECD countries (11.6%), with enrolment rates of all Southeast Asian countries with available data, except for Indonesia and Singapore, remaining below both regional averages (Figure 3.4). Like compulsory education, access to TVET in Southeast Asia is heavily determined by various socio-economic conditions. For instance, in countries with available data, students in rural areas have less access to TVET opportunities than those in urban areas. The urban-rural gap is often exacerbated by the geographic concentration of TVET providers in urbanised and high-income areas, as well as the poor state of roads and transportation infrastructure that would facilitate mobility across regions (ILO, 2016[82]; OECD, 2018[83]). In addition, gender differences in TVET enrolment are also noticeable. Across all countries in the region, an average of approximately six in ten students enrolled in TVET at the secondary level are males. While most countries report lower TVET participation rates among females than males, an important exception is the Philippines, where 54% of TVET graduates in 2018 were female, and 46% were male. However, throughout the region, even in the Philippines, female and male TVET students are highly segregated according to course or programme, with more female students being concentrated in low-productivity and low-pay occupations (e.g. garment, secretarial work, beauty and cosmetics) (ADB, 2021[84]).

Many TVET learners in Southeast Asia still face both demand- and supply-side barriers to participation. On the supply side, firms across Southeast Asian countries are reluctant to participate in TVET due to a lack of effective dialogue (between government, education institutions and firms), concerns about the (low) reputation of TVET and lack of information about how to participate (ASEAN, 2021[85]). Even when firms do participate in TVET, especially small- and medium-sized enterprises, their ability to provide quality work-based learning opportunities may be restricted by limited financial and human resource capacities. Similarly, on the demand side, the direct (e.g. training course fee) and indirect costs (e.g. transportation, opportunity costs) significantly limit the ability of youth to access TVET programmes, especially those who

are female, are a member of a racial/ethnic minority, come from a low-income household, or live in rural areas. Moreover, many among the public still generally consider TVET as inferior to formal academic education or as a "dead end" in learning pathways (UIL, 2017[86]; ASEAN, 2021[85]; OECD, 2021[45]).

Policy efforts are being pursued in Southeast Asia to respond to challenges in TVET and accelerate uptake, especially among disadvantaged groups. Several countries in the region, such as Malaysia, have launched various initiatives to provide financial support to disadvantaged groups and facilitate their participation in vocational training (Box 3.3). In Indonesia, independent learning programmes, competency-based training, community-based vocational training and apprenticeships have been targeted to informal workers, helping them access skills development offers that can boost their employability in the formal sector (ASEAN, 2022[35]). There are also efforts in the region, such as those in Viet Nam, to rebrand the image of TVET and strengthen partnerships with industry and academic communities to boost both the provision of, and participation in, TVET opportunities (Box 3.3). Moreover, more pathways to tertiary education and higher forms of TVET have been made available to learners in Southeast Asia in recent years. Several countries, including Cambodia and Thailand, have begun to open programmes at more advanced levels of TVET education, providing learners with options to pursue technical and vocational training at the bachelor's, master's, and doctorate levels. Some countries, such as Brunei Darussalam, Cambodia, the Philippines, Singapore and Viet Nam, have also begun to provide options for learners to directly enter tertiary education levels in general or academic tracks after the attainment of TVET certificates and diplomas at the secondary or post-secondary level (UNESCO, 2017[87]; UNESCO, 2021[88]). However, more systematic information is needed on the uptake of higher levels of TVET across the region and how individual countries' reforms are working in practice.

Removing financial and location-based barriers to tertiary education

Participation in tertiary education is another important part of skills development and lifelong learning that needs to be promoted after compulsory schooling. Tertiary educational attainment has been associated with higher levels of productivity and innovation through the acquisition not only of specialised knowledge but also higher-level analytical, managerial and interpersonal skills, driving the economic growth of many countries in Southeast Asia (Muhamad, Sulaiman and Saputra, 2018[89]; Tullao and Cabuay, 2013[90]). Moreover, in many cases, tertiary education institutions in the region are not only places where higher levels of skills and advanced levels of knowledge are acquired but also where social responsibility and community engagement are fostered among learners (Symaco and Tee, 2019[91]).

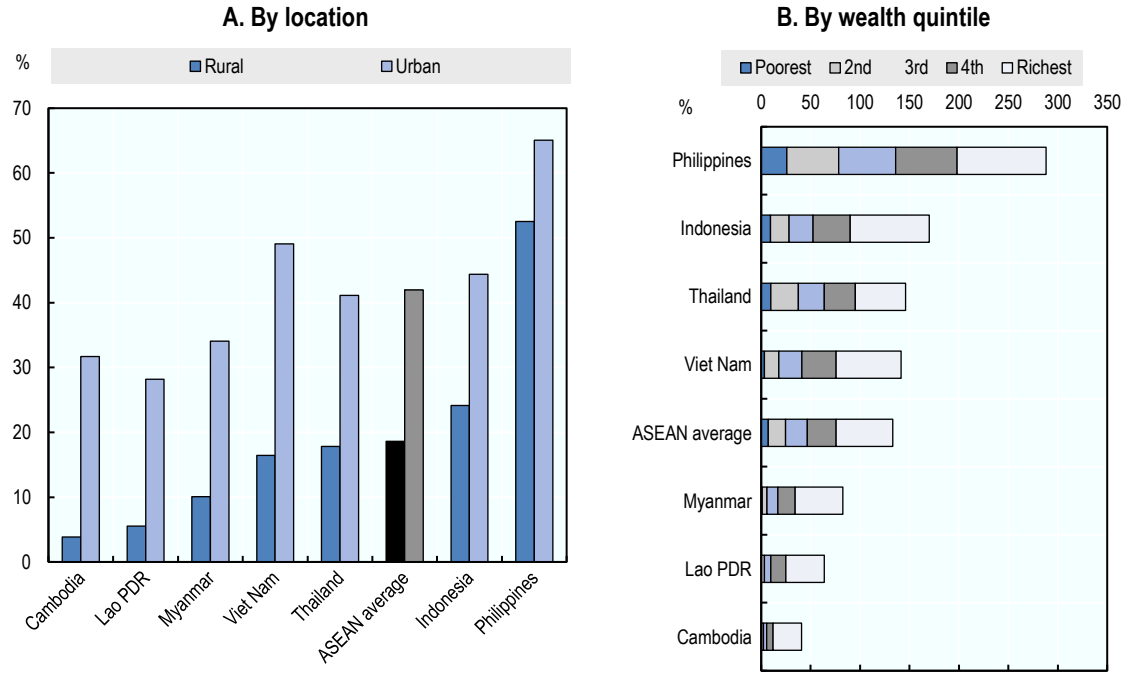
Despite the importance of tertiary education, many Southeast Asian countries still struggle with extremely low participation rates. While the ASEAN's average gross enrolment rate at the tertiary level has more than doubled from 16% in 2000 to 36% in 2019, it is still significantly lower than that of the OECD (76.5%) (Figure 3.5). Enrolment rates are especially low for low-income countries in the region, such as Lao PDR (14.5%), Cambodia (14.7%) and Viet Nam (18.8%). Moreover, not only is access to tertiary education in Southeast Asia low, but it is also highly unequal. Levels of inequality at the tertiary level are strongly associated with inequalities at the secondary level. However, the magnitude of inequality in educational attainment is larger at higher levels of education (UN ESCAP, 2017[48]).

Access to tertiary education is highly influenced by individual characteristics, namely location (i.e. urban versus rural) and household wealth. By location, tertiary education is less accessible in rural areas, where the attendance rate is only 18.6%, than in urban areas, where it is 41.9%, representing an average gap of 23.3 percentage points across ASEAN countries (Figure 3.13). Moreover, in all Southeast Asian countries, individuals from households in the richest quintile are more likely to attend tertiary education, averaging about 57.3% in the region. In contrast, only 7.3% of learners from households in the poorest quintile are likely to attend tertiary education. In addition to location and wealth, ethnicity, language and disability status contribute to unequal access to higher learning in Southeast Asia (The HEAD Foundation, 2022[92]).

The COVID-19 pandemic has exacerbated low and unequal access to tertiary education, but several Southeast Asian countries have taken steps to respond to this challenge. While sudden school closures led to the rapid deployment of online tools to ensure the continuation of learning, many measures were not sustainable, with many universities having to suspend or postpone remote classes due to the lack of access among socio-economically disadvantaged students (The HEAD Foundation, 2020[93]). Private universities, which account for an average of 70% of tertiary education institutions in the region[3] (Welch, 2021[94]), experienced a marked decline in enrolment due to the disruption in financing and in-person teaching during the pandemic (Bustos-Orosa, 2022[95]). Government spending on education was reduced due to economic shocks and constraints in public financing during the pandemic. At the same time, income and urban-rural divides widened, and students with limited access to distance learning opportunities dropped out of schools (Chau, 2022[96]). In response to these challenges, Southeast Asian countries have put in place several policy measures to facilitate learners' access to distance education, as reported in the OECD Skills Strategy Southeast Asia Policy Questionnaire. For instance, in Malaysia, 1 Gigabyte of Internet was offered free of charge by the Malaysian Communications and Multimedia Commission to learners in upper secondary vocational educational and tertiary education. In Singapore, tertiary education institutions provided subsidies and loans for students to purchase digital devices for learning, such as the National University of Singapore's Notebook Ownership Scheme, which assists full-time students in purchasing computers that are well-equipped with a wide variety of information-technology-based learning tools and resources (National University of Singapore, 2022[97]). Beyond COVID-19, there remains a need to make tertiary education more financially accessible in Southeast Asia, as in some OECD countries with generally affordable tertiary education systems, such as France (Box 3.3).

Figure 3.13. Gross attendance rates at the tertiary level in Southeast Asia, by location, sex, and wealth quintile, latest available year

Percentage of students attending tertiary education in relation to five-year age group starting from the official secondary school graduation age



Note: Due to a lack of data, the latest available year was used for the following countries: Cambodia and Viet Nam (2014), Myanmar (2016), Lao PDR and Indonesia (2017), the Philippines (2018), and Thailand (2019). The ASEAN average is the unweighted mean for these seven countries. Data for reference countries in the OECD are not available.
Source: UNESCO Institute for Statistics (2021[27]), *Education*, http://data.uis.unesco.org/.

StatLink https://stat.link/mfyvsr

Adopting a comprehensive policy strategy for adult learning

The development of skills over the life course goes beyond formal education in tertiary education and involves access to reskilling and upskilling opportunities in adulthood. Adult learning refers to learning that occurs in formal settings (e.g. general education, vocational education leading to a nationally recognised diploma), in non-formal settings (e.g. employer-provided training, workshops), and informal settings (e.g. learning from peers at work) (OECD, 2021[98]). Participation in adult learning has many benefits and has been associated with increased employability and productivity, prolonged working lives, as well as improved psychological and social well-being and quality of life (Formosa, Fragoso and Schmidt-Hertha, 2019[99]). Given that most adults have already left initial education, adult learning systems play a crucial role in providing opportunities in adulthood to develop new skills and respond to changing labour market needs, helping prevent skills imbalances (OECD, 2019[100]). In Southeast Asia, different terms may refer to adult learning, such as continuing education and complementary education, among others (Gartenschlaeger, 2019[101]).

Systematic data on access to adult learning programmes in Southeast Asia are scarce, but available evidence suggests that participation rates are low in most countries in the region. While employer-sponsored training is available in many countries across ASEAN (Figure 3.6), provision across firms varies greatly depending on firm characteristics, such as size and whether firms are in the informal or formal economy (see Opportunity 3). Furthermore, uptake is relatively low, with an average of only 11.3% of adults participating in formal and non-formal education and training throughout the region compared to 20.13% across OECD countries. Moreover, gaps in access to skills development, including those between adult men and women, are still prevalent. Across Southeast Asia, enrolment rates among men surpass women by 1.2 percentage points. The greatest gender differences can be found in Singapore, where enrolment rates between men are higher than those of women by 7.5 percentage points (UNESCO Institute for Statistics, 2022[18]).

As with other components of skills development systems in Southeast Asia, access to adult learning is also highly unequal across socio-demographic groups. For instance, participation in adult learning is limited to only a minority of the working population in most ASEAN member states (OECD, 2021[45]). Many of those who need training the most, such as low-skilled adults, the unemployed and long-term unemployed, and workers in rapidly changing industries, have particularly been found to have limited access to adult learning opportunities (OECD, 2021[45]). Participation in learning is also lower among older adults, and there are few formal adult learning systems in place for them (Gartenschlaeger, 2019[101]; OECD, 2021[45]), although some Southeast Asian countries, such as Singapore, have begun to take policy action in response to a rapidly ageing demographic (Box 3.3). Moreover, access to adult learning among workers in the informal economy is a pressing policy issue, as the lack of employer-sponsored training not only lowers their productivity but also inhibits their ability to acquire skills that would help them transition into the formal labour market (ASEAN, 2022[35]; ILO, 2019[76]; OECD, 2021[98]). However, several policy initiatives are in place in OECD countries, such as Mexico, to make training offers more accessible among workers in the informal economy (Box 3.3).

Multiple factors may explain low participation in adult learning in Southeast Asia. Available evidence suggests that many adults do not participate in adult learning programmes because they have low motivation levels and may not see the need to upgrade their skills or develop new ones. Many adults also lack information about adult learning offers and face financial barriers. However, a variety of financial incentives are available in the region to facilitate individuals' enrolment in adult learning (see Table 3.6 under Opportunity 3) (OECD, 2021[45]; Bok, 2021[102]). Moreover, improving adult learning systems in Southeast Asia has been challenging due to insufficient co-ordinated policy attention, funding and monitoring. For example, education ministries typically give much higher priority to initial education, leaving little room to mobilise human and financial resources to support adult learning. While other ministries, in particular the Ministry of Labour, also offer short-term vocational adult learning programmes, co-ordination

mechanisms are often weak and under-established. The lack of co-ordination across all relevant ministries, levels of government and with stakeholders leads to fragmented and inefficient implementation of adult learning policies, with gaps and unnecessary overlaps. Lastly, the general lack of systematic data on information on adult learning makes it difficult to assess participation rates and monitor the outcomes of participation (Gartenschlaeger, 2019[101]), which is important information to improve the quality of adult learning programmes.

Box 3.3. Country examples relevant to promoting access to skills development after compulsory education

France's multi-pronged approach to financing tertiary education

Tuition fees in public higher education institutions are generally low in France, as the French government is the primary funder of tertiary education. In 2019, public sources accounted for 75.3% of spending on tertiary education. In addition to public funding that covers tuition costs, government financial aid is also available to support students during their studies, including tertiary education grants based on social criteria, merit scholarships, housing assistance and emergency grants. These types of financial aid come from mostly public sources, such as the Ministry for Higher Education, Research and Innovation, the Ministry for Europe and Foreign Affairs and local governments. However, some private funders, such as international institutions, non-governmental organisations (NGOs) and foundations, are also available.

Malaysia's provision of financial support to learners to facilitate enrolment in TVET

Additional support is provided to upper secondary vocational students who come from lower-income households. A monthly allowance of MYR 100 (Malaysian ringgit) (USD 22) is provided to students in certificate programmes, and MYR 300 (USD 65) is provided to students with disabilities. Loans are also available for diploma and advanced diploma levels.

Mexico (Tlaxcala)'s Supérate, productive training component

Supérate is a conditional cash transfer programme, which has a training component (*componente de entrenamiento productive*) that aims to upskill members of selected households, including those working in the informal economy, and increase their incomes over the medium term. To facilitate participation in the programme, the government covers the tuition fees and learning materials, and beneficiaries may also receive transportation aid when needed. The trainings cover a wide variety of topics, including financial education, training for formal employment in strategic sectors, micro-business entrepreneurship and agricultural activities.

Singapore's Action Plan for Successful Ageing

To prepare for rapid population ageing, Singapore established the Ministerial Committee on Ageing to adopt a whole-of-nation approach to ageing and co-ordinate all related government policies and initiatives. In 2015, the committee launched the Action Plan for Successful Ageing, which serves as the country's blueprint for enabling senior citizens to contribute to the economy and society even in their later years. The National Silver Academy was established in partnership with a network of civil society organisations to provide a wide range of learning and skills development offers for senior citizens, including inter-generational learning programmes where they could learn skills in information technology (IT), social media, photography, arts and crafts, and music from younger students.

Viet Nam's awareness-raising campaign to rebrand TVET

In Viet Nam, where there is little interest in TVET among employers and the public, the Ho Chi Minh City branch of the Vietnamese Chamber of Commerce and Industry conducts an awareness-raising campaign and offers TVET-oriented career guidance to a variety of groups from government, industry and students. To ensure maximum reach, the campaign utilises different channels, including social media accounts, to respond to questions from students. The campaign also organises open days at schools, where they invite business representatives to connect with prospective students and discuss TVET learning pathways.

Source: Seel and Phuong (2020[103]), *Implementing the Future ASEAN Agenda for TVET: A Compendium of Case Studies*, https://asean.org/wp-content/uploads/2021/08/GIZ-2020_Future-ASEAN-Agenda-Compendium.pdf; OECD (2021[69]), *OECD Skills Strategy Southeast Asia Policy Questionnaire*; OECD (2019[104]), *Spending on tertiary education*, https://data.oecd.org/eduresource/spending-on-tertiary-education.htm; OECD (2021[105]), *OECD Skills Strategy Tlaxcala (Mexico): Assessment and Recommendations*, www.oecd.org/fr/publications/oecd-skills-strategy-tlaxcala-mexico-13925818-en.htm/; Ministère de l'Enseignmement supérieur, de la Recherche et de l'Innovation (2017[106]), *Higher education and research in France, facts and figures – Summary,* https://publication.enseignementsup-recherche.gouv.fr/eesr/10EN/EESR10EN_RESUME-.php; Ministère de l'Europe et des Affaires étrangères (2022[107]), *Finance your studies/scholarships*, www.diplomatie.gouv.fr/en/coming-to-france/studying-in-france/finance-your-studies-scholarships/; N26 (2021[108]), *How to get grants and housing assistance as a student in France*, https://n26.com/en-fr/blog/how-to-get-higher-education-grants-in-france; Singapore Ministerial Committee on Ageing (2019[109]), *What is the Action Plan About?*, www.moh.gov.sg/ifeelyoungsg/about/what-is-the-action-plan-about; UNESCO (2017[110]), *Six Ways to Ensure Higher Education Leaves No One Behind*, https://unesdoc.unesco.org/ark:/48223/pf0000247862/PDF/247862eng.pdf.multi.

Recommendations for promoting access to skills development after compulsory education

- **Adopt a comprehensive policy strategy to address both supply- and demand-side barriers to technical and vocational education and training participation.** On the supply side, encourage the provision of work-based learning opportunities by employers through providing a wide range of financial incentives that subsidise the cost of provision, as well as opportunities for strengthening TVET institutions-industry partnerships (see Opportunity 3). Moreover, pay close policy attention to smaller firms who have less capacity by providing them with resources on pedagogical skills to facilitate their provision of work-based learning opportunities, such as internships and apprenticeships. On the demand side, provide financial support options to learners from low-income households in the form of monthly stipends or affordable loans to reduce financial barriers to participation. Additionally, conduct public awareness campaigns about the new progression opportunities in TVET, including accessing tertiary education, and the types of professional development offers available to graduates.
- **Facilitate access to tertiary education by reducing the most significant financial barriers, both in terms of tuition fees and the cost of learning materials.** Adopt a multi-pronged approach to alleviating the costs of tertiary education for disadvantaged groups and make use of a combination of affordable tuition policies and financial aid programmes, such as needs-based grants and income-contingent loans that consider factors such as household income and location. Ensure that such financial instruments are easily accessible and financially viable for students coming from low-income households. Moreover, help students cover the cost of learning materials by providing subsidies or loans when purchasing textbooks, digital learning devices, Internet connection subscriptions and other materials they may need to finish their schooling.
- **Create a comprehensive national adult learning strategy that targets disadvantaged groups and facilitates their participation.** Establish a comprehensive national adult learning strategy with all relevant actors (e.g. ministries, levels of government and stakeholders) to identify priorities, goals and actions. Actions should specifically target disadvantaged groups that often have lower adult learning participation rates, such as the unemployed, low-skilled workers, older adults and workers in the informal economy. The strategy should raise awareness among the public about the

benefits of adult learning, promote affordable and easy-to-access skills development offers, and disseminate information about adult learning opportunities (e.g. an online portal that consolidates various training offers). The adult learning strategy should also have measures that provide financial and logistical support for potential learners, so that they can attend programmes. Data on adult learning provision and participation, as well as on the outcomes of adult learning programmes, should be collected and consolidated in an integrated data base to inform adult learning policy and programme design and implementation.

Opportunity 2: Increasing equity and excellence in skills development

Through recent decades, Southeast Asian countries have prioritised not only improving access but also improving the quality of education. Challenges remain, however. At the regional and national levels, various policy measures have been put in place to address issues in educational quality, including the expansion of teacher and school leader training opportunities, the upgrading of classrooms and educational infrastructure, the establishment of educational quality assurance bodies, efforts to improve student assessment, the regular conduct of curriculum reviews to assess the relevance of educational content, the strengthening of links between education and labour market actors, and the adoption of performance-based funding strategies in schools (Lee, 2016[36]; SEAMEO INNOTECH, 2020[111]). Despite these efforts, Southeast Asian learners still performed lower in reading, mathematics and science than learners in OECD countries in the latest PISA round in 2018 (Figure 3.7). Universal literacy still has not been achieved in the region, with some low-income countries having a sizeable proportion of their populations still unable to read and write simple statements (Figure 3.8). Digital literacy is also generally weak in Southeast Asia, with only 28% of youth and adults having the skills to carry out activities related to information and communication technology (ICT) (Figure 3.9), risking the ability of the region to develop a workforce that can adapt to increasing digitalisation. Moreover, performance on key skills indicators is also highly unequal across socio-economic groups in Southeast Asia, reflecting inequities in countries' education systems (OECD, 2019[38]).

Increasing excellence and equity in skills development is highly contingent on improving the governance of schools throughout Southeast Asia. This opportunity presents two policy directions for strengthening the quality of education in the region. The first policy direction focuses on improving the quality of human resources in schools, such as teachers and school leaders. The second policy direction discusses the importance of strengthening funding and student assessment in schools to improve equity.

Improving the quality of human resources in schools

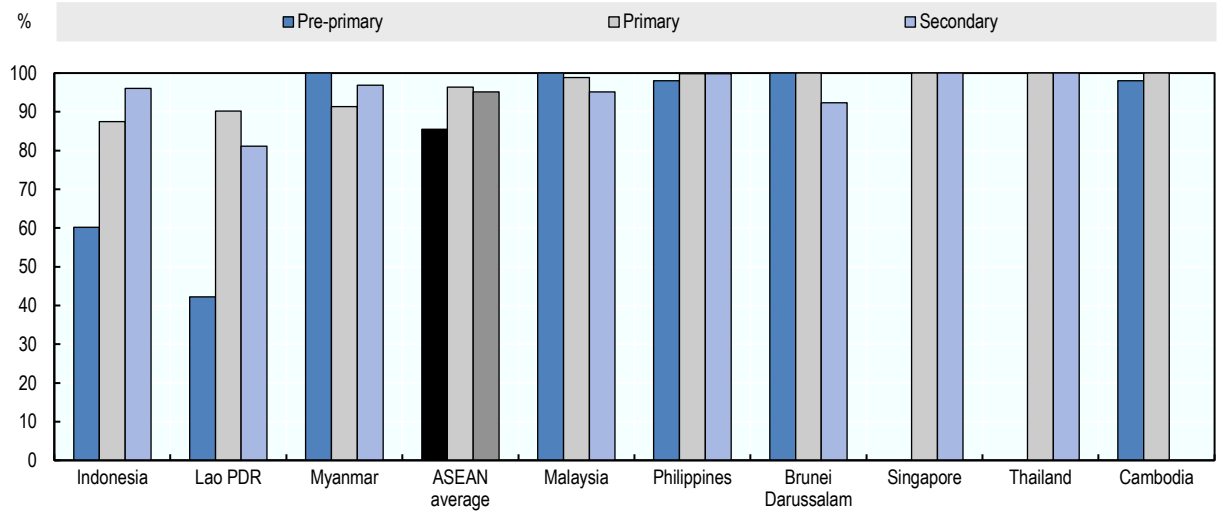
High-quality teachers and strong school leaders are indispensable to skills development systems. For many students, teachers are the main source of new knowledge and skills and are some of the most important figures shaping their cognitive and social development outside the family. On the other hand, school leaders such as principals are at the forefront of improving educational quality and creating effective learning environments where teachers and students can interact and transfer valuable knowledge and skills. Beyond teachers and principals, there are also many other types of staff (e.g. guidance counsellors, in-school psychologists, administrative personnel and social workers) who play an active role in improving the management of schools and creating supportive learning environments. For these reasons, human resources in schools have begun to gain important policy attention in many skills development systems across Southeast Asia and OECD countries (OECD, 2019[112]). This policy direction explores two areas for improving the quality of human resources in schools: 1) helping teachers develop pedagogical skills needed to better manage classroom challenges; and 2) regularly consulting with school leaders about the needs of their schools and learners.

Helping teachers develop pedagogical skills needed to better manage classroom challenges

Southeast Asia generally has a good stock of well-qualified teachers at most levels of education, although there is room for improvement in some countries. In most countries in the region, nearly 100% – if not all – teachers at the pre-primary, primary and secondary levels have at least the minimum academic qualifications (see further below) required to teach their subjects (Figure 3.14). On average, throughout Southeast Asia, 96.4% of teachers at the primary level and 95.2% of teachers at the secondary level are qualified. Figures are generally lower at the pre-primary level, with only 85.5% of teachers being qualified throughout the region, although some countries have significantly lower levels, namely Lao PDR (42.3%) and Indonesia (60.2%). Regardless of the share of qualified teachers, the minimum level of teacher qualification differs across Southeast Asian countries. For instance, in Indonesia, Malaysia, the Philippines, and Thailand, ECEC teachers are required to have achieved some tertiary education, including two years of post-secondary education, specialising in early childhood instruction. On the other hand, in Viet Nam, ECEC teachers are required to have only secondary education (SEAMEO-UNESCO, 2016[113]).

Figure 3.14. Qualified teachers at different levels of education in Southeast Asia, latest available year

Percentage of teachers who have at least the minimum academic qualifications required to teach their subjects



Note: A high value indicates that students are being taught by teachers who are academically well-qualified in the subjects they teach. Data at the pre-primary level are not available for Singapore and Thailand, and at the secondary level for Cambodia.
Source: World Bank (2020[32]), *Education Statistics*, https://databank.worldbank.org/source/Education-Statistics.

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In addition to ensuring that Southeast Asian teachers have the right qualifications, it is equally important that they have strong and up-to-date pedagogical skills, which greatly affect the quality of teaching. All countries in the region have adopted policies to support the development and implementation of teaching competency standards, which define the pedagogical skills needed by competent teachers. Across all countries, teachers are considered competent when they are able to select short-term measurable objectives and long-term goals based on national curricula, employ instructional strategies that are appropriate to a lesson's objectives and students' needs, and use appropriate resources and tools when teaching in order to suit students' abilities and learning styles (SEAMEO INNOTECH, 2010[114]). Specialised institutes or training centres for teachers have been established in Southeast Asian countries

such as Singapore and Malaysia (Box 3.4). Despite these efforts, not all Southeast Asian teachers are confident in their ability to use various teaching approaches aligned with their students' needs. For instance, less than 80% of Grade 5-level teachers in Cambodia, Lao PDR and Malaysia are confident in their ability to use multi-age teaching techniques and differentiated instruction, which can risk increasing inequities in educational outcomes among students (UNICEF and SEAMEO INNOTECH, 2022[115]). Moreover, one in every ten teachers across Southeast Asia is not skilled in teaching digital literacy, and training in using ICT in the classroom varies widely between countries. Some 96% of students in Viet Nam, 91% in Malaysia and 83% in the Philippines were in a classroom with a teacher who had received ICT training. However, only 78% of children in Cambodia, 74% in Lao PDR, and 51% in Myanmar do so, creating significant barriers to the ability of teachers in these countries to equip students with much-needed digital skills (UNICEF and SEAMEO INNOTECH, 2022[115]; UNICEF and ASEAN, 2021[67]).

Regardless of qualifications and skill level, many teachers in Southeast Asia face multiple challenges in delivering high-quality education, including material limitations in classrooms. For instance, while print-related materials are some of the most common teaching tools across the region, only 34% of children in Cambodia, 56% in Lao PDR and 58% in Myanmar had a teacher who had access to a classroom library (UNICEF and SEAMEO INNOTECH, 2022[115]). The lack of textbooks and school supplies is especially pronounced in rural areas, widening location-based equity gaps in education (Oblina, Linh and Phuong, 2021[116]). Moreover, teachers' access to ICT in classrooms is also severely limited, with only 22% of Southeast Asian children having a teacher who has access to a working computer and only 15% having access to an overhead projector. In many instances, classrooms also lacked the power outlets needed to use digital learning tools. This has severe implications for the ability of teachers to develop important skills among their students, such as digital literacy, as well as to carry out remote teaching practices in the context of the COVID-19 pandemic (UNICEF and SEAMEO INNOTECH, 2022[115]).

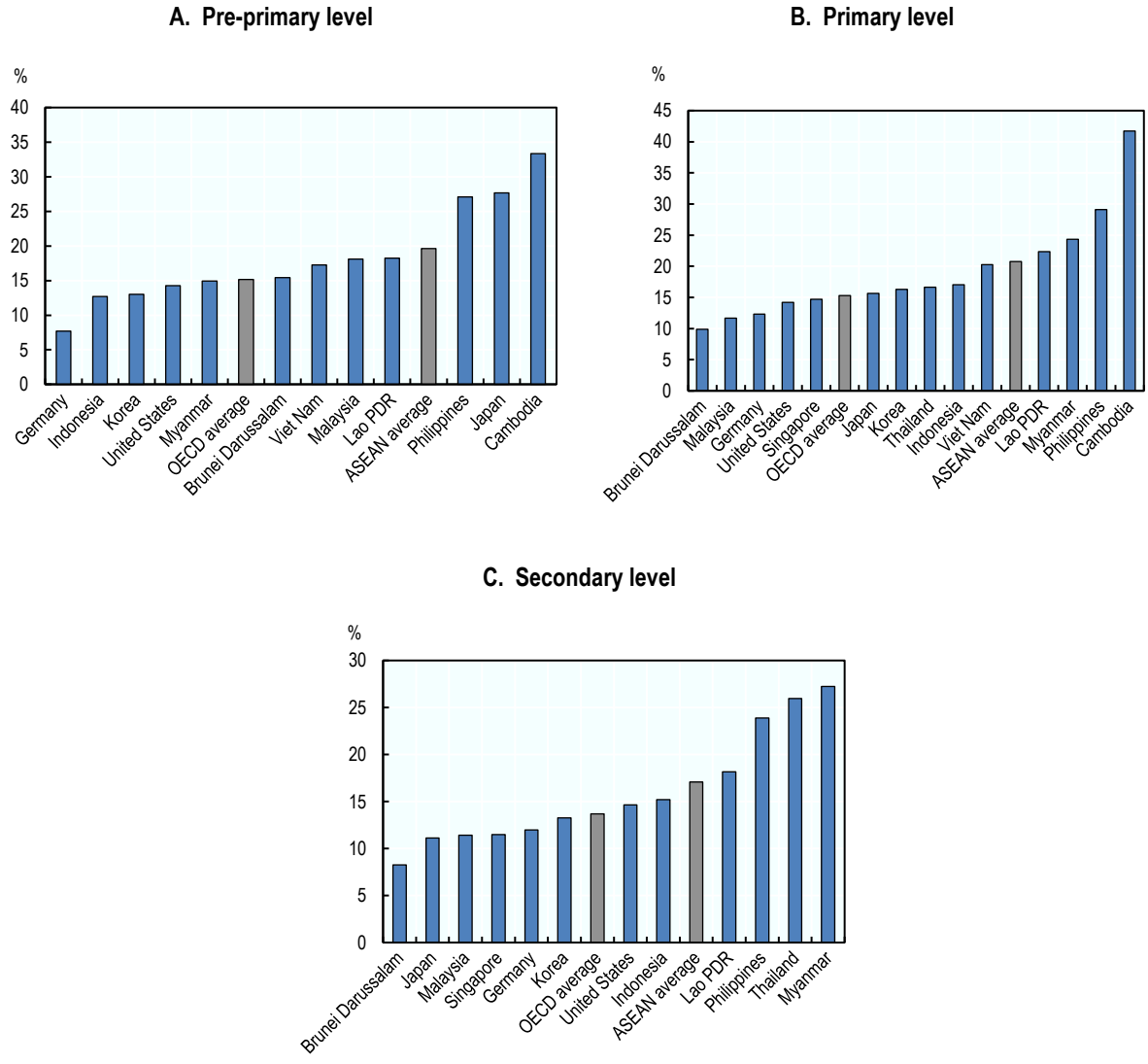
In addition, large class sizes in Southeast Asia may serve as a barrier to providing well-tailored instruction to students and reducing inequities in schools. There is evidence that smaller class sizes are beneficial, especially for disadvantaged students, as they allow teachers to pay more attention to the individual needs of learners and reduce the amount of class time needed to manage disruptions (OECD, 2022[117]). However, in Southeast Asia, there are more students for every teacher at all levels of compulsory education than in classrooms in OECD countries (Figure 3.15). At the pre-primary level, every teacher in Southeast Asia manages an average of 20 students compared to 15 in OECD countries, and the pupil-teacher ratio is particularly high in Cambodia (33) and the Philippines (27). At the primary level, an average teacher in ASEAN countries manages 21 students, 6 students more than an average teacher in OECD countries (15), and the average Cambodian teacher manages double (42) the average number of ASEAN students. There is also evidence from the region showing that more than 60% of Grade 5 students had teachers who experienced difficulties getting learners to settle down – an effect of larger class sizes – which serves as a barrier to effective teaching. Furthermore, a significant proportion of primary students in the region have also failed to master skills expected in earlier grades, therefore requiring additional support from teachers. Learners may also speak diverse languages, which makes it more difficult for teachers to meet individual learning needs (UNICEF and SEAMEO INNOTECH, 2022[115]). While class sizes at the secondary level are slightly smaller than at the primary level, the pupil-teacher ratio is still larger in ASEAN countries (17.1) than in OECD countries (13.7).

To provide better instruction despite resource constraints in the classroom, teachers in Southeast Asia could benefit from opportunities to improve their pedagogical skills. While it is important to address material limitations in the classroom and maintain a good stock of well-qualified teachers, it could also be strategic to provide teachers with opportunities to improve their pedagogical skills and learn a wide variety of teaching techniques (e.g. use of ICT, peer learning, differentiated instruction) that could help them overcome challenges in the classroom (UNICEF and SEAMEO INNOTECH, 2022[115]). This is especially important in cases where governments might have resource constraints that inhibit them from hiring more teachers. It is important to invest in teacher training and make training offers more financially accessible,

especially among disadvantaged schools, as is being implemented in OECD countries such as the United Kingdom (Box 3.4).

Figure 3.15. Pupil-teacher ratio by level of education in Southeast Asia and selected OECD countries, latest available year

Number of students per teacher



Note: Due to a lack of data, the latest available year was used for the following countries: Germany, Japan, Korea, the Philippines, Singapore and Viet Nam (2017); and Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, OECD average, Thailand and Viet Nam (2018).
Source: World Bank (2020[32]), *Education Statistics*, https://databank.worldbank.org/source/Education-Statistics.

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Teachers in Southeast Asia also need increased levels of support during times of massive disruptions, such as during the COVID-19 pandemic. In 2020 and 2021, a wide variety of support measures were adopted across ASEAN and OECD countries to support teachers in the transition to remote teaching (Table 3.3). The most common intervention adopted by countries across the two regions was the provision

of guidelines on how to teach from a distance, such as teaching content adapted to remote teaching (e.g. open educational resources, lesson plans) as well as instructions on how to use a wide variety of teaching modalities (e.g. television, radio, online learning platforms), although more support could have been given on how to prepare a virtual classroom. Teachers were also provided with opportunities to upskill, especially in using ICT in education.

Table 3.3. Support for teachers in Southeast Asia and selected OECD countries to transition to remote teaching in 2020 onwards

Support measures for teachers to transition to remote teaching	ASEAN					OECD			
	Cambodia	Malaysia	Myanmar	Singapore	Viet Nam	Germany	Japan	Korea	OECD total
Teaching content adapted to remote teaching (e.g. open educational resources, lesson plans)	☒	☒	☐	☒	☒	☐	☒	☒	29
Instructions on distance teaching (e.g. TV, radio, learning platforms)	☒	☒	☒	☒	☒	☐	☒	☒	28
Special ICT training	☒	☒	☐	☒	☐	☐	☒	☒	26
Professional development activities (e.g. workshops and webinars) on pedagogy and ICT use	☒	☒	☒	☒	☒	☐	☒	☒	25
ICT tools and connectivity (e.g. PCs, mobile devices, mobile broadband vouchers)	☒	☐	☒	☒	☐	☒	☒	☒	24
Professional, psychosocial and emotional support (e.g. chat groups, online teacher forums)	☒	☒	☐	☒	☒	☐	☒	☒	24
Guidelines for preparing a virtual classroom	☒	☒	☐	☒	☒	☐	☒	☐	13

Note: For OECD countries, data are derived from Iteration 3 (February to April 2021) of the *Survey of National Education Responses to COVID-19 School Closures*, which surveyed countries on the support measures they implemented in 2020. The column "OECD total" refers to the total number of OECD countries with the policy measure in place.
Source: OECD (2021[69]), *OECD Skills Strategy Southeast Asia Policy Questionnaire*; OECD, UNESCO UIS and World Bank (2021[118]), *Survey of National Education Responses to COVID-19 School Closures*, https://covid19.uis.unesco.org/data/.

Regularly consulting with school leaders about the needs of their schools and learners

Addressing teachers' many challenges in the classroom requires strong leadership from principals and school administrative personnel. School leadership has gained more policy attention across the world, as it plays a key role in influencing the motivations and competencies of teachers, as well as the general learning environment in schools. To help schools adapt to changing megatrends, cater to increasing student diversity and decrease inequities in education, school leaders have been tasked with more and more responsibilities relating to financial and human resource management (Pont, Nusche and Moorman, 2008[119]). At the regional level in Southeast Asia, strong leadership in schools has been increasingly recognised as an important area of skills development policy, as it is central to the ability of schools to navigate changes brought about by global megatrends and disruptions such as the COVID-19 pandemic.

Efforts by individual Southeast Asian countries to decentralise the delivery of education have highlighted the need for stronger management skills among school leaders. Many countries in the region have introduced decentralisation efforts to cope with rising educational demand, reduce inequities, such as between urban and rural settings, and respond more adequately to the needs of local schools (Shoraku,

2008[120]). The decentralisation of educational management has involved the total or partial transfer of decision making and school administration responsibilities from the national government to regional, provincial and/or local authorities, including schools. This has highlighted the increased role that school leaders play in ensuring the delivery of quality education. While the transfer of such responsibilities may result in differences in the quality of educational services, countries in the region have mitigated these risks by developing national quality standards for education and enforcing quality assurance efforts in schools. In many cases in Southeast Asia, school leaders were unprepared for rapid decentralisation efforts. However, countries such as Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand and Viet Nam have managed to put in place various capacity-development initiatives to equip school leaders and staff with skills relating to instructional leadership, planning, decision making and financial management (SEAMEO INNOTECH, 2012[121]).

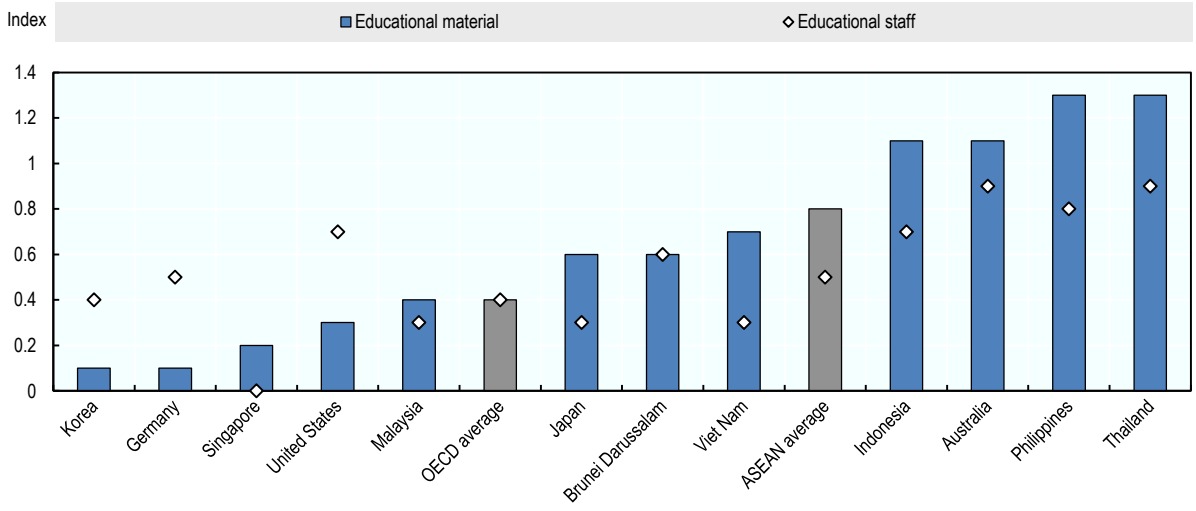
In addition to individual countries' efforts, there is also increasing recognition at the regional level of the need to upskill school leaders to help them respond to various global challenges. For instance, in 2003, SEAMEO INNOTECH, in partnership with ministries of education across the region, developed the Competency Framework for Southeast Asian School Heads, which outlines the skills and attributes needed by school leaders to effectively carry out their roles. The core skills identified in the framework include strategic thinking and innovation, managerial leadership, instructional leadership, personal excellence and stakeholder engagement. The competencies in the framework guide SEAMEO INNOTECH'S programme offerings to train school leaders in the region and may also serve as a useful reference for ministries of education as they conduct capacity-development initiatives for school staff (SEAMEO INNOTECH, 2015[122]).

While steps have been taken to equip school leaders with strong management skills, many barriers remain to ensuring the delivery of high-quality education in schools. One of these barriers is the severe lack of resources in many regional schools, which limits school leaders' ability to effectively carry out their responsibilities. School leaders across many countries in Southeast Asia face a shortage of educational materials and educational staff, with these limitations being even bigger in disadvantaged schools. While Malaysia and Singapore perform better than or are relatively close to the OECD average, differences in schools' socio-economic profiles are especially pronounced in countries such as Indonesia, the Philippines and Thailand (Figure 3.16). In addition to these long-standing problems, the onset of the COVID-19 pandemic has also brought about a new set of challenges for school leaders throughout the region. Many of them were forced to adapt and develop new leadership styles to provide guidance to their schools, as well as ease the constant anxieties of teachers, students and parents surrounding the uncertainty of educational provision. Many school leaders struggled to fully adapt to online learning due to the lack of technical tools and inadequate ICT skills among teachers, forcing them to work closely with members' local communities, such as philanthropists, social organisations and corporate groups, to find innovative ways to deliver lessons despite school closures. School leaders have also had to spearhead curricula-related reforms that aim to make educational content more adapted to online learning (Adams et al., 2021[123]; Parr and Sum, 2021[124]).

Consulting with school leaders and relevant stakeholders is an effective way to gather insights about schools' specific needs and collectively plan reforms. Continuous dialogue between policy makers and school leaders is important to making skills development policies, especially those at the national level, more reflective of the situations at the local school level. During times of change and disruption, consulting school leaders and their personnel also fosters a sense of ownership over policy reforms, which could, in turn, encourage greater co-operation across levels of the skills development system (Pont, Nusche and Moorman, 2008[119]). While policies are in place in some OECD countries, such as in Australia and New Zealand, to formalise consultation mechanisms between the government and school leaders (Box 3.4), there is less information on the existence of such initiatives in Southeast Asian countries.

Figure 3.16. Difference in shortages of educational materials and staff by school socio-economic profile, Southeast Asia and selected OECD countries, 2018

Mean index difference between advantaged and disadvantaged schools



Note: A higher value indicates a larger shortage of resources in disadvantaged schools, relative to advantaged schools.
Source: OECD (2020[125]), *PISA 2018 Results (Volume V): Effective Policies, Successful Schools*, https://doi.org/10.1787/ca768d40-en.

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Box 3.4. Country examples relative to improving the quality of human resources in schools

Australia's consultation with school-based staff

The government of Victoria has put in place mechanisms to consult with school leaders and their unions each time a significant policy change in their work is proposed, providing them with an opportunity to raise any concerns. Additionally, principals are required to formally consult with school staff to involve them in consultation processes with the government and adequately reflect their interests.

Malaysia's Centre for Instructor and Advanced Skill Training

Malaysia has put in place support measures to improve teachers' pedagogical skills in line with global megatrends. For example, through the Centre for Instructor and Advanced Skill Training of the Ministry of Human Resources, teachers have access to courses and seminars on theory and methods of designing online education, as well as other continuous professional development offers relating to Fourth Industrial Revolution-related technology.

New Zealand's statutory consultation process with schools

The Minister of Education has formalised the consultation processes between the government and school leaders through the statutory consultation process under the Education and Training Act of 2020. Under the policy, the government is required to discuss policy proposals that may affect local school communities. The consultation allows the school community, including its leaders, to provide feedback on the proposed policies that affect the school community, solicit additional information they may need from the ministry, and engage in a dialogue about the school community's needs and concerns.

Singapore's Academy of Singapore Teachers

Singapore's Academy of Singapore Teachers was set up by the country's Ministry of Education to advance the professional development of teaching staff in general education schools throughout Singapore. The academy has established dedicated teacher academies and language institutes, where teachers can build communities of practice and come together to learn from one another about the subjects they teach, as well as pedagogical knowledge. Additionally, teachers can access professional counselling support via the Academy of Singapore Teachers' iCare initiative.

United Kingdom's financial incentives for small schools

With an aim to provide over 500 000 teacher training opportunities, the government has made high-quality, government-accredited training programmes free across the country. In addition to removing financial barriers that teachers may face, an incentive has also been put in place to encourage uptake among smaller schools. A grant payment of GBP 200 is offered to every teacher (in schools with 1-600 pupils) who participates in the training programme.

Source: Academy of Singapore Teachers (2019[126]), *Homepage*, https://academyofsingaporeteachers.moe.edu.sg; OECD (2021[69]), *OECD Skills Strategy Southeast Asia Policy Questionnaire*; New Zealand Ministry of Education (2022[127]), *Having a say – statutory consultations about schools*, www.education.govt.nz/school/new-zealands-network-of-schools/have/; UK Department of Education (2022[128]), *Teacher training to ensure excellent teachers in every classroom*, www.gov.uk/government/news/teacher-training-to-ensure-excellent-teachers-in-every-classroom; Victoria Department of Education and Training (2022[129]), *Consultation with School-Based Staff*, www2.education.vic.gov.au/pal/consultation-school-based-staff/policy-and-guidelines.

Recommendations for improving the quality of human resources in schools

- **Invest in professional development opportunities for teachers to equip them with better pedagogical skills**. Provide schools with resources to train teachers in differentiated instructional techniques that would help them better respond to the diverse needs of learners and manage large classroom sizes (e.g. peer-learning techniques, differentiated instruction). Ensure that digital literacy training opportunities are also available to equip teachers with the skills they need to use ICT in the classroom. It is possible to offer such upskilling opportunities outside of schools through external training institutes that provide free or subsidised course offerings that teachers could easily access and provide incentives to encourage increased uptake. Moreover, make sure that counselling support services are available to ensure the well-being of teachers and school staff, especially during times of disruptions and abrupt changes, to help them cope with increased challenges in the classroom.
- **Consult regularly with school leaders about their various needs in terms of resources and upskilling.** In line with increased responsibilities for school administration and budget management, provide opportunities for school leaders to upskill in terms of financial management, strategic thinking, instructional leadership and stakeholder engagement, and other skills that would allow them to carry out their roles effectively. Provide concrete avenues (e.g. statutory consultation processes) for government officials to regularly consult with school leaders and identify the kinds of support that could be provided through national and local policies, such as increased funding for classroom facilities and educational materials. Ensure that such consultations with school leaders reflect the broader interests of the school community by setting up formal consultation mechanisms between them and the school staff, allowing school leaders to transmit detailed information on the various administrative needs of schools.

Strengthening funding and student assessment in schools to improve equity

Ensuring the sustainable and well-targeted funding and monitoring of schools is central to achieving equitable educational outcomes. Around the world, there is evidence that increasing per-pupil expenditure up to a certain level is linked with improving student learning outcomes. As shown in Figure 3.17, there is a positive relationship between investment in education and average PISA reading performance. Except for Singapore, all participating Southeast Asian countries spend below this threshold and could benefit from increased investments in education. For instance, out of all PISA participating countries, the Philippines, Indonesia and Thailand have some of the lowest expenditures per student. They have also obtained some of the lowest reading scores. However, this relationship could be observed only to a threshold of USD 50 000 in cumulative expenditure per student, after which the level of spending no longer strongly influences average PISA reading performance. For instance, while Brunei Darussalam spends nearly double the amount Malaysia spends, students in Malaysia have a slightly better performance.

The level of spending and the allocation of funding are both equally important in achieving equity in skills development. Funding is necessary to support schooling resources that cost money, such as instructional materials and competitive teacher compensation that allows schools to recruit and retain high-quality teaching staff, among others (Baker, 2017[130]). This is especially important in disadvantaged areas or schools, which often lack adequate infrastructure and educational materials, raising considerable equity concerns (Lafortune, Rothstein and Schanzenbach, 2018[131]; Jackson, Johnson and Persico, 2014[132]; OECD, 2017[133]). Policy decisions on school budgets are best guided by information gathered through strong monitoring systems in schools that show differences in student outcomes and signal equity concerns (OECD, 2017[133]). Given these, this policy direction explores two areas for strengthening the administration of schools towards equitable educational goals in Southeast Asia: 1) improving financial management skills among school leaders and personnel; and 2) addressing technical and human resource constraints in educational monitoring systems.

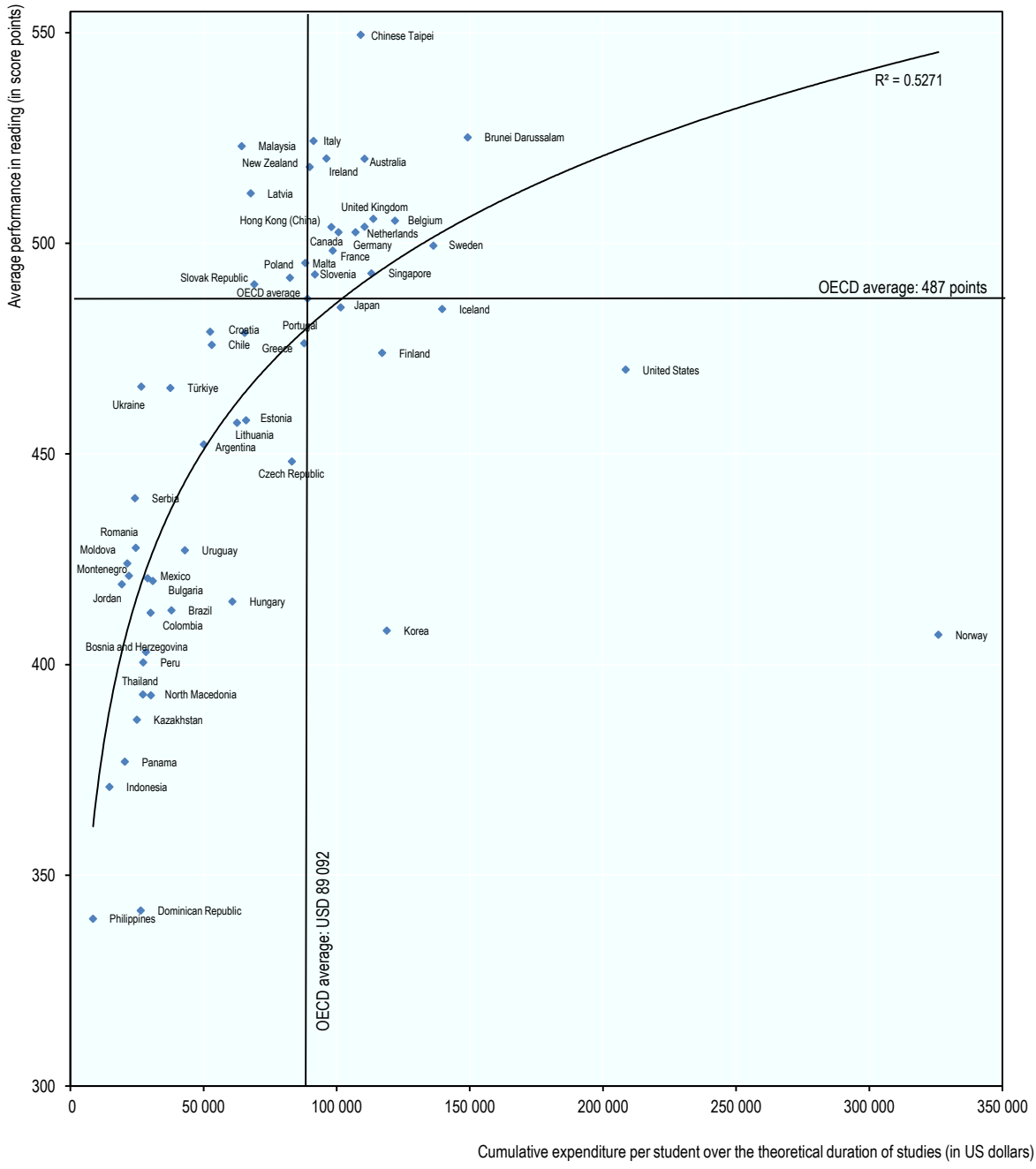
Improving financial management skills among school leaders and personnel

Funding per level of education varies greatly across Southeast Asian countries but is generally lower than that of comparison countries from the OECD. On average, countries in the region spend the most on secondary education (16.7%) and the least on pre-primary education (6.5%) as a percentage of GDP per capita (Figure 3.18). At all levels of education, Southeast Asian countries, on average, have lower levels of funding than the OECD. While some countries, such as Viet Nam (22.7%), have higher levels of government funding for pre-primary education than comparison countries in the OECD, the generally low level of financial commitment to ECEC can have severe implications for inequities in student outcomes. Education is a self-reinforcing process, with the development of foundation skills and knowledge early in life strongly contributing to the successful acquisition of higher-level skills at later stages of education (OECD, 2017[133]). Countries that consistently have extremely low levels of government funding at the pre-primary, primary and secondary levels include Brunei Darussalam, Cambodia, Indonesia and Myanmar.

While overall levels of educational financing matter, mechanisms to allocate funding are equally important, especially for Southeast Asian countries with limited resources. A minimum level of spending is necessary to ensure the provision of high-quality infrastructure, learning materials and teachers. However, the overall level of funding is not the strongest factor that accounts for the success of high-performing schools (OECD, 2017[133]). Evidence shows that beyond a certain level of investment, what matters is how effectively funding is allocated and reaches schools that need it the most, such as those with large student populations from disadvantaged backgrounds. Such strategic targeting of resources can help make the most significant difference in terms of reducing gaps in educational outcomes (OECD, 2021[134]).

Figure 3.17. Relationship between educational funding and PISA reading performance, 2018

Cumulative expenditure per student in US dollars, versus average performance in reading in score points

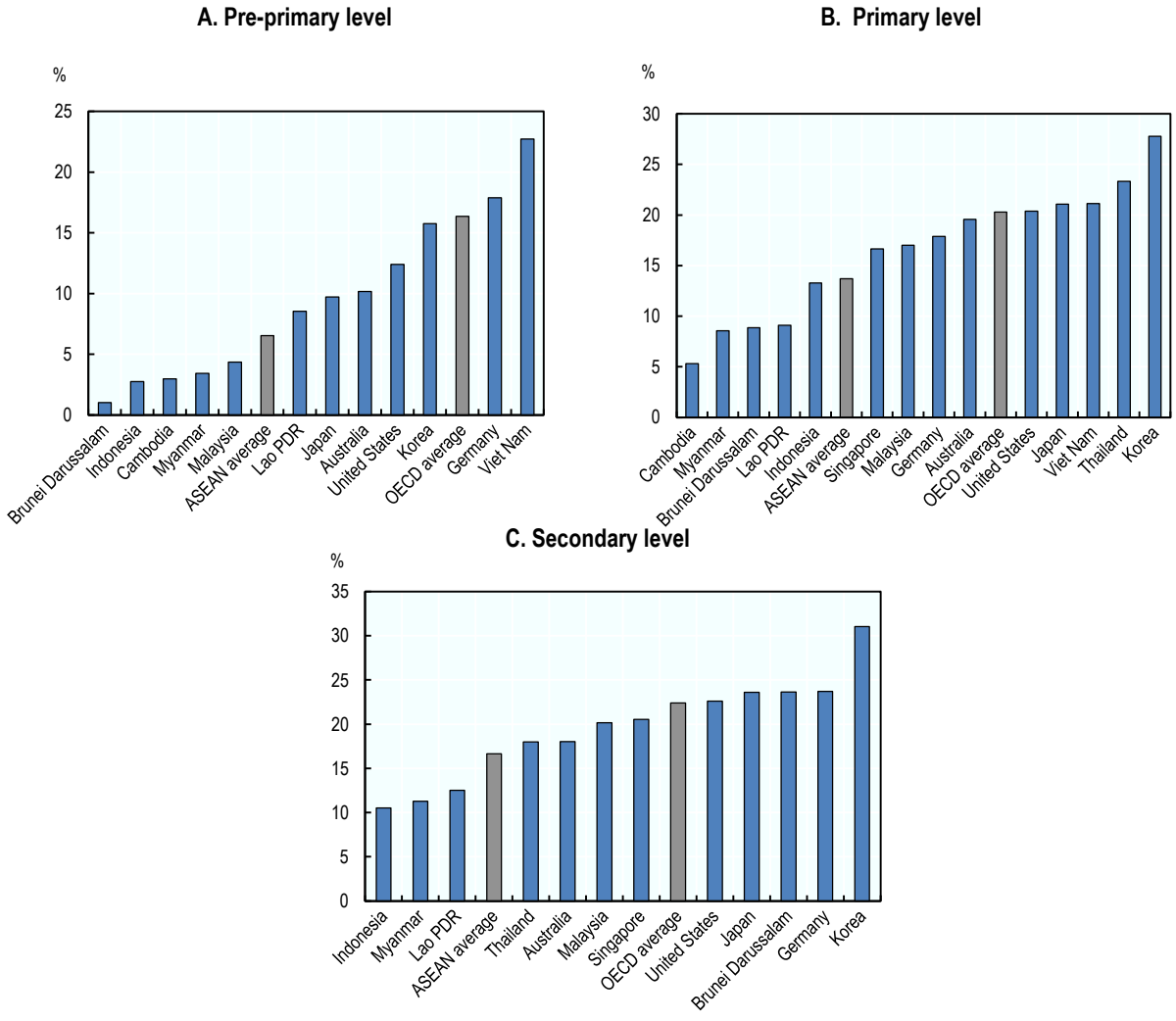


Source: OECD (2018[135]), *PISA 2018 results*, www.oecd.org/pisa/publications/pisa-2018-results.htm; OECD (2021[8]), *Towards a Skills Strategy for Southeast Asia*, https://doi.org/10.1787/6db0907f-en.

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Figure 3.18. Initial government funding per level of education in Southeast Asia and selected OECD countries, latest available year

Percentage of GDP per capita



Note: "Initial" indicates the original source of the funding, in this case, the national government. Using initial funding as an indicator allows analysts to see who paid for the resources and is better aligned with the National Education Accounts methodology. Due to a lack of data, the latest available year was used for the following countries: Thailand and Viet Nam (2013); Cambodia, Indonesia at the pre-primary level and Lao PDR (2014); Indonesia at the primary and secondary levels (2015); Brunei Darussalam and OECD average (2016); Myanmar at the pre-primary level (2017); Australia, Germany, Japan, Korea, Myanmar at the primary and secondary levels, and United States (2018); Singapore (2019); and Malaysia (2020).

Source: UNESCO (2022[18]), *SDG4 Indicator Dashboard*, http://sdg4-data.uis.unesco.org/; UNESCO (2020[136]), *Education expenditure per student by level of education and source of funding*, http://uis.unesco.org/en/glossary-term/education-expenditure-student-level-education-and-source-funding.

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In Southeast Asia, there are various mechanisms to transfer funds from the national level directly to schools in a more equitable manner. In most countries, the national government plays the largest role in educational financing. However, several funding mechanisms have been created to facilitate the transfer of resources from the national level to subnational levels of government and schools. For instance, school grants, which national governments provide directly to schools to manage their own operations, were nearly non-existent

in Southeast Asia in the early 2000s. However, in more recent years, they have begun to represent a significant proportion of national education budgets in some countries – as high as 23% in Indonesia and 17% in Thailand in 2013 (UNESCO, 2013[137]; Lugaz and De Grauwe, 2016[138]). Additionally, school-based management grants have been expanded in some countries, such as the Philippines, where additional funds are given to eligible disadvantaged public primary and secondary schools to augment the resources provided through the national education budget. Individual schools may use these resources to respond to specific education needs, such as increasing school attendance, improving student participation and boosting completion rates (Philippines Department of Education, 2015[139]; 2015[140]). Throughout the region, financial management is now one of the most decentralised administrative functions in the education system, with subnational levels of government and school units in many countries being allowed not only to propose their own budget but also to generate their own funds to augment deficits from the national government (SEAMEO INNOTECH, 2012[121]).

Despite increases in overall levels of funding and autonomy over expenditures, schools across Southeast Asian countries face various challenges in managing educational funding. While decentralisation has helped improve the allocation of funding and bring resources closer to schools, results have been mixed, with many countries in the region facing difficulties in implementation. For instance, schools in Cambodia, Indonesia, Lao PDR, and Viet Nam have reported challenges in having limited capacity among smaller units of the educational system, including schools, to manage fiscal matters. There have been difficulties with defining roles and responsibilities, as well as with following accounting procedures when managing educational budgets. This suggests the need for school leaders and staff in Southeast Asia to strengthen their financial management skills in budgeting, procurement, internal controls and reporting, among many others. Differences in administrative capacity across schools risk further increasing funding inequalities and exacerbating issues in educational equity (UNESCO, 2014[14]). In OECD countries with similar human resource capacity challenges, such as in the United States (Texas), government-run initiatives have been implemented to upskill school personnel in financial management and programme administration, among other functions (Box 3.5).

Addressing technical and human resource constraints in educational monitoring systems

Student assessments are important in identifying learners' needs and designing skills policies. While it is important to mobilise financial resources, it is equally crucial to match educational funding to the needs of learners, as identified through student assessment results. Student assessment data, ideally collected and managed in integrated skills information systems (see Chapter 5), can inform decisions about targeting learning support more effectively, steering limited resources towards the needs of disadvantaged groups and prioritising school management decisions towards equity concerns (OECD, 2017[133]). Countries in Southeast Asia conduct student assessments at multiple levels: 1) at the school level to inform students' progress in the classroom on a regular basis; 2) at the national level to inform long-term skills policy; and 3) at the international level, to obtain cross-country comparative data on student outcomes.

At the school level, formative assessments in Southeast Asia are conducted primarily to monitor students' learning performance and improve teaching quality. School teachers carry out formative assessments regularly to identify their students' learning weaknesses and respond accordingly. Across Southeast Asian countries, a wide variety of skills and knowledge areas are measured by school-based assessments (Table 3.4). The specific topics of assessment differ from country to country, but many of them cover common topics, such as languages (both local and foreign, such as English), mathematics, sciences, social studies, physical education, religion and life skills.

Table 3.4. Skills and knowledge areas measured by school-based assessment exercises at the primary and secondary levels

Country name	Skills and knowledge areas	Country name	Skills and knowledge areas
Brunei Darussalam	Islamic religious knowledge Languages (English and Malay) Mathematics and science Nationhood education	**Myanmar**	Languages (English and Burmese) Mathematics Sciences Social studies
Cambodia	Languages (Khmer) Life skills Mathematics Physical and health education Sciences Social studies	**Philippines**	Geography, history, and civics Languages (English and Filipino) Mathematics Sciences
Indonesia	Aesthetics and arts Citizenship or civics Religion and noble character Personality Physical education, sports and health Science and technology	**Singapore**	Languages (English and mother tongue) Mathematics Sciences
Lao PDR	Arts, drawing and handicraft Languages (Lao and foreign) Lao literature Mathematics Physical education Sciences (Natural sciences, biology, physics and chemistry) Social sciences (history, geography and civics) Technical studies	**Thailand**	Art Health and physical education Languages (Thai and foreign) Mathematics Occupations and technology Religion and culture Sciences Social studies
Malaysia	Geography History Islamic and religious studies Languages (English, Malay, Chinese, Tamil) Life skills Mathematics Moral education Sciences	**Viet Nam**	Drawing and painting History and geography Informatics and technology Languages (English and Vietnamese) Mathematics Morality Music Nature and society Writing

Source: SEAMEO-INNOTECH (2015[141]), *Assessment Systems in Southeast Asia: Models, Successes and Challenges*, www.seameo-innotech.org/wp-content/uploads/2020/04/SIREP_Assessment-151021.pdf; UNESCO (2011[142]), *World Data on Education: Lao People's Democratic Republic*, www.ibe.unesco.org/fileadmin/user_upload/Publications/WDE/2010/pdf-versions/Lao_PDR.pdf.

At the national level, Southeast Asian countries conduct student assessments to inform skills development policies over the long term. The results of these assessments are used to inform system-level decisions on a wide variety of policy areas, such as strengthening the quality assurance of the overall educational system, designing curriculum reforms as needed and determining the extent to which educational policy objectives have been achieved (SEAMEO INNOTECH, 2015[141]). While the educational priorities of individual countries are diverse, their assessment systems usually cover common elements relevant to the school or classroom level, such as measuring the achievement of each learner, measuring the quality and effectiveness of teaching, assessing the readiness of students for later stages of education and appropriately placing students into additional support programmes. Additionally, Southeast Asian countries also conduct high-stake summative assessments, which aim to facilitate the exit from one level of education and entry to a higher level, such as from primary to secondary and/or secondary to tertiary education. In most cases, they are paper and pencil tests that are administered to schools by specialised

government agencies and testing or examination boards (SEAMEO INNOTECH, 2015[141]; UNESCO, 2020[143]).

At the international level, Southeast Asian countries participate in cross-country surveys to obtain comparable data on their performance on key skills indicators. The most common international assessments that countries in the region participate in include PISA[4] and surveys such as the Catalogue of Learning Assessment 2.0, the Literacy and Educational Attainment Survey, the Survey of Formal Education, Trends in International Mathematics and Science Study (TIMMS) and the Progress in International Reading Literacy Study (PIRLS). Furthermore, the Southeast Asia Primary Learning Metrics (SEA-PLM) is a regional learning assessment programme designed to generate comparative data on learning outcomes at the primary level, helping improve system- and school-level policies. Six countries participated in the first round of data collection in 2019, namely Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines, and Viet Nam (Box 3.5) (SEA-PLM, 2022[144]). Several countries in the region also participate in large-scale assessment programmes at the international level, and there is a trend towards increased participation among more and more countries in the region. Table 5.9 in Chapter 5 summarises Southeast Asian countries' participation in various international surveys, which measure various aspects of skills development over the life course.

While assessments have been instrumental in helping Southeast Asian countries monitor students' progress, several challenges remain. Many countries in the region have reported challenges at all stages of the data collection process. For instance, ensuring the credibility and integrity of data collection has been a key concern in some areas, prompting schools to train teachers on how to more effectively detect cheating and conduct inventories of testing materials, as well as install security equipment to monitor the administration of tests (SEAMEO INNOTECH, 2015[141]). Moreover, many countries have also cited challenges in analysing results of assessment exercises – especially those conducted at larger scales – due to a lack of human resources, technical capacity and data-related infrastructure. In some cases, a lack of financial resources has also impeded the administration of tests and the analysis of large amounts of data. These resource constraints affect not only the quality of the analysis of results but also the ability of school leaders and policy makers to collaborate and use these data to inform skills development policies. (UNESCO, 2020[143]). It is important to address these resource constraints and provide platforms for school leaders and local stakeholders to transform student assessment results into concrete educational reforms. Best practices in overcoming these challenges and effectively using student assessments for policy, such as in Belgium (Flanders), could be widely shared across Southeast Asian countries (Box 3.5).

Box 3.5. Country examples relative to strengthening funding and student assessment in schools

Belgium (Flanders)'s National Assessment Programme

The National Assessment Programme is conducted annually to gather information on student achievement. After the administration of the tests and the processing of results, consultation meetings are organised by the Ministry of Education and Training to bring together key stakeholders, such as school support bodies, the Flemish Inspectorate of Education, initial teacher education institutions, and researchers, among others. Stakeholders are expected to engage in concrete steps, such as updating attainment targets, adjusting school curricula, refining teaching materials, improving teacher education, and introducing new interventions to support students in need.

Myanmar's participation in the Southeast Asia Primary Learning Metrics (SEA-PLM)

In 2019, Myanmar was the first country in Southeast Asia to administer the SEA-PLM after five years of preparation work. During this phase, the national project team participated in multiple capacity-building workshops organised by international development partners to improve the country's ability to manage large-scale learning assessments. Field trial assessments were also conducted in schools

before the first official standardised test was administered. The SEA-PLM test aims to measure learning outcomes in reading, mathematics, writing, and global citizenship and administers background surveys to principals, teachers and parents to gain a fuller picture of the various factors that contribute to students' performance. The results of the SEA-PLM aim to inform areas for policy intervention in Myanmar.

Texas Education Agency's guidance handbooks for funding grantees

The Texas Education Agency offers financial grants to districts and charter schools across the state through a consolidated online portal. In addition to grants, the agency also makes financial training support available to grant recipients to ensure the proper use of funds. Through handbooks uploaded on the agency's website, grant providers disseminate detailed guidance on various aspects of financial management, such as budgeting, budget scheduling, procurement, programme administration, internal controls and reporting, among others, which school personnel are free to consult. Additionally, 20 regional education service centres also provide training support to grantees.

Source: OECD (2013[145]), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, https://doi.org/10.1787/9789264190658-en; SEA-PLM (2019[146]), *SEA-PLM 2019 begins in Myanmar*, www.seaplm.org/index.php?option=com_k2&view=item&id=1:sea-plm-2019-begins-in-myanmar&lang=en; Texas Education Agency (2002[147]), *Training and other resources*, https://tea.texas.gov/finance-and-grants/grants/training-and-other-resources.

Recommendations for strengthening funding and student assessment in schools to improve equity

- **Improve the financial management skills of school leaders and personnel.** Accompany the administration of school grants and other educational funding with training opportunities that equip school leaders and personnel with improved skills in various aspects of financial management in schools, such as budget preparation, budget execution, accounting and monitoring, and reporting. Make resources (e.g. handbooks on financial management) on these topics easily accessible to school personnel, such as through distributing physical materials to schools or through a consolidated and user-friendly online portal. Ensure that these resources are updated often and that they are specifically adapted to the various funding strategies used by national governments to allocate funding to sub-governments or schools.
- **Establish avenues to facilitate collaboration among stakeholders on improving student assessment systems.** To effectively improve the administration of student assessments and use their results, provide fora for stakeholders from the school system, such as teachers and school leaders, to openly discuss difficulties they face with the administration of tests and the processing of data, including lack of security, insufficient technical capacity to interpret results, or inadequate infrastructure, and jointly agree on concrete steps on how to address these challenges. Provide opportunities for policy makers to meet with researchers and analysts and interpret results from student assessment exercises, as well as for local school representatives to provide in-depth insights into classroom-level challenges that may help explain these results. Furthermore, regularly examine the ability of student assessment exercises to provide credible insight into the needs of students and schools, as well as their relevance to national educational objectives. At the regional level, the sharing of best practices in designing, implementing and using student assessments could also be expanded.

Opportunity 3: Developing skills that matter

Ensuring the relevance of skills development offers is central to strengthening the ability of Southeast Asian countries to adapt successfully to megatrends and COVID-19. The world of work is constantly changing as megatrends transform the global economy and ASEAN member states' roles in it,

with about 6.6 million workers throughout the region finding themselves in jobs that are made redundant due to technological advancements over the next decade (CISCO and Oxford Economics, 2018[148]; ASEAN, 2021[85]). Additionally, COVID-19 has also accelerated the demand for certain skills in labour markets and in society, such as digital skills, but also a wide range of cognitive and socio-emotional skills that would allow individuals to analyse and critically think about information in an increasingly digital world of work (Cunningham et al., 2022[149]). These rapid changes require Southeast Asian countries to address their workforce's need for updated and relevant educational offers and increased access to upskilling and reskilling in the workplace (World Economic Forum, 2019[41]).

Given the importance of developing skills that matter in Southeast Asia, this opportunity presents two policy directions. The first policy direction pays particular attention to improving the alignment between skills development offers and labour market demand, specifically through ensuring the relevance of educational curricula and expanding access to work-based learning. The second policy direction discusses opportunities for Southeast Asian countries to steer the skills choices of individuals towards those that are in demand in the labour market, such as through improvements in career guidance services and the adoption of a wide range of policy instruments to incentivise people to pursue educational opportunities in areas of skills shortage.

Improving the alignment between skills development offers and labour market demand

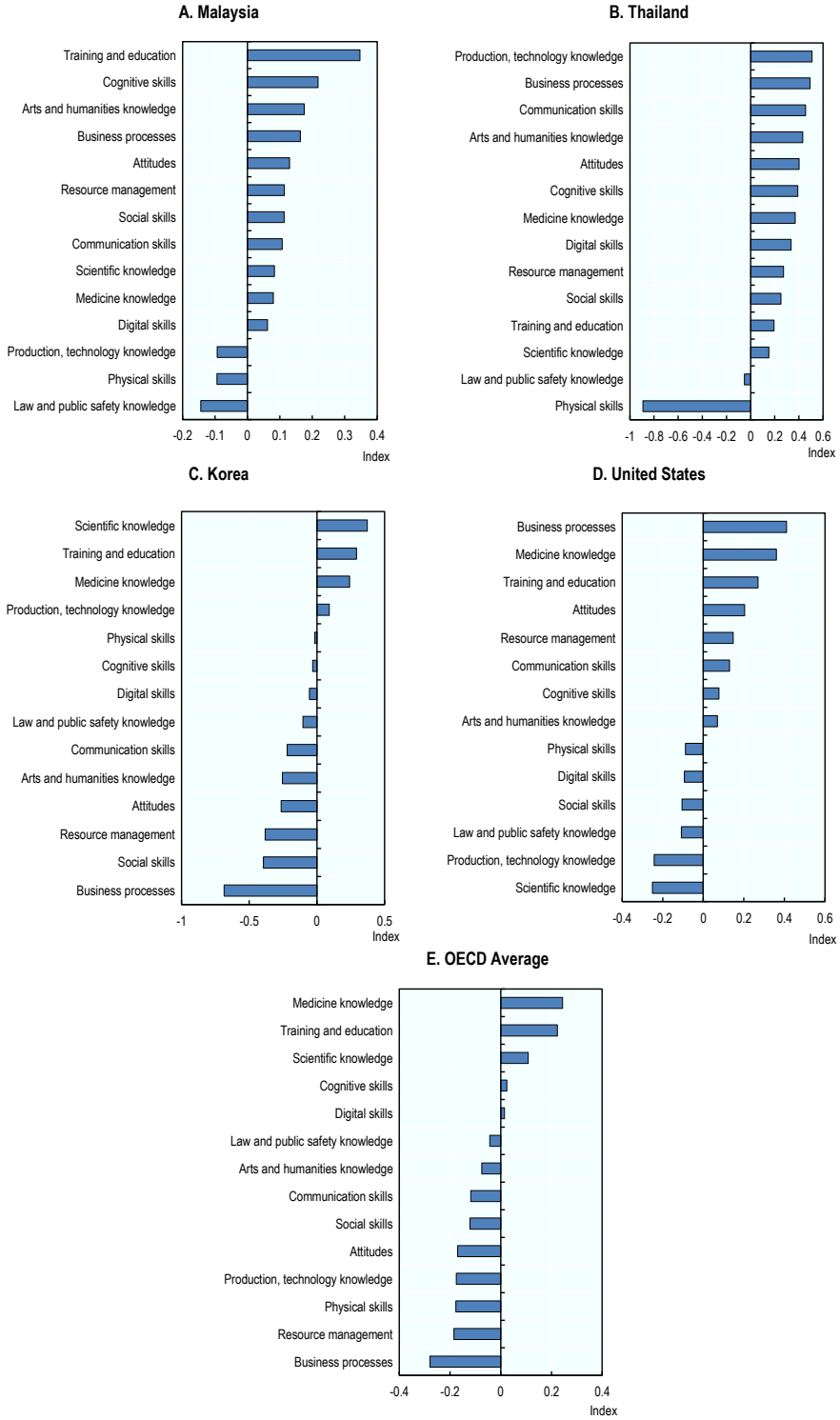
Developing relevant skills over the life course requires an alignment between educational opportunities and the needs of the labour market. This alignment entails that education systems are able to produce the right number of people with the right set of skills at the right time (Van Noy and Cleary, 2017[150]). In doing so, skills mismatches could be reduced, helping address the consequences of over- or under-skilling, such as wage penalties, lower job satisfaction and lower productivity. Ensuring the alignment between educational curricula and labour market demand is thus of utmost importance in skills development beyond compulsory education, such as TVET, tertiary education and adult learning, which play a central role in developing practical, higher-level skills and specialised knowledge that are needed in the workplace (Musset, 2019[79]). To adequately prepare all Southeast Asian learners for the world of work, this policy direction explores two areas: 1) making TVET and tertiary education curricula more relevant to labour market needs; and 2) expanding the provision of on-the-job training among workers in smaller firms and in the informal economy.

Making TVET and tertiary education curricula more relevant to labour market needs

As Southeast Asia's labour market evolves, many workers will need to upgrade their current skill sets, as every sector will undergo changes in line with the development of new technologies. Data from the *OECD Skills for Jobs* database indicate that participating Southeast Asian countries have different skilling shortages that need to be addressed. For example, training and education skills, cognitive skills, and arts and humanities knowledge are areas of greatest skills shortage in Malaysia. In Thailand, production and technology knowledge, business processes and communication skills are most needed (Figure 3.19). Additionally, other sources have estimated that 6.6 million jobs across the ASEAN region will be rendered redundant over the next decade, many involving elementary workers, skilled agricultural workers, service and sales workers, craft and related trades workers, and plant workers and machine operators. Technological displacement of jobs is expected to occur the most in agriculture and manufacturing, which are sizeable employers in countries in the region, highlighting the need to help displaced workers find new employment opportunities. These new jobs will require new kinds of skills and knowledge from their workers, highlighting the need for increased access to education and training (CISCO and Oxford Economics, 2018[148]).

Figure 3.19. Skills needs in Southeast Asia and selected OECD countries, 2019

Index of skills surpluses and shortages, arranged from the highest to lowest level of skills shortage in each country



Note: Positive values indicate skill shortages, while negative values indicate skill surpluses. The larger the absolute value, the larger the imbalance. The value of 1 represents the largest shortage, and -1 the largest surplus across OECD countries, skill categories and years.
Source: OECD (2022[151]), *Skills for Jobs Database: Skill needs by country*, https://stats.oecd.org/Index.aspx?DataSetCode=S4J2022.

StatLink https://stat.link/kc2pun

TVET is one of the principal ways individuals in Southeast Asia develop industry-relevant and transversal skills, boosting employability amidst rapid labour market changes. A key feature of TVET is work-based learning, an educational approach that provides students with real-life working experience and employment-related competencies (UNESCO, 2021[152]). Through the many types of work-based learning, such as internships and apprenticeships, students can use valuable, industry-specific equipment that might not otherwise be available in schools and gain first-hand instruction from industry experts and skilled mentors (Kis, 2016[153]). Furthermore, exposure to various workplace scenarios also equips learners with an opportunity to develop a wide variety of transversal skills (e.g. negotiation, persuasion, service orientation, social perceptiveness), which are expected to rise the most in terms of demand in Southeast Asia (UNESCO, 2015[154]).

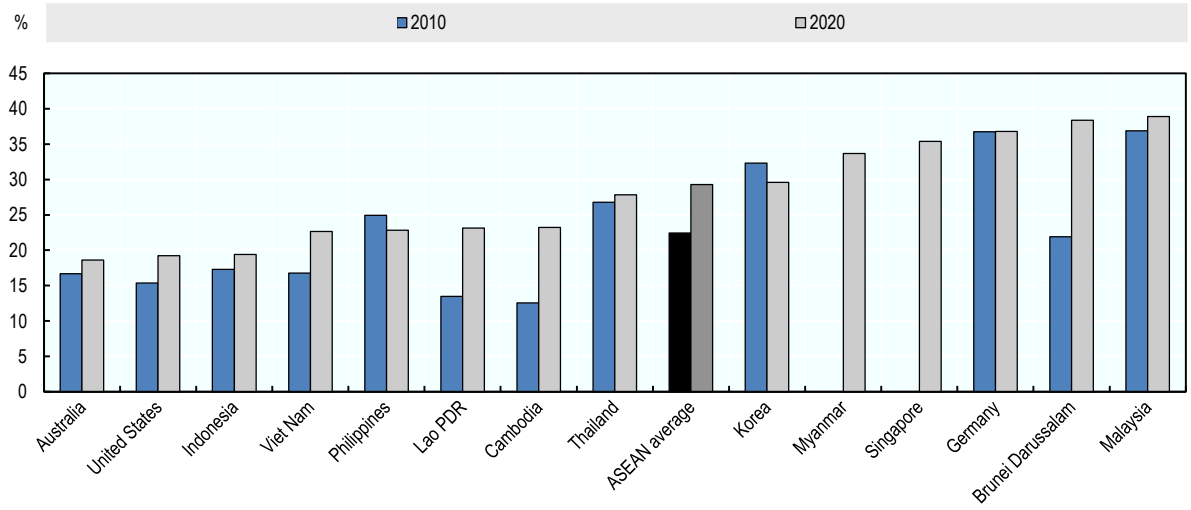
Developing both industry-relevant and transversal skills requires strengthening work-based learning in TVET in Southeast Asia through many ways. For instance, this could be done by providing employers with incentives when they offer skills development opportunities, which help shoulder the cost of hiring interns and apprentices, especially in smaller firms with less financial capacity (e.g. France in Box 3.6). Involving industry in designing the content of TVET programmes is also an equally effective way to ensure the relevance of work-based learning opportunities, as employers and business experts have valuable first-hand insights into the current needs of the labour market (e.g. Brazil in Box 3.6). Moreover, close co-ordination with industry leaders on the certification of skills upon students' graduation ensures that the content of work-based learning programmes is in line with the standards and expectations of employers and is responsive to industry's needs (e.g. Colorado, the United States, in Box 3.6).

In addition to TVET, tertiary education also has a crucial role to play in ensuring the development of relevant, higher-level skills needed for countries' socio-economic development. Through tertiary education, learners can develop skills relevant to research and development (R&D), innovation and entrepreneurship, which strongly contribute to countries' competitiveness and economic development. These constitute strong rationales for countries to boost the uptake of tertiary programmes related to STEM subjects, especially in a world of rapid technological change (Wilson, 2013[155]). The percentage of tertiary graduates from STEM programmes has risen in nearly all Southeast Asian countries from 2010 to 2020 by an average of 6.8 percentage points (Figure 3.20). Malaysia (38.9%) and Brunei Darussalam (38.4%) lead the region in terms of producing STEM graduates, performing better than comparison countries from the OECD, such as Germany (36.8%) and Korea (29.6%). When accompanied by strong skills use policies that foster innovation and entrepreneurship, this presents valuable opportunities for these Southeast countries to leverage their stock of STEM graduates to foster new technologies and socio-economic development (see Chapter 4).

Regular review of tertiary education programmes in partnership with relevant government agencies and industry representatives is needed to ensure the relevance of the skills of the Southeast Asian workforce. A systematic attempt to regularly review the content and methods of tertiary education can help ensure that students are equipped with the right skills and are prepared to thrive in the future world of work. Redesigning educational curricula is a complex process – often involving the conduct of labour market forecasts (see Chapter 5), identification of educational goals at the country level and extensive co-ordination among multiple stakeholders, both inside and outside of government – but it is nonetheless an important policy task (OECD, 2020[156]; Wilson, 2013[155]). It is important to ensure that there are sufficient human resources to support such collaboration. Some countries in Southeast Asia (e.g. Malaysia, the Philippines) and beyond the region (e.g. Brazil, the United States) have instituted such multi-stakeholder policy practices, involving industry representatives in the design of educational curricula and the certification of skills (Box 3.6). Moreover, it is equally important to ensure that there are incentives in place to encourage institutions to focus on providing skills development offers at the tertiary level, especially in areas of skills shortage (see below) (OECD, 2020[157]).

Figure 3.20. Tertiary graduates in science, technology, engineering, and mathematics programmes in Southeast Asia and selected OECD countries, 2010 and 2020

Percentage of graduates



Note: If figures for 2010 or 2020 were not available, those from the closest year were used.
Source: UNESCO Institute for Statistics (2019[158]), *Other policy-relevant indicators*, http://data.uis.unesco.org/.

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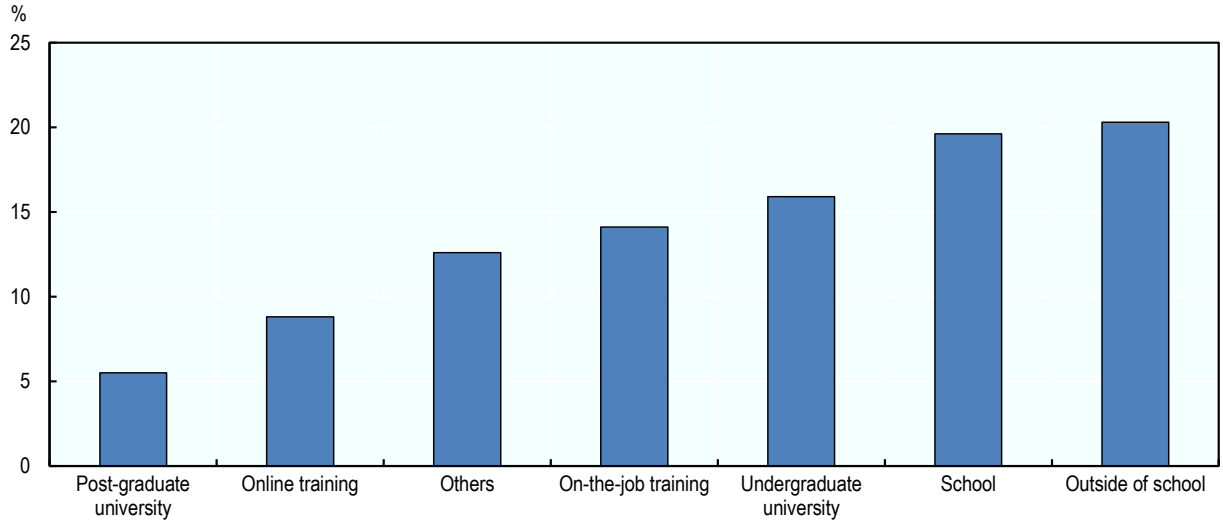
Expanding the provision of on-the-job training among workers in smaller firms and in the informal economy

In addition to ensuring the relevance of educational offers, on-the-job training is an equally important way for Southeast Asia's workforce to develop industry-relevant skills over the life course. On-the-job training contributes to upgrading individuals' skill sets, which is key to addressing the labour market's current and future needs (Hobbs, 2021[159]; Musset, 2019[79]). At present, there is widespread recognition among individuals in Southeast Asia of the value of on-the-job training. Most workers in the region are more likely to report that they were able to acquire the most essential workplace skills outside of school than in it, and on-the-job training is one of the most common methods by which these skills are developed (Figure 3.21). Across Southeast Asia, 14.1% of workers reported acquiring essential workplace skills through on-the-job training.

Countries in Southeast Asia have long recognised the value of on-the-job training through the adoption of various policies. For instance, in the Philippines, the Continuing Professional Development Act of 2016 was passed to improve the competencies of employees and equip them with new skills in line with the developments or advancements in their field (Senate of the Philippines, 2016[160]). Moreover, in Thailand, the Skill Development Promotion Act outlines the responsibilities of employers to provide training for their employees and specifies the specific conditions under which such training opportunities must be offered (e.g. timing of training as a function of the employee's working schedule) (Thailand Department of Skill Development, 2002[161]).

Figure 3.21. Acquisition of essential workplace skills among young workers aged 15-35 years old in Southeast Asia, 2018

Percentage of respondents (employees in companies, excluding entrepreneurs) in Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam, by source



Note: "Undergraduate university" often refers to a bachelor's degree (ISCED Level 6), while "post-graduate university" refers to higher levels of degree after the completion of a bachelor's degree (e.g. master's degrees at ISCED Level 7 and doctoral degrees at ISCED Level 8).
Source: World Economic Forum (2019[41]), *ASEAN Youth: Technology, Skills and the Future of Work*, www3.weforum.org/docs/WEF_ASEAN_Youth_Survey_2019_Report.pdf.

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However, the provision of on-the-job training in Southeast Asia remains highly unequal depending on various factors, such as firm size. On average, 48.8% of workers in large firms have access to non-formal training in the workplace, in comparison to only 36.1% of medium-sized firms and small-sized firms (Figure 3.6). Individuals working in family businesses also have limited opportunities to develop new skills through work-based learning (World Bank, 2020[34]). Small firms face a wide range of barriers to providing high-quality training to their workers, including financial constraints, lack of human resources, inadequate infrastructure and resources for training, poor insight into training needs, and the absence of opportunities for career progression that would encourage the uptake of reskilling and upskilling programmes among workers (Martinez-Fernandez and Choi, 2012[162]; Omar, Arokiasamy and Ismail, 2009[163]).

There are many ways by which Southeast Asian governments can encourage the expansion of skills development offers, especially for workers in small- and medium-sized enterprises (SMEs). A wide variety of opportunities are already available in the region. One of them is the ASEAN SME Academy, an innovative private-sector-led initiative that provides training materials to SMEs on a wide variety of skills topics, such as marketing and business management, finance, legal management, logistics and IT (ASEAN, 2022[164]). In other countries, such as France, various policy support options are also being offered, such as training networks, tax-based measures and training vouchers (Box 3.6).

Additionally, workers in Southeast Asia's widespread informal economy do not have access to high-quality on-the-job training opportunities in the workplace. This puts informal workers in an even more precarious situation, as many of them already have lower levels of skills and education, to begin with. With their lack of access to employer-sponsored on-the-job training, there is a risk of failing to develop newer and higher levels of skills that could boost their employability and help them adapt to changes in the labour market. Providing informal workers with access to skills development can provide them with new skills and

qualifications that can not only boost their productivity but also help them transition towards formal employment (ILO, 2019[76]). Nonetheless, despite the precarious nature of their work, many workers in the informal economy are able to develop skills on the job, for instance, through informal apprenticeships, experiential learning or self-teaching (GIZ, 2020[165]; Palmer, 2020[166]).

Box 3.6. Country examples relevant to improving the alignment between skills development offers and labour market demand

Brazil's engagement with the private sector for curriculum design through its National Industrial Apprenticeship Service (SENAI)

Employers from Brazil's private sector play a lead role in conducting skills forecasts and planning training activities, ensuring a closer alignment between the development of skills and the needs of employers. The SENAI (Serviço Nacional de Aprendizagem, or the National Industrial Apprenticeship Service), a network of not-for-profit professional schools at the secondary level established and maintained by the Brazilian Confederation of Industry, collaborates with a wide range of stakeholders, including businesses and industry experts to forecast labour market needs over a five-year period. The forecast involves looking at trends in technology, emerging occupations, new ways of organising work and educational gaps, which feed into the planning of training activities and curriculum design. SENAI's forecast exercises have been applied to various industries in Brazil, including construction, food, footwear, heavy equipment, industrial automation, petrochemicals, shipbuilding, ship repairing, telecommunications and textiles.

Colorado Department of Education's industry-led certification of skills

In Colorado (United States), partners from industry play a key role in the certification of skills as an option to demonstrate academic knowledge and skill mastery upon graduation. Through the Industry Certification Governing Body, industry can provide specifications of the skills and knowledge that need to be assessed when individuals seek to attain the certification. The body periodically reviews the competencies to maintain relevance to the industry's needs.

France tax incentives for SMEs to offer skills development

Since 1971, all French enterprises with employees have been required to allot to vocational training a percentage of the previous year's total gross wages paid. In addition, the government has developed several tax incentives to promote education and training in SMEs. For instance, enterprises with fewer than 11 employees may be totally or partially exempt from (or may be reimbursed for) paying social contributions for their apprentices, which the state covers.

Malaysia's university-industry advisory panels

Following the Ministry of Higher Education's recommendation to universities to engage directly with industry representatives under the Malaysia Education Plan 2013-2025, universities across Malaysia have appointed university-industry advisory panels (UIAPs) to provide input into their curriculum. UIAPs are composed of experts from top businesses and are matched with relevant university programmes, where they meet with academic staff and provide guidance on how to reflect the industry's latest trends and skilling needs in educational content. In some cases, UIAPs also provide students with internship opportunities.

The Philippines' Technical Education and Skills Development Authority (TESDA)'s Implementing Guidelines on the Establishment of Institutional Arrangements with Industry Boards or Industry Associations

TESDA formalised the bigger role that employers and workers play in designing and implementing TVET programmes in the Philippines through its Implementing Guidelines on the Establishment of Institutional Arrangements with Industry Boards or Industry Associations. In each priority industry, industry boards and industry associations are selected and consulted in developing competency standards, curricula, sectoral skills plans, assessment of industry workers, and accreditation of assessors or trainers, as well as in the administration of apprenticeship programmes and dual training systems. In addition, TESDA provides funding to organise consultative meetings, conferences, and fora to bring together officials from the government agency, industry boards and industry associations, as well as other relevant government offices.

Source: Department of Education (2015[167]), *Industry Certificate Guidebook*, www.cde.state.co.us/postsecondary/ic-standards-alignment; CEDEFOP (2009[168]), *Using Tax Incentives to Promote Education and Training*, www.cedefop.europa.eu/files/5180_en.pdf; European Commission (2017[169]), *A Ticket to Better Training for Polish SMEs*, https://ec.europa.eu/regional_policy/en/projects/poland/a-ticket-to-better-training-for-polish-smes; Humber College (2020[170]), *Become a Program Advisory Committee Member*, https://communityservices.humber.ca/industry/partnerships/program-advisory-committees-pacs.html; Palmer, (2020[166]), *Lifelong Learning in the Informal Economy: A Literature Review,* www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_741169.pdf; OECD (2016[171]), *Enhancing Employability,* www.oecd.org/g20/topics/employment-and-social-policy/Enhancing-Employability-G20-Report-2016.pdf; OECD (2019[77]), *OECD Skills Strategy 2019: Skills to Shape a Better Future*, https://doi.org/10.1787/9789264313835-en; Seneca College (2022[172]), *Program Advisory Committees*, www.senecacollege.ca/about/advisory.html; Taylor's University (2022[173]), *Industry advisory panel (IAP)*, https://university.taylors.edu.my/en/study/undergraduate/business/industry-advisory-panel-iap.html; TESDA (2018[174]), *Implementing Guidelines on the Establishment of Institutional Arrangements with Industry Boards or Industry Associations*, https://intranet.tesda.gov.ph/circulariframe/DownloadFile/1000035537; Vargas Zúñiga (2015[175]), *Skills Anticipation: The Transfer of the SENAI Prospective Model*, www.oitcinterfor.org/sites/default/files/file_publicacion/oit_Prospectiva_ing_sec.pdf.

Recommendations for improving the alignment between skills development offers and labour market demand

- **Increase the involvement of relevant government agencies and industry partners in reviewing the curricula of skills development offers in technical and vocational education and training and tertiary education.** Conduct regular and systematic reviews of emerging skilling needs and establish mechanisms to involve industry representatives (e.g. programme advisory committees) in the design (e.g. of curricula), delivery (e.g. of work-based learning) and certification of educational opportunities. With these industry experts, identify current and future trends in technologies, emerging occupations over a specified period, the specific skills and knowledge needed to effectively carry out these occupations and shortages in the current supply of skills being developed in the educational system (e.g. indicators on graduation rates in relevant programmes identified in the review) (see also Chapter 5). Provide incentives, such as tax exemptions, to TVET providers and employers that offer work-based learning opportunities that are in line with the needs of the labour market, as well as to tertiary education institutions that offer programmes or courses in areas of skills shortage.

- **Increase the provision of on-the-job training opportunities, especially among workers in smaller firms and in the informal economy.** Continue support for the establishment of private-sector-led initiatives that expand the provision of training opportunities for SMEs, such as the provision of free, easily accessible and industry-relevant course offerings (e.g. ASEAN SME Academy). Explore the use of different policy options to ease the financial burden of employee training on SMEs, such as the adoption of tax-based exemptions that allow the state to offset the costs of training (whether fully or partially), as well as the provision of training vouchers that employees could use to pursue skills development offers in training institutions pre-selected and quality assured by the government. Moreover, expand the mandate of vocational training institutions to include the provision of education to workers in the informal economy, such as offering affordable or free course offerings with low admission requirements (e.g. making completion of primary school optional). More importantly, provide ways for workers in the informal economy to certify skills that were developed informally to recognise the value of their competencies and boost their transition into formal labour markets.

Steering skills development choices towards labour market needs

Providing effective guidance services and financial incentives can help individuals choose relevant skills development offers in a rapidly changing labour market. Career guidance refers to a wide range of services that provide people with personalised and timely information on what skills and occupations are in high demand in the labour market, help them assess their current skill set, and advise them on where to obtain skills development offers they need to pursue their interests (CEDEFOP, ETF and European Commission, 2019[176]). Career guidance services must be available throughout the life course and serve a wide variety of educational trajectories – from choosing between academic and vocational pathways at the secondary level, to deciding between different forms of formal, non-formal and informal learning to help them move to a new job, keep a current one or obtain a promotion (OECD, 2019[77]).

In addition to providing career guidance services, it is equally important for countries to make sure that people face no financial barriers to pursuing the education and training opportunities they need. From an economic development perspective, it is also strategically beneficial for countries to promote skills development offers in skills shortage areas by providing a wide range of financial incentives to individuals, schools and employers to increase uptake in those areas (OECD, 2017[177]). Given these insights, this policy direction explores two areas: 1) ensuring the relevance of guidance services and encouraging widespread use; and 2) providing financial incentives to both institutions and individuals to steer skills development choices towards areas of skills shortage.

Ensuring the relevance of career guidance services and encouraging widespread use

Most Southeast Asian countries have put in place various policy measures to improve their career guidance systems, while some others have yet to establish their own. Several countries, such as Brunei Darussalam and Malaysia, have specialised government agencies or ministry departments in charge of managing the career guidance services provided to students in schools or the public. In contrast, others, such as the Philippines, have programmes managed by multiple government ministries (Table 3.5). Career guidance systems in Southeast Asia offer guidance on a wide range of topics and services not only to students but also to out-of-school youth and adults who are unemployed or may want to change jobs. These services include the assessment of individuals' skillsets and skill gaps, the provision of updated labour market information (e.g. employment trends), advice on available skills development offers and training providers, advice on funding options and other forms of assistance, the provision of a personal counsellor to follow progress, and, in some cases, emotional and psychological support. While career guidance services are well established in some Southeast Asian countries, such as Singapore, they are relatively new and are still in development in some others, such as in Cambodia (ICCDPP, 2017[178]).

Table 3.5. Overview of available career guidance services in Southeast Asia

Name of country	Career guidance initiative	Description
Brunei Darussalam	Ministry of Education, Department of Schools	• Has the Counselling and Career Guidance Section, which oversees guidance services in schools
	Student Affairs Division and its Career Guidance Unit, Institute of Brunei Technical Education	• Promotes education and training to potential students and the public through various platforms • Organises job fairs and market days to introduce job opportunities and match graduates with potential employers
Malaysia	Employment Insurance System, including the Graduate Empowerment Programme	• Assesses individuals' profiles and closely monitors their progress • Provides career advice and emotional support to individuals • Assigns an Employment Service Officer who actively provides career advice and support • Provides vocational training in partnership with appointed training providers
	Human Resource Development Corp Placement Centre	• Makes available assessment tools to help individuals learn more about their skills, strengths, goals and interests to help them find the right career • Provides advice to recent graduates on how to apply for jobs and best present their skills
Philippines	Career Guidance Advocacy Programme	• Provides updated labour market information • Invites Career Ambassadors to provide insights on career options for TVET and tertiary education graduates • Facilitates networking opportunities between young learners and industry partners to inform them about various career options
	TESDA Online Programmes (TOP)	• Provides free, accessible, and highly interactive training tools that help learners build skills and confidence to make informed career choices and boost their employability • Has a focus on job readiness, lifelong learning, and 21st Century skills
	Job Linkaging and Networking Services (JoLiNs)	• Established by TESDA in private and public technical vocational institutions (TVIs) • Provides job seekers with relevant labour market information, strategies, approaches and techniques in looking for job opportunities
	Public Employment Service Office of the Department of Labour and Employment	• Delivers core services, such as the provision of labour market information, referral and placement, employment coaching and career counselling
	National Secondary School Career Guidance and Counselling Programme	• Offers career guidance and counselling services to all public and private secondary schools nationwide to provide advice in pursuing tertiary education • Provides secondary education students with labour market information to make informed career decisions • Ensures that graduates of tertiary education meet government and industry requirements
Singapore	Skills and Training Advisory, MySkillsFuture portal	• Guides students or adults at different phases of their careers to identify their skills and training needs, and make informed education and career decisions • Encourages individuals to learn more about their interests, abilities, and passions • Allows individuals to explore different learning or education pathways and career opportunities across various industries to embrace learning throughout life
	Career Advisory Programme of Workforce Singapore	• Functions as an introductory programme for professionals (e.g. human resources practitioners, social service officers, industry mentors) and trains them to provide career basic education and career advisory services as a secondary role in their work (i.e. in addition to their principal roles and tasks)

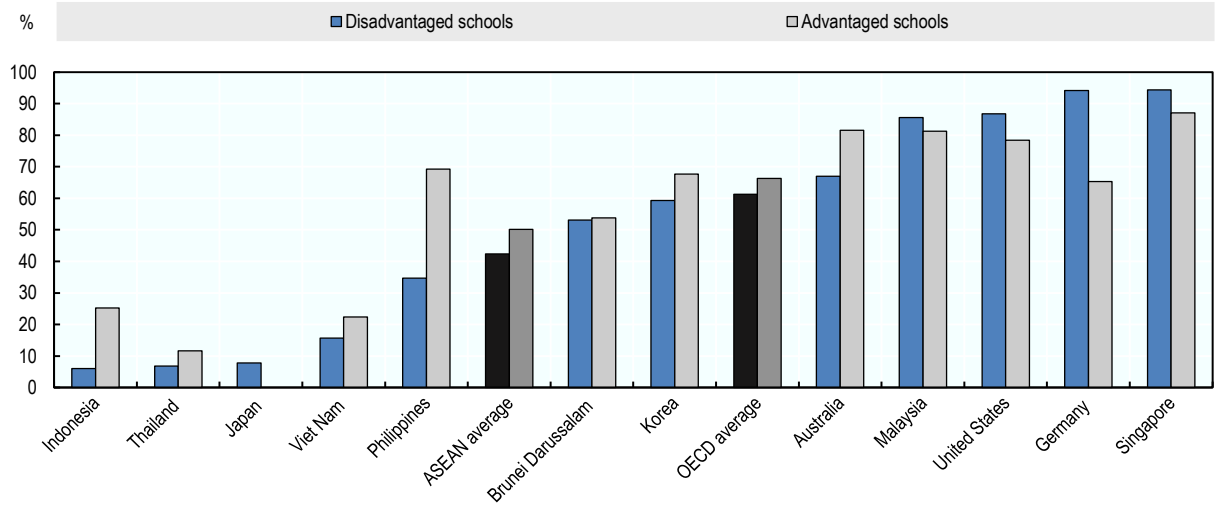
Name of country	Career guidance initiative	Description
Thailand	Public Employment Centres and Smart Job Centre on line and via app	• Provides access to career information and vacancies

Note: Only countries with available information on career guidance initiatives are shown in this table.
Source: Brunei Darussalam Ministry of Education (2018[179]), *Department of Schools,* www.moe.gov.bn/SitePages/Department%20of%20Schools.aspx; Congress of the Philippines (2018[180]), *Republic Act No. 112016: An act establishing a career guidance and counselling program for all secondary schools and appropriating funds therefore*, https://issuances-library.senate.gov.ph/sites/default/files/2022-10/ra%252011206.pdf; Malaysia Ministry of Human Resources (2020[181]), *Employment Insurance System (EIS) – Home*, https://eiscentre.perkeso.gov.my/; Malaysia HRD Corp (2021[182]), *HRD Corp Placement Centre*, https://hpc.hrdcorp.gov.my/; Philippines Department of Labour and Employment (2020[183]), *About Public Employment Services (PES)*, www.dole.gov.ph/public-employment-services-pes-contents/; Philippines Department of Labour and Employment (2021[184]), *Career Guidance Advocacy Program (CGAP)*, https://ro12.dole.gov.ph/career-guidance-advocacy-program-cgap-2/; Singapore Skills Future (2022[185])), *Education and Career Guidance*, www.skillsfuture.gov.sg/ecg; Thailand Ministry of Labour (2022[186]), *e-Labour*, https://lb.mol.go.th/en/; Workforce Singapore (2020[187]), *Career Advisory Programme (CAP)*, www.wsg.gov.sg/programmes-and-initiatives/career-advisory-programme.html.

One of the most common ways for Southeast Asian countries to offer career guidance is through schools, although access remains unequal. Across the region, more students in advantaged schools (50.1%) have access to a dedicated counsellor in comparison to those in disadvantaged schools (42.3%) by about 8 percentage points (Figure 3.22). The difference between advantaged and disadvantaged schools is especially stark in some countries, such as the Philippines (34 percentage points) and Indonesia (19 percentage points). In some countries, access to a guidance counsellor is low regardless of whether a school is advantaged or disadvantaged. For example, in Thailand, only 11.6% of students are in advantaged schools with a dedicated guidance counsellor. This figure drops even lower to 6.8% in disadvantaged schools in the country. Addressing these challenges is key to improving the relevance of career guidance services in the region. For instance, in some OECD countries, such as Sweden, teachers and guidance counsellors in schools are provided up-to-date training on labour market information and the career guidance profession (Box 3.7).

Figure 3.22. Students in schools with one or more dedicated counsellor(s), Southeast Asia and selected OECD countries, 2018

Percentage of students



Source: OECD (2019[188]), *PISA 2018 Results (Volume I): What Students Know and Can Do*, https://doi.org/10.1787/5f07c754-en.

StatLink https://stat.link/v0ow3a

While Southeast Asia has initiatives to provide students and job seekers with career guidance services, there remain many opportunities to ensure that current initiatives reflect the rapidly evolving needs of the labour market. The use of skills assessment and anticipation exercises are key to identifying current and future skills needs, the results of which could be used to better inform career guidance services (OECD, 2016[189]). However, many Southeast Asian countries have technical and infrastructure limitations in the collection, management, and use of skills data, impeding their ability to adequately perform skills assessment and anticipation exercises (see Chapter 5, Opportunity 3). For instance, in Indonesia, outdated data and methodologies for collection affect students' skills development choices by guiding them into traditional occupations that have low demand in the job market (APCDA, 2021[190]). Moreover, curriculum guidance in Southeast Asia is often not based on available data and does not always correspond to labour market requirements. Many students are often guided into careers based on their gender and personal interests instead of their actual skills or the skills needs of the labour market, worsening skill gaps. In some cases, the advice of parents and local community members also has a significant influence on Southeast Asian learners' skills development choices, but may not always be based on either their personal interests or the needs of the labour market (Intad, 2021[191]; Muhamad, Salleh and Nordin, 2016[192]). Countries in the region could consult policy practices from OECD countries, such as Belgium, Japan and the United Kingdom, where a wide range of initiatives are being implemented to help learners assess their skill sets and guide their skills development choices (Box 3.7).

Countries could also promote the career guidance profession in Southeast Asia to improve the quality of guidance services. There is a lack of supply of guidance counsellors who have obtained adequate undergraduate qualifications for the career counselling profession, suggesting that many counsellors do not always have the skills and knowledge needed to perform their tasks properly (Saputra and Sudira, 2019[193]). Guidance counsellors in the region generally have poorly defined roles, occupy low-ranking positions in educational institutions, have limited access to training and professional development, and do not tend to form communities of practice where they can learn from peers (Harrison, 2022[194]). OECD consultations with stakeholders in Viet Nam have affirmed that there is a general lack of training for guidance counsellors and that teachers are assigned counsellor tasks despite having limited information on how to find jobs in the private and public sectors, the actual needs of the labour market, which economic sectors are growing, and the future skilling requirements of emerging occupations (Intad, 2021[191]; Muhamad, Salleh and Nordin, 2016[192]).

Providing financial incentives for both institutions and individuals in areas of skills shortages

In addition to providing relevant career guidance, countries may make use of a wide variety of incentives targeted towards both institutions and individuals to steer skills development choices towards key skill shortage areas. With rapid technological changing the world of work more quickly than ever, there is increasing room for governments to better align the supply of skills with the needs of the labour market. Many OECD countries have adopted a range of policies to provide financial incentives, such as subsidies, subsidised loans and tax incentives, to encourage the uptake of skills development offers in industries with a national skills shortage. Several Southeast Asian countries are also beginning to increase the use of such policies (OECD, 2017[177]).

Currently, several financial incentives in Southeast Asia target educational institutions, encouraging them to increase the provision of programmes or courses in line with labour market demand. For instance, the Government of Thailand provides earmarked funding for public universities to establish degree and non-degree programmes that develop STEM skills, as well as professional and digital skills, which are central to the implementation of the country's technological and industrial policies (Rouvrais et al., 2020[195]). In addition, performance-based funding is another policy measure commonly used in OECD countries to encourage institutions to deliver training in high-demand sectors. Many Southeast Asian countries are beginning to adopt similar policy practices. Performance-based funding

ensures that the financial resources received by public tertiary education institutions are influenced by certain performance indicators, such as the employment outcomes of graduates (OECD, 2017[177]). There is evidence that this method has been used in several Southeast Asian countries, such as Indonesia, Malaysia and Thailand (Ngoy et al., 2019[196]; Rahman Ahmad, Siok Yee and Farley, 2020[197]), although information on the suitability of such funding mechanisms in the region and the corresponding implementation challenges is extremely limited.

Targeted financial incentives for individuals are also a common policy measure that Southeast Asian countries use to increase access to training in certain skill areas. These financial incentives commonly include subsidies (including scholarships, grants, allowances, vouchers and training credits, among others), tax incentives, loans, time accounts and training or study leaves. Examples of these financial incentives are in place in some countries, such as Malaysia and Singapore, although information on the use of time accounts in the region remains limited (Table 3.6). In many cases, these financial incentives are used to steer the uptake of educational offers towards strategic areas. For instance, in Lao PDR, where a general student loan scheme does not exist, TVET students are exempted from paying tuition fees in shortage sectors, such as automotive and electronic programmes. Similarly, there is evidence of other financial incentives in Malaysia and the Philippines, where scholarships are provided to sectors that either have a shortage of graduates or are considered a priority for the countries' economic development (Box 3.7) (AFD, 2019[198]).

Table 3.6. Financial incentives for participation in adult learning: Examples from ASEAN and OECD countries

	Subsidies	Tax incentives	Loans	Time accounts	Training/study leaves
Description	Direct and highly flexible ways in which governments shoulder a part of the costs of training to keep fees low	Incentives that deduct the costs of training from individuals' taxable income, or provide lower rates of tax	Incentives in which governments allow individuals to borrow money to be used for training, or provide guarantees to individuals to facilitate borrowing from private financial institutions	Mechanism that allows individuals to save up time (rather than money) for training purposes	Incentives that give employees the right to temporarily leave their jobs for training purposes (and guarantees their right to return afterwards)
Southeast Asia country examples	Singapore (SkillsFuture Mid-career Enhanced Subsidy)	Malaysia (Tax reliefs for the purchase of ICT devices through the Inland Revenue Board of Malaysia)	Singapore (SkillsFuture Credit), Malaysia (Loan for the purchase of ICT devices)	n/a	Malaysia (Scholarship for government officers funded by Department of Civil Service)
OECD country examples	Austria (Fachkräftestipendium, or Skilled Workers' Grant) Finland (Ammattitutkintostipendi)	Czech Republic (Tax allowance for students continuously preparing for future employment)	Australia (Higher Education Loan Programme), United States (Public Service Loan Forgiveness Program)	France (Compte Personnel de Formation)	Germany (WeGebAU)

Source: CEDEFOP (2022[199]), *Tax allowance for students continuously preparing for future employment,* www.cedefop.europa.eu/en/tools/financing-adult-learning-db/search/tax-allowance-students-continuously-preparing-future; OECD stakeholder consultations; OECD (2017[177]), *Getting Skills Right: Financial Incentives for Steering Education and Training*, https://doi.org/10.1787/9789264272415-en.

Financial incentives may also be used to encourage disadvantaged groups to pursue skills development offers in strategic economic sectors. Certain groups in Southeast Asia, such as women, face more barriers to obtaining education and training and, at the same time, have significant needs to adapt to changing skills demands, highlighting the need for more incentives targeted to them (OECD, 2017[177]). For instance, in many countries in the region, enrolment in different educational programmes remains highly segregated

according to gender, with fewer female students enrolling in the field of ICT despite expected increases in demand for employment opportunities in the future (OECD, 2020[200]). Across ASEAN countries, less than half of graduates in ICT programmes are female (39.3%), and many countries have significantly high gender gaps in key economic sectors, such as Cambodia, where only 8.4% of ICT graduates are female. While many of the barriers to the uptake of such programmes among women are largely cultural in nature (e.g. belief that ICT and STEM are more well suited for men), there are also significant financial barriers that could be addressed through targeted policy measures and financial incentives (Boccuzzi and Uniacke, 2021[201]).

There is room for Southeast Asian countries to increase the systematic use of financial incentives targeted to disadvantaged groups. While there are initiatives in place to increase the stock of women in key strategic sectors, such as ICT and STEM, many of them are civil-society-led and still in need of a strong enabling policy environment to ensure sustainability. One key area of intervention that Southeast Asian governments could pursue is the provision of subsidies, such as scholarships, earmarked specifically for disadvantaged groups. For instance, in the Philippines, the #WOMENCANDOIT Scholarship Programme is implemented by the International Labour Organization (ILO) and TESDA, in partnership with employers from the private sector, to boost the participation of women in skills development offers (e.g. in animation, creative web design, game development, software development, web development) and facilitate employment in STEM-related jobs afterwards. This highlights the importance of a whole-of-society approach to financial incentives in skills development, wherein various stakeholders are involved not only in providing funding but also in scholarship implementation and employment support (Boccuzzi and Uniacke, 2021[201]; Dalberg, 2017[202]; ILO, 2020[203]).

Box 3.7. Country examples relevant to steering skills development towards labour market needs

Belgium's (Flanders) Mijn loopbaan

The Flemish public employment service (VDAB) offers an online platform, Mijn loopbaan, which offers career guidance services to Belgian citizens. The service allows them to view their work experience and pension credits, create a personalised CV outlining their skills and qualifications, search through available job offerings and training opportunities, and upload their CV onto a platform employers use to find jobseekers. To support early career development and promote the uptake of the service among young learners, the VDAB offers training sessions for teachers on how to use the Mijn loopbaan platform.

Japan's assessment of skillsets through Job Tag

In Japan, the occupational information site Job Tag is equipped with various functions to support individuals' career development, including assessing their current skill set based on their job history. The platform shows the skills gap between their current skillset and the job they want and provides information on the training pathways that would allow them to address these gaps.

Philippines' Fast-Tracked S&T Scholarship Act of 2013

In 2013, the Philippines passed a policy that aims to provide scholarships to students of tertiary programmes in STEM fields in exchange for a return service programme, where they are required to teach full-time high school subjects in mathematics, biology, chemistry, physics, IT and agricultural, aquaculture or fisheries technology. The programme applies to both university and TVET tracks. Apart from receiving financial aid during their last two years of a four-year programme (three years for a five-year programme), recipients are also guaranteed a teaching position in a public or private high school for a minimum of two years, as well as a competitive compensation package.

Sweden's collaboration with the private sector for the public employment service

The Swedish public employment service (Arbetsförmedlingen) works closely with firm representatives to offer training on updated labour market information to teachers and guidance counsellors in schools, so they can rely on the most up-to-date information when providing guidance to students. In-service training for these school personnel is available through respective employers, such as universities, as well as through specialised agencies and NGOs. The trainings cover current labour market topics and the career guidance profession.

United Kingdom's Labour Market Information (LMI) for All

LMI for All was created as an open data project that aims to make labour market information from various reliable sources more accessible to all, helping individuals make better decisions about their learning and work. Career development practitioners collaborate with software developers to design online platforms that suit their clients' (e.g. students or jobseekers) needs.

Source: Euro Guidance (2020[204]), *Guidance System in Sweden*, www.euroguidance.eu/guidance-system-in-sweden; OECD (2021[205]), *Career guidance for adults in a changing world of work,* https://doi.org/10.1787/9a94bfad-en; Japan Ministry of Health, Labour and Welfare (2020[206]), *Jobtag: About This Site*, https://shigoto.mhlw.go.jp/User/about; Official Gazette of the Philippines (2013[207]), *Republic Act No. 10612: Fast-Tracked S&T Scholarship Act of 2013*, www.officialgazette.gov.ph/2013/08/23/republic-act-no-10612/; UK Department of Education (2021[208]), *Research and analysis: LMI for All 2017 to 2018*, www.gov.uk/government/publications/developing-and-enhancing-a-labour-market-information-database-lmi-for-all/lmi-for-all-2017-to-2018; UNESCO et al., (2021[209]), *Investing in Career Guidance: Revised Edition 2021*, https://unesdoc.unesco.org/ark:/48223/pf0000378215.

Recommendations to steer skills development choices towards labour market needs

- **Provide regular training to guidance counsellors and make updated labour market data more accessible to inform their work.** Offer training programmes to career guidance professionals who work in schools and companies, where they could be provided with information on the latest employment trends and labour market developments. Such information could also be made available by establishing online portals that consolidate labour market information and make it easier for guidance counsellors to access and use updated data in their work. In schools where the supply of guidance counsellors is low, teachers could be given additional training on how to provide career counselling and information on how to access and use public employment services, which they could impart to their students.
- **Expand financial incentives for individuals and institutions to encourage the uptake of skills development in strategic industries, especially among disadvantaged groups.** Provide financial incentives, such as performance-based funding, targeted towards institutions universities, TVET institutions and other training providers that would incentivise them to develop programmes or course offerings that address skills shortage areas. Performance-based funding may be based on the ability of institutions to achieve key labour market objectives (e.g. number of graduates in key economic sectors). Furthermore, provide a wide range of financial incentives, such as subsidies (e.g. scholarships), tax incentives, loans, time accounts and training/study leave, targeted towards individuals in educational programmes related to economic sectors that are identified as a priority in the country's national development plan or strategy, or in sectors where there is a shortage of workers. Allot slots in the provision of such financial incentives for individuals from disadvantaged groups, such as women, to facilitate their participation, helping make skills development systems more equitable.

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Notes

1. Gross enrolment rates account for students of all ages, including those whose age exceeds the official age group for the specified level of education. Therefore, if there is early enrolment, late enrolment or grade repetition, gross enrolment can exceed 100%.

2. Gross enrolment rates at the primary level were also higher in 2000 than in 2019 in Brunei Darussalam and Lao PDR. Data to explore whether this is due to high repetition rates are not available.

3. Estimate is based on data from 2017.

4. Participating countries in the latest round of PISA in 2018 include Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand and Viet Nam. All Southeast Asian countries participate in the UNESCO surveys mentioned. See Chapter 5 for more details on other international surveys in which Southeast Asian countries participate.

4 Using skills effectively in work and society in Southeast Asia

The effective use of skills in workplaces and society is important for a country's economic prosperity, social cohesion and people's overall well-being. The full and effective use of skills can help raise productivity and innovation for businesses and help increase wages and job satisfaction for employees. This chapter examines the importance of using people's skills more effectively and how this could support Southeast Asian countries in achieving sustainable and inclusive growth and social well-being. It explores three opportunities for Southeast Asian countries to use the skills of their people more effectively: 1) promoting participation in the formal labour market; 2) making intensive use of skills in work and society; and 3) increasing demand for higher-level skills.

The importance of using skills effectively in work and society

The degree to which skills are used in both the economy and society has significant implications for individuals, firms and countries. For individuals, the greater use of skills in work and society is associated with higher wages, higher job satisfaction, higher level of trust, strong political efficacy and better health (OECD, 2012[1]). For firms, better skills use is associated with higher productivity, higher profits and lower staff turnover. At the country level, it is associated with more inclusive economic growth and greater social cohesion (OECD, 2019[2]).

While developing people's skills is an important first step, skills development policies will only achieve their desired benefits if they are accompanied by simultaneous actions to boost the demand for, and effective use of, skills. Therefore, it is important to adopt policies and practices to make the most of the available skills supply to spur innovation, productivity and growth, and strengthen social cohesion. Indeed, the failure to fully use skills could result in a waste of the initial investment in the development of skills and the depreciation and obsolescence of those skills that are left underutilised (OECD, 2019[2]).

Southeast Asian countries have experienced remarkable economic growth and a rise in living standards over past decades, supported, among others, by governments' efforts to make effective use of people's skills in work and society. Governments have improved the delivery of public employment services (PES) to respond better to the needs of labour markets, provide transitional support for job seekers and facilitate international mobility and employment. Some Southeast Asian countries promote volunteering in schools to encourage civic engagement and the use of skills in society among students. In addition, efforts were made in many countries to promote entrepreneurship and innovation through increased research and development (R&D) spending, tax incentives for R&D and education-industry partnerships, thereby increasing demand for higher-level skills.

Yet numerous challenges remain to use skills fully and effectively in work and society. These challenges include high barriers for disadvantaged groups, such as women, youth and migrants, to participate in the formal labour market. A challenge is the size of the informal labour market, which is large in many Southeast Asian countries. High-performance workplace practices (HPWPs), which can raise skills use at work and overall productivity levels, are not yet widely adopted and are lacking in small- and medium-sized enterprises (SMEs). Levels of innovation and entrepreneurial activities in Southeast Asian countries are behind that of OECD countries. In addition, across Southeast Asian countries, overall awareness, and information about civic engagement opportunities, such as volunteering, are relatively low.

Given these challenges, this chapter aims to suggest future directions for Southeast Asia's policies for skills use based on an analysis of the current performance of the region. It starts with an overview of the current governance arrangements for policies related to skills use and an assessment of Southeast Asian countries' performance on key indicators of skills use. Building on this assessment, the chapter then presents three opportunities for the region to use skills effectively in work and society: 1) promoting participation in the formal labour market; 2) making intensive use of skills in work and society; and 3) increasing demand for higher-level skills. Each opportunity addresses the region's current challenges and proposes concrete, evidence-based policy recommendations.

Summary of recommendations

The policy recommendations presented throughout this chapter are summarised as follows.

Summary of policy recommendations for Southeast Asia to use skills effectively in work and society

Opportunity 1: Promoting participation in the formal labour market

Reducing barriers to employment for disadvantaged groups

2.1. Facilitate women's participation in the labour market through the promotion of a more equitable distribution of housework and encouraging flexible work arrangements
2.2. Support youth employment through tailored and online employment services
2.3. Enhance migrant employment possibilities through job search support, legal counselling and language training from specialised institutions for migrants

Facilitating the transition of workers from the informal to the formal labour market

2.4. Facilitate the registration of workers and businesses by making online business registration platforms more user-friendly and simplifying registration procedures
2.5. Improve the effectiveness and efficiency of labour inspection by adopting new technologies to ease the verification of workers' employment status

Opportunity 2: Making intensive use of skills in work and society

Promoting skills use in the workplace through the greater adoption of high-performance workplace practices

2.6. Create a single portal in each country to efficiently disseminate comprehensive information on high-performance workplace practices to firms, especially SMEs
2.7. Improve the managerial skills in SMEs by providing networking and mentoring opportunities

Promoting skills use in everyday life through civic engagement and leisure activities

2.8. Make volunteering activities available as part of the school curricula to encourage young people to contribute their skills to society from an early age
2.9. Raise awareness about the benefits of using skills in society and personal life
2.10. Provide financial incentives to encourage adults to use skills in civil society

Opportunity 3: Increasing demand for higher-level skills

Promoting innovation to increase demand for high-level skills

2.11. Increase expenditure on research and development through direct grant support and tax incentives
2.12. Foster collaboration between institutions of higher education and industry

Fostering entrepreneurship

2.13. Improve access to finance for female entrepreneurs by providing targeted financial services combined with financial training
2.14. Facilitate the transfer of entrepreneurial knowledge and skills to women by supporting unions for female workers and business associations for women

Overview and performance

Overview of Southeast Asia's governance arrangements for using skills effectively

Given the many factors that directly or indirectly affect skills use in work and society, a broad range of Southeast Asian ministries are implicated (Table 4.1). Ministries that are in charge of employment and labour affairs aim to increase participation in the formal labour market through policies and services, such as PES, sheltered and supported employment, employment incentives, direct job creation and start-up incentives, among others (OECD/ADB, 2020[3]). Four Southeast Asian countries (Cambodia in 1971, the Philippines in 1976, Thailand in 1969, and Viet Nam in 2012) ratified the Employment Policy Convention, 1964 (No. 122), which promotes employment and labour policies to achieve full, productive and inclusive employment. Furthermore, ministries in charge of employment and labour affairs offer targeted policies and programmes to help women, youth and migrants to integrate into the formal labour market. Ministries in charge of economy, industry and innovation provide a wide range of initiatives that incentivise and support the effective use of skills, including providing support services to firms to adopt HPWPs and offering subsidies to firms to innovate and carry out R&D, thereby increasing the demand for higher levels of skills. Ministries responsible for social affairs, culture and sports also implement a variety of policies to increase skills use in society, including promoting social engagement, volunteering, and cultural and sports activities.

To mitigate the negative impacts of the coronavirus (COVID-19) pandemic and help foster a rapid and inclusive recovery from the pandemic, Southeast Asian countries have adopted a variety of Association of Southeast Asian Nations (ASEAN) initiatives and strategies to boost employment, skills use and productivity, as described in Table 4.2.

Table 4.1. Overview of Southeast Asian government agencies responsible for employment and skills use policies

Country	Labour and employment	Economy, industry and innovation	Social affairs, culture and sports
Brunei Darussalam	Ministry of Home Affairs	Ministry of Finance and Economy	Ministry of Culture, Youth and Sports
Cambodia	Ministry of Labour and Vocational Training	Ministry of Economy and Finance	Ministry of Social Affairs, Veterans and Youth Rehabilitation Ministry of Culture and Fine Arts
Indonesia	Ministry of Manpower	Ministry of Industry	Ministry of Social Affairs Ministry of Youth and Sports Affairs
Lao PDR	Ministry of Labour and Social Welfare	Ministry of Industry and Commerce Ministry of Science and Technology	Ministry of Information, Culture and Tourism
Malaysia	Ministry of Human Resources	Ministry of Entrepreneurship Development and Cooperatives Ministry of Science, Technology and Innovation	Ministry of Youth and Sports Ministry of Women, Family and Community Development Ministry of Tourism, Art and Culture
Myanmar	Ministry of Labour, Immigration and Population	Ministry of Industry	Ministry of Health and Sports Ministry of Social Welfare and Resettlement
Philippines	Department of Labour and Employment	Department of Science and Technology Department of Trade and Industry	Department of Social Welfare and Development National Commission for Culture and the Arts Philippine Sports Commission
Singapore	Ministry of Manpower	Ministry of Trade and Industry	Ministry of Culture, Community and Youth Ministry of Social and Family Development

Thailand	Ministry of Labour	Ministry of Industry	Ministry of Tourism and Sports Ministry of Culture
Viet Nam	Ministry of Labour, Invalids and Social Affairs	Ministry of Industry and Trade Ministry of Science and Technology	Ministry of Culture, Sports and Tourism

Source: Brunei Darussalam Department of Labour (2021[4]), *Organisation Structure*, www.labour.gov.bn/SitePages/Organisation%20Structure.aspx; Royal Government of Cambodia (2005[5]), *Sub-decree on the organization and functioning of the Ministry of Labour and Vocational Training*, www.ilo.org/dyn/natlex/docs/MONOGRAPH/92808/108288/F-1312769134/KHM92808%20Eng.pdf; Indonesia Ministry of Manpower (2018[6]), *About the Ministry of Manpower*, www.kemnaker.go.id/information/about; Malaysia Ministry of Human Resources (2017[7]), Departments and Agencies, www.mohr.gov.my/index.php/en/?option=com_content&view=article&id=33; Myanmar Ministry of Labour (2022[8]), *About the Ministry*, https://mol.nugmyanmar.org/about-ministry/; Philippines Department of Labour and Employment (2022[9]), *DOLE Offices: Bureaus*, www.dole.gov.ph/; Singapore Ministry of Manpower (2022[10]), *Divisions and statutory boards*, www.mom.gov.sg/about-us/divisions-and-statutory-boards; Thailand Ministry of Labour (2022[11]), *MOL Duties*, www.mol.go.th/en/departments/mol-duties; Viet Nam Ministry of Labour, Invalids and Social Affairs (2017[12]), Decree Stipulating Functions, Duties, Authorities and Organization Structure of the Ministry of Labour - Invalids and Social Affairs , http://english.molisa.gov.vn/Pages/About/DutiesResponsibilities.aspx.

Table 4.2. Recent ASEAN initiatives to promote intensive skills use in work and society

Name	Year	Description
ASEAN Work Plan on Youth 2021-2025	2021	Covers five priority areas, which align with the domains of the ASEAN Youth Development Index: education, health and well-being; employment and opportunity; participation and engagement; and ASEAN awareness, values, and identity. The plan promotes volunteering among ASEAN youth through the ASEAN Volunteers project, the ASEAN Volunteer Forum and the ASEAN Volunteer Award. Furthermore, the plan supports youth entrepreneurship.
ASEAN Economic Ministers' Statement on Strengthening ASEAN's Economic Resilience in Response to the Outbreak of the Coronavirus Disease (COVID-19)	2021	Resolves to take collective action to leverage technologies and digital trade to allow businesses, especially micro, small and medium-sized enterprises (MSMEs), to continue operations amidst the COVID-19 outbreak
Go Digital ASEAN Initiative	2020	Aims to close the digital gap across ASEAN in support of the vision set out by the ASEAN Coordinating Committee on Micro, Small and Medium Enterprises (ACCMSME)'s Action Agenda on Digitalisation of ASEAN MSMEs through Capacity Building. Implemented by The Asia Foundation, with support from Google.org, Google's philanthropic arm, the initiative will train up to 200 000 people from rural regions and underserved communities – including entrepreneurs, underemployed youth and women. Working with local partners in ASEAN member states, the USD 3.3 million grant will broaden participation in the digital economy to include groups with the most to gain from digital literacy skills and online safety awareness. Amidst the COVID-19 crisis, this initiative will also be a mechanism for helping MSMEs to learn about programmes or assistance that can help them continue to operate during the COVID-19 crisis.
Third ASEAN Inclusive Business Summit	2020	Convened government officials and business leaders to advocate for inclusive business strategies that support MSMEs and support recovery from economic setbacks and impacts of the COVID-19 pandemic. The summit explores how women, over-represented among the poor, can be better included in value chains as well as the role of social enterprises contributing to inclusive business models.
ASEAN+3 Plan of Mitigating the Economic Impact of the COVID-19 Pandemic	2020	Promotes co-operation between ASEAN and the Plus Three countries [China (People's Republic of) Japan, Korea] to mitigate the economic impact of the COVID-19 pandemic. ASEAN and the Plus Three countries will work together to facilitate a smooth flow of essential goods, such as food, commodities and medical supplies. They also aim to support businesses, particularly MSMEs, vulnerable groups, business start-ups and economic sectors adversely affected by COVID-19, by facilitating timely information sharing on trade-related measures and promoting science, technology, innovation and digital trade to allow them to continue operations and increase market opportunities in the region and globally.

Source: ASEAN (2022[13]), *ASEAN Secretariat News*, https://asean.org/category/news/.

Southeast Asia's performance in using skills effectively at work, as well as in society and everyday life

Over the last decade, Southeast Asia has increased its policy focus on improving its citizens' use of skills in their work and everyday lives. The average regional labour force participation rate has remained relatively stable over the past ten years and was even higher than the OECD average in 2021. In addition, much policy attention has been given to increasing the access of disadvantaged groups, such as women, youth and migrants, to formal labour market opportunities. There has also been increasing focus on

adopting policies that aim to intensify the use of skills in activities outside the realm of work, such as in civic activities and everyday life in general. For instance, the share of people who dedicate time to volunteering is higher in Southeast Asia than among OECD countries, and policies have been initiated at the regional level to recognise the societal value of such civic engagements. Nevertheless, considerable work must be done throughout the region to address barriers to fully and effectively use skills in work and everyday life.

The labour force participation rate is high in Southeast Asia, but many barriers remain to the full and effective use of skills, especially among disadvantaged groups

The labour force participation rate in Southeast Asian countries is relatively high and has remained relatively stable in most countries over the last decade. The average labour force participation rate, which refers to the number of persons in the labour force as a proportion of the working-age population, has fluctuated across the region between 68.2% and 65.6% from 2011 to 2021. However, across all countries, men perform better than women, and the average participation rate throughout the region is significantly higher among men (76.5%) than women (58.1%) (Figure 4.1, Panel A). The gender gap is largest in Myanmar, with a 29 percentage point gap between men and women. It is also significant in countries such as the Philippines, Indonesia and Malaysia, where the gap is above 20 percentage points. Lao People's Democratic Republic (hereafter "Lao PDR") has the lowest gender labour force participation rate gap (7.1 percentage points) in the region.

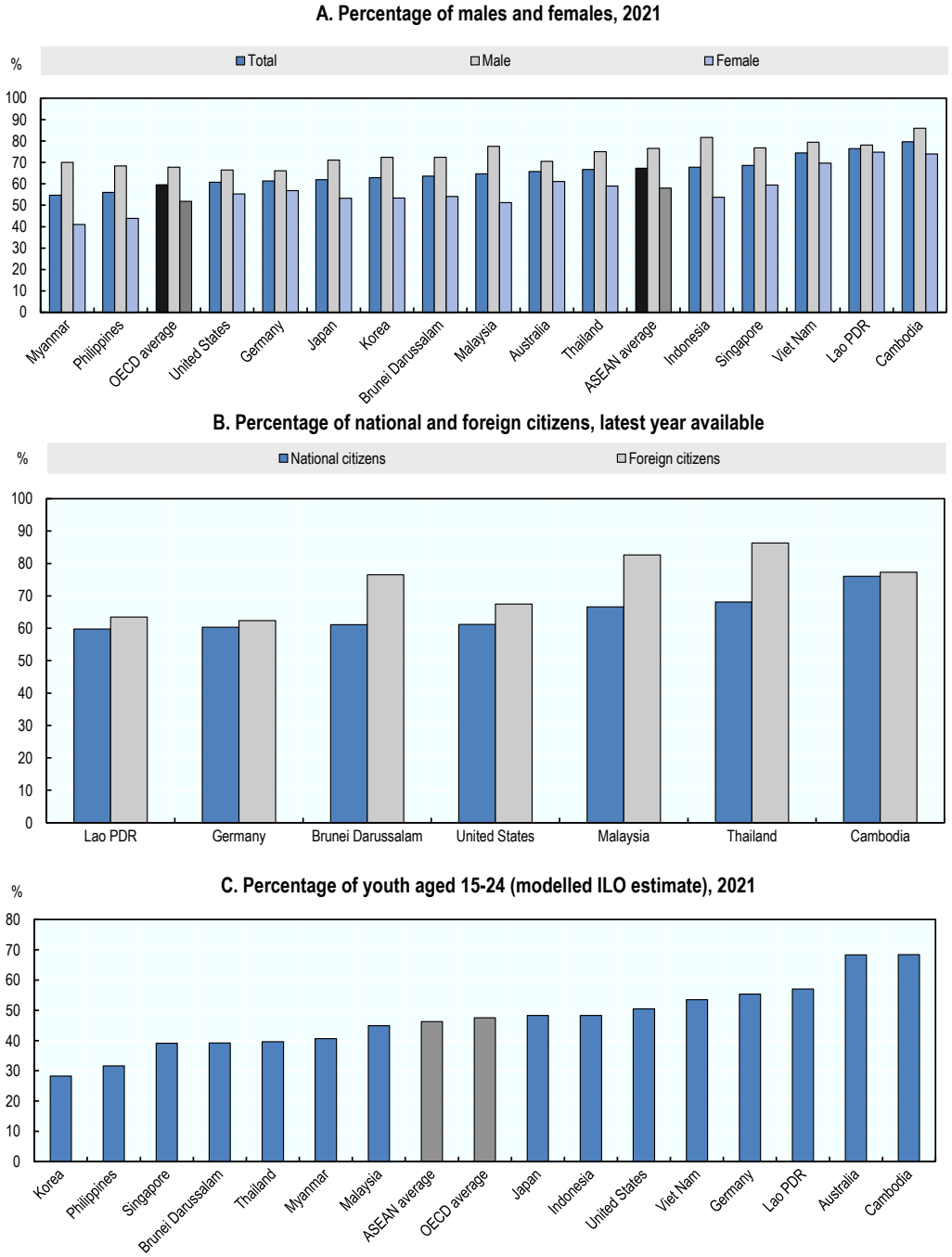
There are several reasons for the gender gap in formal labour markets in Southeast Asia, resulting in significant economic implications for the region. The higher gender gaps in formal labour market participation rates may be partially attributed to female under-representation in key sectors such as science, technology, engineering and mathematics (STEM) (see Chapter 3) or working conditions that make it difficult for women to combine work and family responsibilities (OECD, 2019[2]). Even when women are working, many work as informal workers (workers who do not pay social contributions) and as self-employed workers whose businesses are not registered. Informal workers also often have lower-quality working conditions (ILO, 2019[14]). Based on OECD calculations, in the top three Southeast Asian countries with the largest gender gaps in labour force participation rates (i.e. Myanmar, Indonesia and Malaysia), reaching parity in participation between men and women would mean adding to the labour force about 4.8 million more women in Myanmar, 28.9 million more in Indonesia, and 3.7 million more in Malaysia. This is equivalent to adding about 37.5 million women to the workforce from these three countries alone. Such an increase in the labour force supply would significantly boost labour utilisation. Addressing barriers to women's formal labour market participation is an important policy concern, as estimates reveal that eliminating gender inequalities in Southeast Asian formal labour markets could boost the region's gross domestic product (GDP) by USD 359 billion by 2025 (McKinsey Global Institute, 2018[15]).

In Southeast Asian countries with available data, migrants have higher labour force participation rates than the native population. Thailand and Malaysia have a relatively high percentage of immigrants participating in the labour force, around 80%, which is comparable to – if not more than – the labour force participation rates of native-born citizens (Figure 4.1, Panel B). However, despite high participation in the labour force, evidence suggests that a majority of migrants coming to Southeast Asia have low levels of skills and are compelled to search for economic opportunities, mainly in low-skilled construction, agriculture and domestic services (Gentile, 2019[16]).

The labour force participation rate among youth in Southeast Asia is similar to, but slightly lower than, that of OECD countries. In Southeast Asia, 46.2% of youth aged 15 to 24 participate in the labour force, while 47.5% of youth across OECD countries do. Rates are remarkably high in several countries, such as Cambodia (68.4%), Lao PDR (57%) and Viet Nam (53.5%) but are low in others, such as the Philippines (31.5%) (Figure 4.1, Panel C). Participation in the labour market among youth can suggest that they are participating in employment opportunities in addition to their formal education, such as part-time work and

weekend or student jobs (Eurostat, 2022[17]). While this may help youth develop new skills and fully utilise them in the workplace and other situations, it can also point to the need of young people, especially those from socio-economically disadvantaged backgrounds, to earn money to finance their studies and support their daily lives.

Figure 4.1. Labour force participation rates across socio-demographic groups in Southeast Asia and selected OECD countries, 2021 or latest available year



Source: ILOSTAT (2021[18]), *Labour force participation rate by sex and age (ILO modelled estimates, Nov. 2021) (%)*, www.ilo.org/shinyapps/bulkexplorer0/?lang=en&segment=indicator&id=EAP_2WAP_SEX_AGE_RT_A; ILOSTAT (2022[19]), *Labour force participation rate by sex, age and citizenship*, www.ilo.org/shinyapps/bulkexplorer50/?lang=en&segment=indicator&id=EAP_2WAP_SEX_AGE_RT_A; OECD (2021[20]), *Labour force participation rate*, https://data.oecd.org/emp/labour-force-participation-rate.htm.

StatLink https://stat.link/h3tkbn

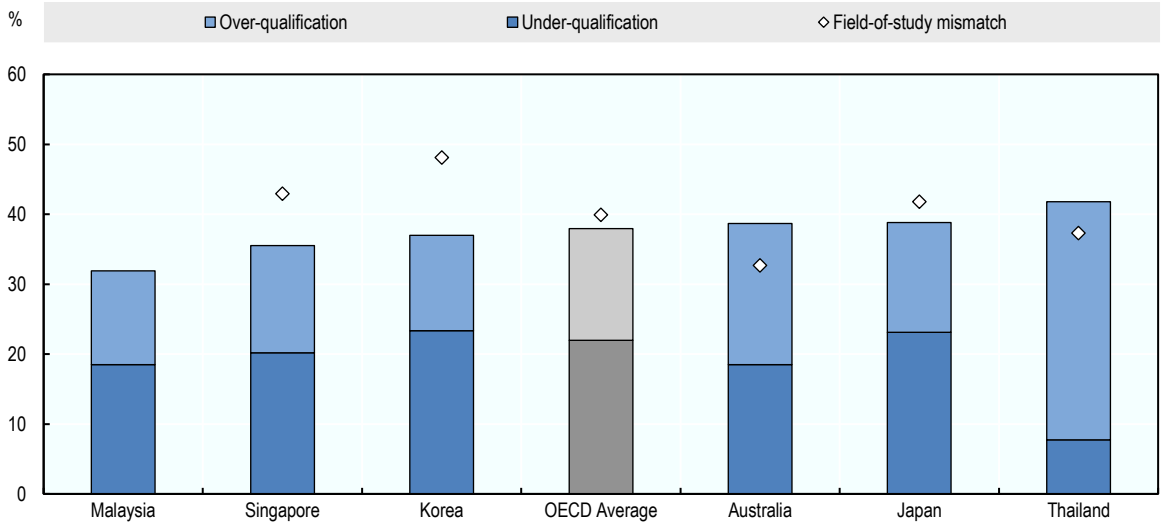
In addition to facilitating participation in the formal labour market, it is equally important to ensure that skills are fully and effectively used at work in Southeast Asian countries. However, evidence suggests that there are challenges to fully using skills at work throughout the region. Skills are not fully used at work when there are imbalances between the supply and demand for skills, which can be found in the form of skills shortages (i.e. a situation in which adequate skills are hard to find in the current labour market) or in the form of skill surpluses (i.e. a situation in which the supply of certain skills exceeds their demand in the labour market) (OECD, 2017[21]). Shortages and surpluses can exist by skill level or by skill type. Imbalances can also take the form of qualification mismatches, which refers to a situation in which workers' qualifications exceed or fall short of those required for their job under current market conditions (OECD, 2017[21]; Shah and Burke, 2005[22]). Skills imbalances are often associated with several negative impacts, such as a higher risk of unemployment, lower wages, lower productivity and lower job satisfaction (OECD, 2019[2]).

In Southeast Asian countries with available data, skills mismatches by level of qualification and field of study are significant. As shown in Figure 4.2, overqualification is more prevalent in Thailand (34%) and Malaysia (13%) than among OECD countries (16%), which could result in inefficient use of valuable skills, as over-qualified workers may be capable of performing higher-level jobs and more complex tasks but are instead performing below their potential. Over-qualified workers also suffer from wage losses when they work at a lower requirement level (Kracke, Reichelt and Vicari, 2018[23]; Verhaest and Omey, 2012[24]). Data on skills mismatches in other Southeast Asian countries apart from Thailand are limited. In OECD countries, however, under-qualifications are more prevalent, suggesting employers may have difficulties finding workers with the right qualifications. On the other hand, some of these workers may, in fact, have skills that are a good match for the needs of their jobs if they have continued to develop their skills non-formally or informally on the job. Nonetheless, a high share of under-qualified workers could lead to lower productivity at the firm level in the longer term, especially when these workers do not have access to upskilling offers where they can learn extra skills required for the job (see Chapter 3) (Kampelmann and Rycx, 2012[25]).

Field-of-study mismatches reflect a mismatch between the field of study completed by individuals and the field of study typically required for the job in which they are employed. Field-of-study mismatches occur when individuals choose fields of study that are not well aligned with labour market needs or when the demands of the labour market change in such a way that those fields are no longer in such high demand. Field-of-study mismatches are particularly problematic for graduates when they are forced to accept a job requiring lower qualifications because they lack the field-specific skills in demand. Available data show that around 37% of workers in Thailand are mismatched by field of study (Figure 4.2) (OECD, 2021[26]).

Besides facilitating a good match between the skills of individuals and the skills requirements of jobs, it is also important to have workplace practices that make full use of people's skills. Evidence suggests that higher intensive use of skills stimulates investment, employee engagement and innovation (OECD, 2016[27]; 2019[28]; 2021[26]). For example, information-processing skills (e.g. literacy, numeracy, information and communication technology [ICT] and problem solving) are useful in a wide variety of social and work contexts, allowing people to carry out a wide range of tasks. These skills allow workers to analyse information and solve problems, and there is evidence that their use is associated with productivity increases. There is a significant difference in the use of these skills between the two Southeast Asian countries with available data (Figure 4.3). For instance, in Singapore, there is a relatively high use of all types of information-processing skills, while the usage of these skills in Indonesia is relatively low. In both countries, writing skills are frequently used, while the use of numeracy skills is less common. Nonetheless, data on the use of information-processing skills at work remains scarce for Southeast Asian countries, highlighting the need to improve the collection of data that could be used to develop policies to improve the use of skills at work.

Figure 4.2. Share of workers mismatched by qualification level and field of study in Southeast Asia and selected OECD countries, 2017 or latest available year



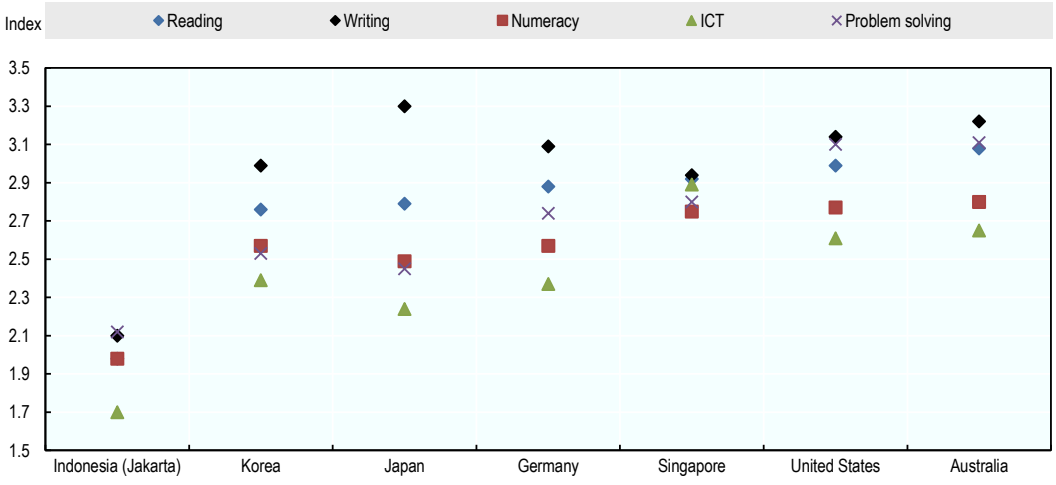
Note: Workers are mismatched by qualification level when their highest obtained qualification (primary education or below, lower-secondary education, upper-secondary and post-secondary non-tertiary education, or tertiary education) is higher or lower than the one most commonly observed among workers 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, 2011/12 for Korea and Japan, and latest available year for the OECD average.

Source: Adapted from OECD (2018[29]), *OECD Survey of Adult Skills (PIAAC)*, www.oecd.org/skills/piaac/data/; Thai and Malaysia Labour Force Survey; Australian Survey of Education and Work.

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Figure 4.3. Information-processing skills used at work in Southeast Asia and selected OECD countries, 2012/2015

Index of frequency of skills usage on a scale of 1 (least frequent) to 5 (most frequent)



Source: OECD (2018[29]), *OECD Survey of Adult Skills (PIAAC)*, www.oecd.org/skills/piaac/data/.

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More could be done to promote the effective use of skills in everyday life in Southeast Asia

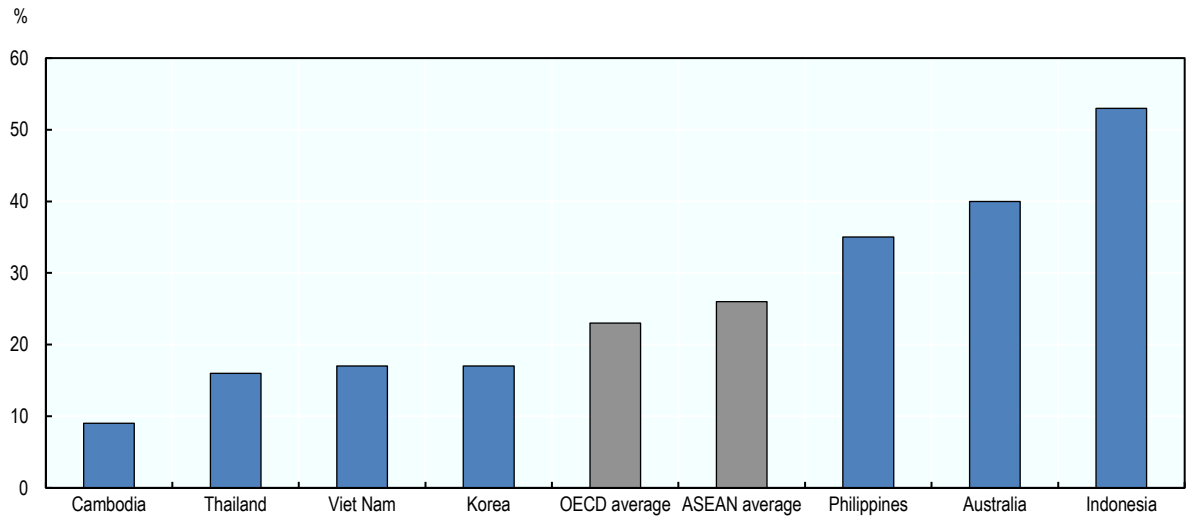
It is important to ensure the full and effective use of skills in the workplace, society, and everyday life. People use their skills in a variety of ways in society and everyday life, including through civic engagement (e.g. volunteering and participating in political parties or religious groups) and participation in leisure activities (e.g. sports and recreational groups, reading books). Civic engagement activities may take many forms, such as membership in an organisation or association, participation in charitable activities, support for environmental causes, participation in protests and social movements, signing of petitions and volunteering, among others (American Psychological Association, 2022[30]; Ghiglieri et al., 2020[31]; Keeter et al., 2002[32]). These activities are typically unpaid and non-compulsory, allowing people to form meaningful relationships with others, experience an increased sense of community, and improve social well-being (Albanesi, Cicognani and Zani, 2007[33]). Through participation in such activities, people can also acquire new skills and knowledge that may enhance career or employment prospects. Participation in recreational activities involving others, such as sports and recreational clubs, can help transfer and strengthen interpersonal skills and develop peer relationships. Recreational activities pursued alone, such as reading and solving puzzles, increase general knowledge, improve memory and reduce stress, among other benefits. When parents use their literacy skills and read books to their children at home, it raises the likelihood that the child will also develop reading literacy (Hemmerechts, Agirdag and Kavadias, 2017[34]; OECD, 2021[26]; 2019[2]).

A common civic engagement activity where individuals can make use of their skills is volunteering. Volunteer work refers to time devoted to non-remunerated and non-compulsory activities whose primary concern is to uphold the common good. Volunteerism has positive effects on individuals' well-being, including happiness, health, life mastery and life satisfaction. Also, it contributes to broader societal development, as the beneficiaries of volunteering activities are often disadvantaged groups, such as low-income individuals, migrants or the homeless (Huang, 2019[35]; OECD, 2015[36]). These many benefits underscore the need to promote a culture of volunteerism in Southeast Asia, especially among individuals who are not always actively engaged in the labour market, such as youth and older adults. This is one of the key points outlined in the ASEAN Work Plan on Youth 2016-2020, which recognises the role that voluntary work plays in helping young people gain new skills, as well as in allowing them to perform beneficial and altruistic tasks for their communities (Agbisit and ASEAN Editorial Team, 2021[37]; Gavelin, Svedberg and Pestoff, 2022[38]). Participation in volunteering varies considerably across Southeast Asian countries (Figure 4.4). The share of people who volunteered time to an organisation in the past month is relatively high in some countries, such as Indonesia (53%) and the Philippines (35%), but the shares in Thailand (16%) and Cambodia (9%) are relatively low by international comparison (OECD, 2019[39]). The average across ASEAN countries (26%) is slightly higher than the OECD average (23%).

While data on the extent to which skills are used in Southeast Asian society are limited, the data that are available suggest potential room for improvement. For example, individuals in Singapore use information-processing skills in everyday life (e.g. reading, writing, numeracy and ICT) at similar but slightly lower rates than the OECD average (OECD, 2018[29]). In contrast, the use of such skills in Indonesia is very limited compared to other countries (Figure 4.5). Across all countries in the region and the OECD (with available data), reading and ICT skills are the most frequently used in everyday life, while numeracy skills are often less used**.**

Figure 4.4. Share of people who volunteered time to an organisation in the past month in Southeast Asia and selected OECD countries, 2019

Percentage of working-age population

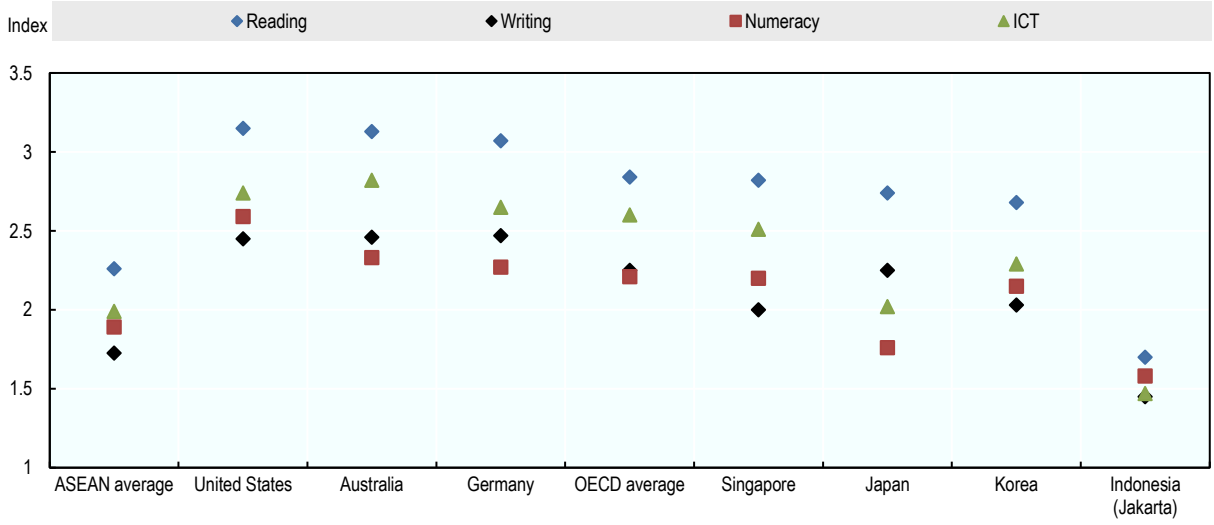


Source: OECD (2019[39]), *Society at a Glance: Asia/Pacific 2019*, https://doi.org/10.1787/soc_aag-2019-en.

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Figure 4.5. Information-processing skills used in everyday life in Southeast Asia and selected OECD countries, 2012/2015

Index of frequency of skills usage on a scale of 1 (least frequent) to 5 (most frequent)



Source: OECD (2018[29]), *OECD Survey of Adult Skills (PIAAC)*, www.oecd.org/skills/piaac/data/.

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Opportunities to use skills effectively in work and society

Using skills effectively in work and society is central to the ability of Southeast Asian countries to make the most of the available skills supply to spur innovation, productivity and growth, and strengthen social cohesion. Based on an assessment of the performance of countries in the region, the following opportunities have been identified for improving the use of skills in work and society:

1. promoting participation in the formal labour market
2. making intensive use of skills in work and society
3. increasing demand for higher-level skills.

Opportunity 1: Promoting participation in the formal labour market

Investments in developing skills will only have the desired impact if those skills are made available to the formal labour market. Giving people opportunities to participate in the formal labour market and making full use of their skills at work not only improves individual well-being but also strengthens economic growth (OECD, 2019[2]). Moreover, expanding the supply of skills through increasing formal labour market participation of groups currently at the margins of the labour market can help alleviate skills shortages while fostering more equitable economic and social outcomes. Promoting participation in the formal labour market is particularly important in the context of megatrends and the COVID-19 pandemic, which are combining to exacerbate skills shortages in some sectors (see Chapter 2).

Southeast Asian countries have relatively high labour market participation rates overall. However, as highlighted in the performance section, in Southeast Asian countries, the participation rates of disadvantaged groups, such as women, youth and migrants, are significantly lower than for the general population. These groups typically face higher barriers to accessing employment and, by extension, to effectively using their skills in the labour market (OECD, 2017[40]). This is concerning as women, youth, and migrants are all important economic actors. Women account for half of the population and make critical contributions to the economy. Activating the skills of young people is particularly important as they are the future. Migrants play an important role in alleviating skills shortages and supporting knowledge transfer across borders (see Chapter 2).

Facilitating participation in the formal labour market is particularly important. Informal employment, which is associated with poor working conditions, such as lower pay, fewer benefits and a lack of training and career development opportunities, is prevalent across Southeast Asian countries. Lack of skills is both a cause and a consequence of informality. It is important to provide people with access to high-quality and equitable education and training opportunities from an early age to ensure that they develop high levels of skills and, later, as adults, can find jobs and work productively, allowing their employers to absorb the greater costs associated with providing them with formal jobs (see Chapter 3). At the same time, it is also important to facilitate the transition of those working in the informal labour market to the formal labour market by simplifying the procedures of registering businesses and workers and improving the effectiveness of labour inspection. By making it easier for workers to obtain formal employment contracts, governments improve workers' living and health standards and create incentives for workers and firms to invest in developing skills.

Opportunity 1 describes two policy directions for promoting greater participation in the formal labour market: first, Southeast Asian countries can reduce barriers to employment for disadvantaged groups; second, Southeast Asian countries can facilitate the transition of workers from the informal to the formal labour market.

Reducing barriers to employment for disadvantaged groups

Strengthening opportunities for all people to activate their skills is a key to building inclusive and efficient labour markets. Efforts to support people's skills development from an early age and in adulthood (see Chapter 3), combined with efforts to reduce employment barriers after completion of education and training, are essential to fostering an inclusive recovery from COVID-19 and strengthening resilience to future shocks. This policy direction presents areas for countries in the region to reduce barriers to employment among three disadvantaged groups in Southeast Asia: women, youth and migrants.

Even though socio-economic background should not be a determinant in accessing the formal labour market, disadvantaged groups face higher barriers to finding employment (OECD, 2021[26]). As described in the previous section, women relative to men have lower employment rates; a substantial share of youth are neither in employment, education, nor training (NEET); and many migrants can often only find employment in certain sectors, such as construction, agriculture and domestic services.

The COVID-19 pandemic has further exacerbated existing inequalities of opportunities in the formal labour market. Recent data show that women, youth and migrants, especially those with lower levels of education, were significantly more likely to lose their jobs and experience decreased incomes due to the pandemic (Bundervoet, Davalos and Garcia, 2021[41]). Table 4.3 illustrates the range of interventions that countries in the region and across the OECD have taken to protect their workforce against the impacts of the pandemic – whether related to employment or public health. The most common policy measure taken was the suspension or postponement of on-the-job training opportunities to protect individuals from the spread of the virus. However, this was also supported by various measures to facilitate employment among workers and firms that were the most socio-economically impacted. These include the use of employment incentives and job creation in the public sector in public works.

Table 4.3. Adjusted employment services in response to the COVID-19 crisis in Southeast Asia and selected OECD countries, 2021

Adjustment in employment services	ASEAN					OECD				
	Cambodia	Malaysia	Myanmar	Singapore	Viet Nam	Australia	Germany	Japan	Korea	OECD total
Suspensions or postponement of on-the-job training	☒	☒	☐	☐	☒	☒	☒	☐	☒	25
Employment incentives added or adjusted	☒	☐	☐	☐	☒	☒	☐	☐	☒	22
Adjusted or new places added on public sector direct job creation/public works	☐	☐	☐	☐	☒	☐	☐	☒	☒	13
Additional places on training programmes made available	☒	☒	☒	☒	☒	☒	☐	☐	☐	11
Start-up incentives	☒	☐	☐	☐	☒	☒	☐	☐	☐	9
Other active labour market programmes (please specify)	☐	☐	☐	☒	☐	☒	☐	☐	☐	7

Note: The column "OECD total" refers to the total number of OECD countries with the policy measure in place. In Singapore, other active labour market programmes were implemented, such as the SGUnited Traineeships (ceased in March 2022) for fresh graduates to gain industry-related experience and exposure in preparation for future opportunities, as well as the SGUnited Mid-Career Pathways Programme, where mid-career individuals benefit from training to develop new skills and boost employability during the restructuring of the economy after the COVID-19 pandemic. Data are not available for the United States.

Source: OECD (2021[42]), *OECD Skills Strategy Southeast Asia Policy Questionnaire*; OECD (2021[43]). *Active Labour Market Policy Measures to Mitigate the Rise in (Long-term) Unemployment*, www.oecd.org/els/emp/almpmeasurescovid19.pdf.

Southeast Asian countries recognise the additional challenges that disadvantaged groups face and are making efforts to tackle the issue. Several ASEAN-wide initiatives and country programmes are in place to support disadvantaged groups in finding employment (Table 4.4). In recent years, Southeast Asian countries have expressed high-level political commitment to recognising the role that disadvantaged groups, such as women, persons with disabilities, the elderly, migrant workers, and people from rural or remote areas, play in the region's socio-economic development. Countries have put in place interventions that eliminate obstacles to decent employment and business opportunities for these groups, providing targeted skills development support and raising awareness among companies about their rights in the workplace, among others.

Table 4.4. ASEAN-wide initiatives promoting formal labour market participation of vulnerable groups

Name	Year	Description
Joint Statement of the ASEAN Ministerial Meeting on Social Welfare and Development: Mitigating Impacts of COVID-19 on Vulnerable Groups in ASEAN	2021	• Recognises the differentiated and disproportionate impacts of COVID-19 on disadvantaged groups and the pressing need to develop comprehensive recovery programmes and social protection for them • Notes that women form a majority of the health and social sector workforce and that their work environment, safety and psycho-social needs are pivotal • Recognises the need to address the digital divide across and within ASEAN to assist in the implementation of policies covering disadvantaged groups and address the negative impacts of the pandemic on them
ASEAN Declaration on Human Resources Development for the Changing World of Work and its Roadmap	2020	• Aims to improve the inclusivity of education and employment across the region by increasing access to skills training and job opportunities for all, especially women, persons with disabilities, the elderly, those in rural or remote areas, and those employed in SMEs
ASEAN Enabling Masterplan 2025: Mainstreaming the Rights of Persons with Disabilities	2019	• Aims to remove obstacles to employment and business opportunities for persons with disabilities and encourages a disability-inclusive environment in enterprises run by persons with or without disabilities • Establishes one-stop entrepreneur centres for persons with disabilities to provide them with more information on MSMEs, networking opportunities and funding for their enterprises • Promotes inclusive skills training on entrepreneurship among persons with disabilities • Raises awareness among financial institutions and human resources staff about the rights of persons with disabilities, emphasising diversity, equality and inclusion
ASEAN Labour Ministers' Statement on the Future of Work: Embracing Technology for Inclusive and Sustainable Growth	2019	• Aims to increase the participation of women, persons with disabilities, the elderly and youth in various career opportunities, especially in STEM • Adopts policies, initiatives and training on technological skills and digital platforms in order to facilitate the access of these vulnerable groups to decent work
ASEAN Consensus on the Protection and Promotion of the Rights of Migrant Workers	2017	• Requires employers from receiving states to undergo employer education programmes that explain the legal procedures for hiring a migrant and their rights to ensure their fair treatment in the workplace • Ensures that both sending and receiving states carry out their obligation to issue an employment contract (with clear and basic terms of employment subject to national laws) and proper documentation by relevant authorities and/or employers • Promotes collaboration among ASEAN member states to ensure access to labour market information and skills development opportunities for migrant workers.

Source: ASEAN (2017[44]), *ASEAN Consensus on the Protection and Promotion of the Rights of Migrant Workers,* https://asean.org/wp-content/uploads/2017/11/ASEAN-Consensus-on-the-Protection-and-Promotion-of-the-Rights-of-Migrant-Workers1.pdf; ASEAN (2020[45]), *ASEAN Declaration on Human Resources Development for the Changing World of Work and its Roadmap*, https://asean.org/wp-content/uploads/2021/08/ASEAN-Declaration-on-Human-Resources-Development-for-the-Changing-World-of-Work-and-Its-Roadmap.pdf; ASEAN (2019[46]), *ASEAN Enabling Masterplan 2025: Mainstreaming the Rights of Persons with Disabilities*, https://asean.org/wp-content/uploads/2019/03/Publication-ASEAN-Enabling-Masterplan-2025-1.pdf; ASEAN (2019[47]), *ASEAN Labour Ministers' Statement on the Future of Work: Embracing Technology for Inclusive and Sustainable Growth*, https://asean.org/asean2020/wp-content/uploads/2021/01/ASEAN-Labour-Ministers-Statement-on-the-Future-of-Work-Embracing-Techno....pdf; ASEAN (2020[48]), *Joint Statement of the ASEAN Ministerial Meeting on Social Welfare and Development: Mitigating Impacts of COVID-19 on Vulnerable Groups in ASEAN*, https://asean.org/wp-content/uploads/2021/03/22.-AMMSWD-Joint-Statement-on-COVID19_ADOPTED.pdf; ASEAN (2016[49]), *Vientiane Declaration on Transition from Informal Employment towards Decent Work Promotion in ASEAN and its Regional Action Plan*, https://asean.org/wp-content/uploads/2016/09/Vientiane-Declaration-on-Employment.pdf.

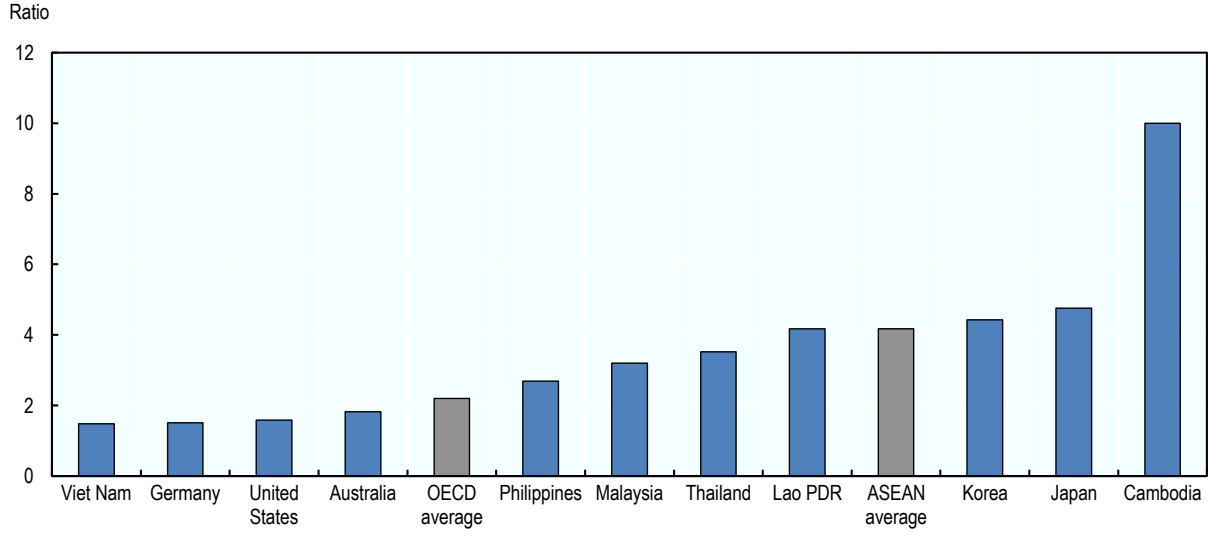
However, as noted by stakeholders consulted during the project, disadvantaged groups' formal labour market outcomes need to be improved. Recent data show that participation rates of disadvantaged groups remain relatively lower than for the general population (Figure 4.1), and there is evidence suggesting that women, youth and migrant workers in Southeast Asia still face relatively greater barriers compared to their counterparts (OECD, 2021[26]). The specific barriers for each group are discussed in the following sub-sections.

Reducing employment barriers for women

For women, one of the main barriers to participation in economic activities is the heavy burden of unpaid care work, such as childcare, care for elderly relatives, cooking and cleaning. This burden reduces the time they can devote to economic activities and hampers their productivity in the formal labour market. The gender gap in time spent on unpaid care and domestic work is relatively large in Southeast Asian countries (Figure 4.6). On average, women spend 4.2 times longer hours than men on unpaid care work in Southeast Asia compared to an OECD average of 2.2 times longer. The gap was especially large in Cambodia (10 times), followed by the Lao PDR (4.1 times) and Thailand (3.5 times). Evidence suggests that the COVID-19 crisis and associated lockdown measures may have further exacerbated women's unpaid work burden (OECD, 2021[50]). Mothers often ended up being the ones who assumed the extra work associated with home-schooling and childcare while classes were closed. Moreover, women are more likely to work in service occupations, including paid care work, which initially exposed them to job loss during the pandemic. This exacerbated gender differences in the distribution of paid and unpaid work.

Figure 4.6. Gender gap in time spent on unpaid work in Southeast Asia and selected OECD countries, 2019

Female-to-male ratio of average time spent on unpaid domestic, care and volunteer work over a 24-hour period



Note: The ratio shows the number of hours women spent on unpaid domestic, care and volunteer work within a day over the number of hours men spent on unpaid domestic, care and volunteer work within a day.
Source: OECD (2019[51]), *Gender, Institutions and Development Database (GID-DB), 2019*, https://stats.oecd.org/Index.aspx?DataSetCode=GIDDB2019.

StatLink https://stat.link/pg6izc

The high gender gap in unpaid care and domestic work in Southeast Asia reflects traditional gender roles, which are reinforced through strong social norms. In many Southeast Asia countries, strong patriarchal social norms remain and continue to shape stereotypical gender roles, with men, especially from rural areas, often reporting a fear that performing "women's chores" will result in social stigma (ActionAid, 2017[52]). Awareness-raising campaigns could help balance more responsibilities for unpaid domestic work between men and women and reshape traditionally defined gender roles. Evidence suggests that raising knowledge and awareness about the economic costs (e.g. reduced time for women to allocate to economic activities) and social costs (e.g. increased stereotypes on gender roles, women's lack of confidence in economic activities) of unequally shared responsibilities within the household can lead to more equal distribution of responsibilities for domestic tasks (OECD, 2021[50]).

Several OECD countries have recently introduced national campaigns to tackle gender stereotyping and norms, using the support of both traditional and online media channels. A good example is the Equilibrium Man Challenge in Australia. It is a joint public-private campaign that features a series of online documentaries, which follow a group of men who have taken up flexible work arrangements to care for family members and pursue skilled hobbies outside of work. It aims to raise awareness about the beneficial effects of work-life balance for both partners, resulting in a more equal distribution of care responsibilities. Some benefits of such flexible arrangements at work include clearer roles in family life among men, better time management, better outcomes in terms of health and well-being, increased knowledge and further skills development (OECD, 2017[53]; Parents at Work, 2015[54]). In Southeast Asia, several countries, such as Lao PDR, have launched initiatives to facilitate women's participation in income-generating activities in sectors usually dominated by men, such as construction (Box 4.1). Cambodia has also implemented a gender mainstreaming action plan (GMAP) to expand the scope of rights and benefits that women could exercise in the labour market (Box 4.1).

Flexible work arrangements, such as part-time work, flexible working hours and remote working, can encourage and facilitate women's participation in the formal labour market. Such arrangements allow women to combine work with other care and social responsibilities more easily. Evidence suggests that the removal of disincentives to part-time work could result in a significant improvement in employment among women (OECD, 2017[40]). In OECD countries, women, especially mothers, constitute the bulk of part-time workers (OECD, 2017[40]). Efforts to contain the COVID-19 pandemic have provided an impetus for expanding flexible work arrangements, such as remote working and flexible working hours (see Chapter 2).

Some Southeast Asian countries have adopted policies to promote women's participation in the formal labour market by facilitating the expansion of flexible work arrangements. In Malaysia, the government introduced the Work-Life Practices programme in 2015, which promotes flexible working arrangements (e.g. option to leave earlier from work, staggered hours, job sharing, telecommuting), a healthy work-life balance among employees (e.g. study/exam leaves, family care and paternal duties) and family-friendly facilities in the workplace (e.g. nursing rooms for mothers, parking spots for pregnant women, childcare centres) (TalentCorp, 2018[55]). The programme also provides tax incentives to firms when they purchase necessary technologies for remote work and adopt remote-work-friendly work practices, such as online training services. However, stakeholders consulted during this project noted that flexible working arrangements are usually easier to implement in large companies, which have access to greater resources than in SMEs, which are typically more resource constrained. Thus, SMEs could benefit from government support in promoting such flexible working arrangements. In Southeast Asian countries, SMEs represent around 97-99% of firms and, on average, account for around 66.3% of employment. The relative importance of SMEs providing employment varies across Southeast Asian countries, ranging between 51.7% in Viet Nam to 97% in Indonesia (OECD, 2021[56]).

Furthermore, access to part-time work, as a form of flexible working arrangement in formal employment, remains sporadic across Southeast Asian countries. While 25.32% of all employment across the region is part-time, most part-time working arrangements occur in casual jobs rather than in contractual employment

with formal guarantees (Nguyen, Nguyen-Huu and Le, 2016[57]; ILOSTAT, 2022[58]). Some Southeast Asian countries maintain legislation that may discourage certain forms of employment, including part-time work. Part-time work in Southeast Asian countries is discouraged either using implicit fiscal disincentives (e.g. high mandated minimum social security contributions) or by placing excessive restrictions on the use of part-time contracts (OECD, 2017[40]). Such rules were originally put in place to protect workers' rights and prevent workers from being exploited, but inadvertently, they could harm women's economic opportunities and encourage informal employment. Across Southeast Asian countries, employers' contributions to social security protection have increased as coverage was expanded to cover pensions, health insurance and welfare assistance, among others. In 2020, employer social security tax rates varied significantly across countries: Myanmar (3%), Cambodia (3.4%), Thailand (5%), Indonesia (5.74%), the Philippines (8%), Brunei Darussalam (8.50%), Malaysia (12%), Singapore (17%), and Viet Nam (21.5%) (KPMG, 2023[59]). The higher the social security contributions, the more disincentivised employers are to offer part-time employment since the contribution rates are almost identical to full-time employment (OECD, 2005[60]).

Reducing employment barriers for youth

For youth, transitioning from school to the formal labour market is challenging. In Southeast Asia, youth, who represent about 34% of the population, face a number of challenges to their participation in the formal labour market. Evidence from low- and middle-income countries, including those in Southeast Asia, suggests that it takes a while for young people to find their first job, even when the job is not entirely to their satisfaction. According to School-to-Work transition survey data, the average time to find a first job across Southeast Asia was about 11.6 months, and the average time to find a satisfying job was 13.8 months (ILO, 2019[61]; 2020[62]). These labour market challenges grew more severe during the COVID-19 pandemic. Compared to the pre-pandemic youth unemployment rate of 8.9% in 2019, there has been a significant increase during the pandemic to 11.3% in 2021 (ILOSTAT, 2021[63]). This unemployment rate represents about 25.4 million youth in Southeast Asia who were left unemployed. Addressing youth unemployment is particularly critical, as it has long-term consequences. Individuals unemployed in youth tend to lose touch with the formal labour market, earn significantly less over their lifetime, and be more pessimistic about their future (OECD, 2020[64]).

The main employment barriers youth face include a lack of previous work experience and mismatches between the skills they have acquired in education and those required by employers (ILO, 2020[62]). As noted in Chapter 3, it is crucial to ensure that youth are equipped with skills in demand before they enter the labour market. Ensuring school curricula align with changing demands in the labour market and provide young people with sufficient and quality career guidance could facilitate smoother transitions to the labour market (see Chapter 3). PES play an important role in facilitating school-to-work transitions for young people: they not only help young people find relevant jobs more quickly, but they also help firms overcome skills shortages by providing them with a larger pool of job seekers. Many Southeast Asian countries offer targeted employment services for young people. For example, the Philippines introduced the JobStart Philippines Programme (JSP) to reduce the high percentage of NEET in the country (Box 4.1). The programme matches young Filipino jobseekers with internship and employment opportunities and provides them with technical training and one-on-one career coaching.

To improve the tailoring of employment services for disadvantaged groups, such as youth, Southeast Asian countries could promote the digitalisation of labour market databases and job-matching services (ILO, 2020[62]). Digitalisation and new technologies, such as big data, artificial intelligence (AI) or advanced algorithms, help identify the specific skills profile of job seekers among youth and improve the targeting of employment services (Mwasikakata, 2019[65]). Many OECD countries actively use digitalisation to provide efficient and tailored employment services. For example, in Flanders, Belgium, the automated matching platform "Elise" can compare registered curriculum vitae (CVs) against millions of vacancies in real-time, resulting in more accurate matches than any human could ever achieve (OECD, 2019[2]). The

Netherlands has a digital profiling tool that measures the probability that a job seeker will resume work within a year. The outcome informs the intensity of employment support to be provided to the job seeker (Box 4.1). In Malaysia, the Graduates Empower Programme of MYFutureJobs uses AI to match individuals with the most suitable jobs based on skills, experience and education levels (Malaysian Ministry of Human Resources, 2022[66]). The effectiveness of these efforts hinges upon the quality of data collection around skills and the labour market (see Chapter 5).

Providing online employment services in addition to in-person employment services has become more important during the COVID-19 pandemic following the introduction of social-distancing requirements (see Chapter 2). Since, on average, youth relative to older adults are more familiar with digital devices and online services, online employment services could be particularly appropriate for this target group. Examples of online employment services provided by public or private employment services could include career guidance, mental counselling, support with preparing resumes and CVs, mock interviews, skills profiling and training, among others. Online services could be delivered through online communication tools, portals, platforms, apps and texting. The advantages of online services are that they are typically less costly, more convenient, more flexible, allow for more frequent and instant communication, and are location-independent. For example, in Canada, Youth Employment Services provides many employment services on line, including counselling, training and mentorship, among others (Youth Employment Services, 2022[67]). While during the pandemic, many PES in Southeast Asia started offering online service options, common challenges included insufficient digital skills among PES.

Reducing employment barriers for migrants

Like women and youth, migrants in Southeast Asia also face challenges in finding employment. These challenges include the high cost of legal counselling for employment, lack of coverage by labour law, limited access to labour market information, and language barriers (World Bank, 2017[68]). Although ASEAN member states have put in place several mutual recognition agreements (MRAs) to facilitate the flow of skilled labour within the region, these flows remain relatively constrained due to the inconsistencies of MRAs with national laws and regulations (Gentile, 2019[16]).

In recent years, ASEAN countries have adopted measures and taken steps to facilitate international labour mobility (see Chapter 2). Several Southeast Asian governments have set up specialised administrative and regulatory offices responsible for managing cross-border recruitment and relevant services. These offices can be useful in protecting both workers and employers, as well as facilitating labour mobility (Gentile, 2019[16]; ILO, 2016[69]). A regional, donor-funded, ten-year programme named Tripartite Action to Enhance the Contribution of Labour Migration to Growth and Development (also known as TRIANGLE in ASEAN) is active in Cambodia, Lao PDR, Malaysia, Myanmar, Thailand, and Viet Nam to deliver services directly to migrant workers and their communities through a network of migrant worker resource centres (MRCs), available in countries of origin and destination. Managed in partnership with government institutions, trade unions and civil society organisations, MRCs provide services such as migrant training, language lessons, vocational or financial skills training, as well as awareness raising about the labour rights of migrants, legal counselling and health checks, among others. Similar initiatives are also being implemented by individual governments, such as Singapore, which offers the Settling-In Programme (SIP). The SIP is a compulsory course that provides training to foreign domestic workers about their rights and responsibilities, culture in Singapore and improved working practices in the households where they work (Box 4.1). Stakeholders consulted throughout the project noted that despite the existence of these initiatives, most migrants are not aware of the existence of the MRCs and other specialised services for migrants; therefore, they do not use them.

Migrant workers often have limited information about safe migration and their rights at work or where they can access support or information. Southeast Asian governments should create awareness of the MRCs and other migrant-specialised services by using various channels to inform workers, especially those in hard-to-reach communities, about the relevant information and services they provide. As various

institutions are active in serving migrants, it is important to establish co-ordination mechanisms to avoid overlapping responsibilities and unnecessary, duplicative actions. Specialised institutions serving migrant workers (e.g. MRCs) should play a key role in disseminating information about the recruitment process, legal assistance, and language training. To improve outreach, such institutions should work closely with migrant civil society organisations. The information should be provided as much as possible in the languages of the migrants. Providing emergency assistance, legal support and training to migrant workers are particularly important, as they were one of the groups most vulnerable to the COVID-19 pandemic (ILO, 2021[70]). Given the large intra-regional migration flow, regional co-operation in migration policies would need to be strengthened to improve cross-border recruitment and integration services.

Box 4.1. Country examples relevant to supporting employment for disadvantaged groups

Cambodia's efforts to promote female participation in the labour market

Each line ministry in Cambodia has a gender working group responsible for developing and implementing a GMAP. For instance, the Ministry of Labour and Vocational Training is committed to promoting gender equality through initiatives in the areas of employment, migration and vocational training. The Ministry of Commerce developed a GMAP providing concrete initiatives to assist women business owners in expanding their businesses. The Ministry of Agriculture, Forestry and Fisheries developed a GMAP to promote greater inclusion of women in the civil service and allow more capacity for rural women to have stronger rights for social land concession, participating in the private sector, participating in village and community groups, credit and extension services.

Lao PDR's Poverty Reduction Fund

The Poverty Reduction Fund was established to narrow Lao PDR's gender gap in labour market participation and facilitate women's involvement in income-generating activities. Under the fund, the Road Maintenance Groups programme was established to connect women to paid jobs in the infrastructure sector, targeting those from the poorest households in remote areas of Lao PDR. In addition, training was provided to ensure that the women acquired the right skills to carry out their new jobs and that women participated in decision-making processes (i.e. for the allocation of resources and management of project funds) related to the programme.

Netherland's jobseeker profiling

In the Netherlands, a digital profiling tool called Work Profiler determines the probability that a job seeker will resume work within a year and offers a quick diagnosis of the job seeker's obstacles to returning to work. The tool is based on 11 factors, including age, years of work experience, views on return to work, job search behaviour, and physical and mental work ability. The selection of factors can shed light on how risk factors associated with disadvantaged groups, such as having a disability or low psycho-social capacity, can affect the chances of resuming employment. Each job seeker fills in the questionnaire electronically before three months of unemployment. The outcome of the questionnaire determines whether the job seeker is entitled to intensive support to increase the chances of finding a job. The tool is used in about one-third of all unemployment offices in the Netherlands.

Philippines' JobStart Philippines Programme

The Department of Labour and Employment introduced the JobStart Philippines Programme to reduce the high percentage of youth NEETs. The JSP provides young Filipinos with technical training and supports them in entering the labour market by matching job seekers with employment opportunities. JSP is developed as an employer-led programme that offers skills training, one-on-one career coaching and opportunities for technical training and internships with private-sector employers.

Singapore's Settling-In Programme to support migrant workers

The SIP is a compulsory course that provides training to foreign domestic workers (FDWs) who work in Singapore. It includes information on their rights and responsibilities; adapting to living and working in Singapore; fostering good working relationships in the household; stress management; work safety, and ways to seek help when in need. All first-time FDWs are required to complete the course within the first three days of their arrival in Singapore. Their employers bear the cost of the SIP. The SIP is conducted in English or the FDWs' native languages, such as Bahasa Indonesia, Tagalog or Burmese.

Source: ADB (2015[71]), *Promoting Women's Economic Empowerment in Cambodia*, www.adb.org/sites/default/files/publication/156499/promoting-womens-economic-empowerment.pdf; Lao PDR Ministry of Agriculture and Forestry (2018[72]), *How We Work – Our Approach*, www.prflaos.org/feature-article/how-we-work-our-approach; Wijnhoven and Havinga (2014[73]), *The Work Profiler: A Digital Instrument for Selection and Diagnosis of the Unemployed*, https://doi.org/10.1177/0269094214545045; ADB (2018[74]), *Reducing Youth Not in Employment, Education, or Training through JobStart Philippines*, https://dx.doi.org/10.22617/BRF189205; ASEAN (2017[75]), *Compendium on Migrant Worker's Education and Safe Migration Programmes*, https://asean.org/wp-content/uploads/2012/05/ASEAN-Compendium-on-Workers-Education-and-Safe-Migration-Programmes.pdf; World Bank (2020[76]), *Women pave the way for paid jobs and poverty reduction in Laos*, www.worldbank.org/en/news/feature/2020/11/25/women-pave-the-way-for-paid-jobs-and-poverty-reduction-in-laos.

Recommendations for reducing barriers to employment for disadvantaged groups

- **Facilitate women's participation in the labour market through the promotion of a more equitable distribution of housework and encouraging flexible work arrangements.** Governments should promote a more equitable distribution of housework to ensure women have the time and energy to participate more fully in the formal labour market. Social campaigns and awareness-raising training should be provided to change perceptions about gender roles and overcome prejudices against female participation in the formal labour market. Furthermore, governments should promote flexible work arrangements, such as flexible working hours, part-time work and remote working, to encourage and facilitate the participation of women in the formal labour market. This can be done, for example, by reviewing and adjusting regulatory and legal frameworks where necessary to ensure that they do not discourage flexible forms of employment, including part-time work, through excessive restrictions. Governments could also provide incentives to SMEs (e.g. tax breaks, subsidies, grants) to adopt the infrastructure (e.g. work laptops, software, Internet connections) and flexible working practices needed to allow employees to work from home.
- **Support youth employment through tailored and online employment services.** Employment service providers across Southeast Asian countries should use digital solutions to improve the tailoring of employment services for youth. Digital solutions, such as AI and advanced algorithms, leverage big data to identify the specific skills profile of job seekers among youth, compare them with all available job vacancies in real-time and find the best possible match. Based on the proposed matches tailored to each youth job seeker, the employment service providers can prioritise and decide which kinds of support (e.g. re-skilling training solutions, job application support, employment incentives) would best match clients' needs to increase their employment chances. Furthermore, since youth are typically more used to online solutions than older adults, online employment services could be particularly well-suited to reach and engage youth. Typical employment services that could also be provided on line include career guidance, mental counselling, support with preparing resumes and CVs, mock interviews, skills profiling and training, among others. Employment service providers can use a range of online communication tools, portals, platforms, apps and texting to interact with youth.
- **Enhance migrant employment possibilities through job search support, legal counselling, and language training from specialised institutions for migrants.** Southeast Asian countries should create and expand specialised institutions, such as the MRCs, to support migrant workers

in finding employment. Such institutions provide migrants with relevant employment information to support job searches, legal counselling and language training. Furthermore, such institutions could support employers with any administrative procedures needed to hire migrants. In addition, awareness about the services from such migrant-specialised institutions should be raised by reaching out to migrants through migrant civil society organisations that can communicate with migrants in their own languages, and which may already also provide other complementary services, such as food and shelter. Finally, given the large intra-regional migration flow, regional co-operation in migration policies should be strengthened to improve cross-border recruitment and integration services.

Facilitating the transition of workers from the informal to the formal labour market

The use of skills at work differs largely between informal and formal employment. Informal employment constitutes employment relationships that are – whether in law or practice – not subject to national labour legislation, social protection, income taxation or entitlement to employment benefits (Box 4.2). Higher levels of informal employment are prevalent in countries with lower GDP, lower Human Development Index, lower productivity and higher poverty levels. Both informal and formal employment can exist within the same labour market (OECD/ILO, 2019[77]). The nature of employment influences the type of work individuals carry out – and consequently, how extensively they can use their skills and competencies in the workplace – as well as the compensation they receive from their employers in exchange for their labour.

Box 4.2. Definitions of informal and formal employment

Informal employment

Informal employment constitutes employment relationships that are – whether in law or practice – not subject to national labour legislation, social protection, income taxation or entitlement to employment benefits (e.g. paid annual or sick leave, advance notice of dismissal, severance pay). It is usually undeclared by employers or employees and is associated with temporary work, casual jobs and jobs with working hours or wages below a specified threshold. Informal employment covers own-account workers and individuals employed by firms operating in the informal sector, as well as contributing family workers of family-owned small businesses.

Formal employment

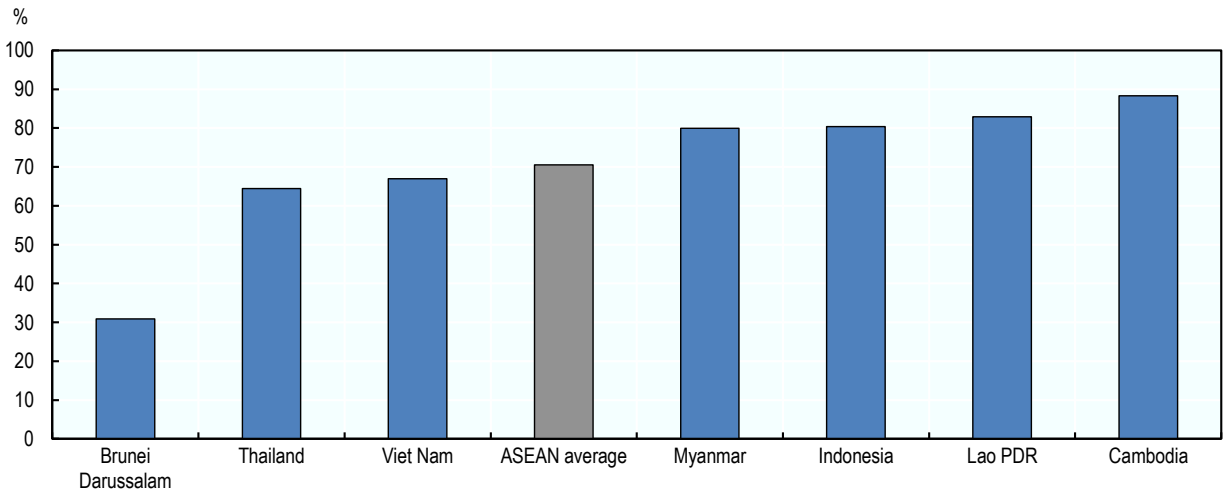
Formal employment is covered by a contractual arrangement that is registered with state authorities, and that regulates employer-employee relationships, such as for income taxation and social protection purposes. Formalisation normally entails registering businesses and jobs, acquiring a licence to operate and regularly paying taxes. Individuals with formal employment have multiple benefits, such as higher pay, compensation packages (including social protection), membership with trade unions, and employer-sponsored training, among others.

Source: Dasgupta (2016[78]), *Moving from informal to formal sector and what it means for policymakers*, https://blogs.worldbank.org/jobs/moving-informal-formal-sector-and-what-it-means-policymakers; Kaplan (2009[79]), *What does formal mean anyway?*, https://blogs.worldbank.org/psd/what-does-formal-mean-anyway; OECD and ILO (2019[77]), *Tackling Vulnerability in the Informal Economy*, https://doi.org/10.1787/939b7bcd-en.

Widespread informal employment in Southeast Asia is a policy concern. On average, 71% of those employed are employed in the informal sector in ASEAN countries. Cambodia (88%) has the highest proportion of informal employment, followed by Lao PDR (82.9%), Indonesia (80.4%) and Myanmar (79.9%), while Brunei Darussalam (30.9%) has the lowest share among countries with available data (Figure 4.7).

Figure 4.7. Rate of informal employment in Southeast Asia, 2021

Percentage of total employment



Note: Due to a lack of data, the latest available year was used for the following countries: Lao PDR (2017); Thailand (2018); Brunei Darussalam, Cambodia, and Indonesia (2019); Viet Nam (2020).
Source: ILOSTAT (2021[80]), *Informal employment rate by status in employment (by sex) (%)*, https://ilostat.ilo.org/topics/informality/.

StatLink https://stat.link/ajzi43

A large informal labour market discourages the full use of workers' skills and hampers a country's economic growth prospects. Since informal workers often lack basic income security, opportunities for skills development, social protection and healthcare, the incentive to work in the informal labour market and to use one's skills there is weak. This can discourage individuals from participating in the labour market altogether and then lead to a reduced overall skills supply in the labour market (OECD, 2019[2]). In addition, individuals working in the informal labour market are typically employed in small firms that lack strong management and workplace practices for making efficient use of workers' skills. As a result, these environments are often characterised by low productivity. Whereas some individuals work informally by choice, evidence suggests that, globally, about 85% of all informal workers are in precarious employment, not through choice but due to a lack of opportunities in the formal sector (IMF, 2021[81]). Moreover, a large informal labour market has repercussions more broadly since firms and individuals operating in the informal sector pay no or limited taxes, reducing government revenues and limiting possibilities to implement redistributive policies. As a result, a large informal labour market keeps a country below its full economic potential (IMF, 2021[81]).

A large informal labour market also limits labour market inclusiveness and harms overall social cohesion. Participants in the informal labour market are disproportionally disadvantaged groups, such as women, youth and migrants, who often lack other options in the formal sector. Therefore, reducing informality can help improve the employment prospects of disadvantaged groups, reducing pay gaps and counteracting occupational segregation (ILO, 2020[62]; OECD, 2017[40]). Supporting the transitioning of workers from the informal sector to decent work opportunities in the formal sector could encourage more people to participate in the labour market generally and, thereby, contribute to the more effective use of available skills while at the same time improving social cohesion. To facilitate the transition of workers from the informal to the formal labour market, this policy direction presents two areas for Southeast Asia to facilitate the transition of workers from the informal to the formal labour market: 1) improving the process of formally registering workers and firms; and 2) improving the enforcement of labour laws and regulations.

Southeast Asian countries acknowledge the prevalence of informal employment in the region and the negative impacts it can have on individuals and society. In response to high informality in the region, in 2016, the ASEAN member states adopted the Vientiane Declaration on Transition from Informal Employment to Formal Employment Towards Decent Work Promotion in ASEAN at the 28th and 29th ASEAN Summit. The plan promotes joint work and sharing knowledge and best practices to address informality in employment. In addition, it discusses methodologies to analyse barriers to formalisation in the national context and support the design and implementation of measures that facilitate the transition to formal employment (ILO, 2019[14]). Individual countries have also put in place initiatives to help informal workers transition into the formal economy. For instance, in Indonesia, the Ministry of Manpower and Transmigration oversees technical and vocational education and training (TVET) centres, known as Balai Latihan Kerja (BLK), which offer free vocational training to informal workers and provide them with formal educational qualifications, helping them find jobs in the formal sector (Box 4.3).

Low levels of skills are both a cause and a consequence of informal employment. People with lower levels of skills are typically less productive and, as a result, do not generate sufficient profits for firms to justify paying the additional costs associated with formalising their employment. As a result, these individuals often find themselves working in the informal labour market. Indeed, evidence suggests that knowledge and skills gaps between informal and formal workers is one of the barriers to workers transitioning from the informal to the formal labour market in Southeast Asia (ILO, 2019[14]). At the same time, those working in the informal labour market often find themselves stuck in jobs that only require low levels of skills and with few opportunities to upskill and reskill, which further limits their opportunities to develop higher levels of skills, increase their productivity and transition to the formal sector (Ciccone, Roncarati and Chaykamhang, 2019[82]). Consequently, the skills of workers in the informal sector may remain low or even atrophy and/or become obsolete (ILO, 2019[83]). These workers are particularly vulnerable in a world being transformed by digitalisation, automation, and other megatrends that are reshaping and increasing the skills needed for success in work and participation in society (see Chapter 2).

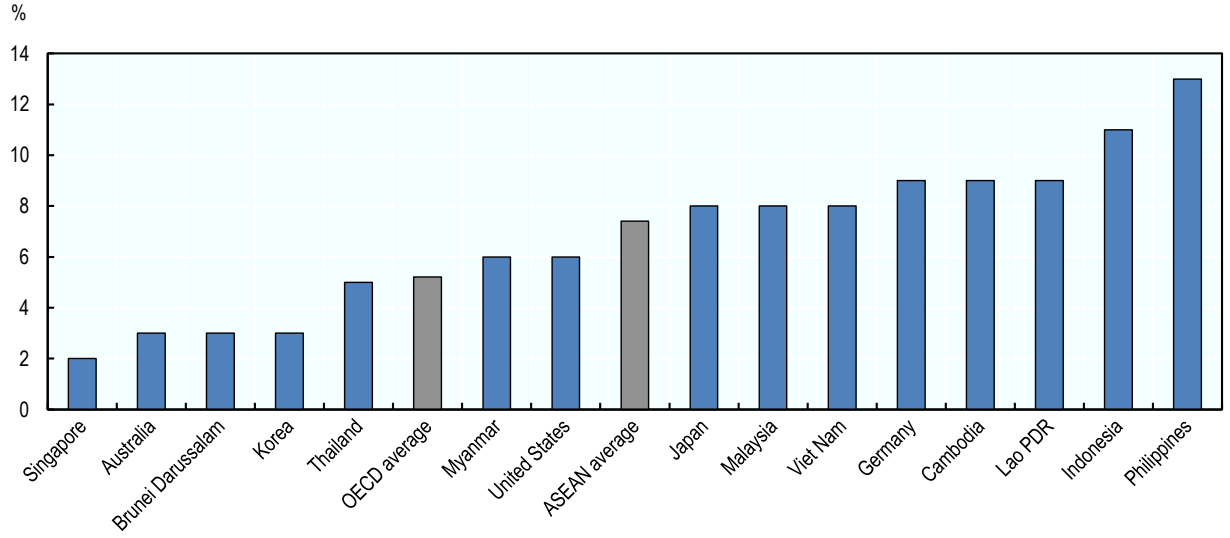
The informal labour market can be reduced when an enabling environment supports firms and workers to join the formal labour market (Chacaltana, Leung and Lee, 2018[84]). An enabling environment entails simplifying the process of firms and self-employed workers to formally register and having strong enforcement mechanisms for labour laws and regulations. Both are discussed in the following sub-sections.

Improving the process of formally registering workers and firms

Barriers for workers transitioning to the formal labour market in Southeast Asia include burdensome and lengthy administrative procedures to register firms and workers. The required time and energy for registration procedures are an incentive for firms and self-employed workers to remain in the informal sector and thereby constrain the full and effective use of the skills of their workers (ILO, 2019[83]). The number of procedures to register a new business, whether as self-employed or with employees, vary greatly across Southeast Asian countries. In some countries, it takes less than one day to process and can be done completely on line by simply submitting a few documents to the website or sending a text message (ILO, 2019[83]). On the other hand, in other Southeast Asian countries, registration involves numerous procedures, such as transactions necessary to obtain permits and licences, inscriptions, verifications and notifications needed to start operations. Sometimes it requires submitting several documents to different locations physically, and the whole process can take up to three months (Figure 4.8).

Figure 4.8. Ease of registering a new business in Southeast Asia and selected OECD countries, 2019

Number of procedures to register a new business



Note: This indicator covers procedures required to start a business, including transactions necessary to obtain permits and licences, as well as all inscriptions, verifications and notifications needed to start operations.
Source: World Bank (2019[85]), *Doing Business Project*, www.worldbank.org/en/programs/business-enabling-environment.

StatLink https://stat.link/gmqida

Simplifying administrative procedures and processes for registering workers and businesses can help to reduce informality. Evidence suggests that new technologies could significantly make business registration procedures less time- and resource-consuming (Chacaltana, Leung and Lee, 2018[84]). Fewer procedures and user-friendly registration websites and applications make registering easier and faster than applications submitted in person. Many Southeast Asian governments have streamlined business registration procedures, brought the relevant registration desks under one roof, and created online platforms to make it easier and faster to register workers and/or businesses (Table 4.5).

Many Southeast Asian countries can do more to simplify registration procedures. The simplification should reduce the time taken for processing and confirming registration and make registration procedures more user-friendly. The user-friendliness and attractiveness of a website can be measured by the bounce rate, which represents the average percentage of visitors who view only one page before leaving the website (Silva, 2022[86]). While some Southeast Asian governments' business registration portals, such as those of Brunei Darussalam, Malaysia, Myanmar, the Philippines and Singapore, have bounce rates that fall within – or close to – the optimal range of 26-40% (Zantal-Weiner, 2022[87]), those of other Southeast Asian countries, such as Viet Nam, have extremely high bounce rates, which casts doubts on a website's effectiveness in being able to help its users register or maintain a business on line (Table 4.5).

Several OECD countries use online platforms to simplify registration procedures and process registration in just a few days. For example, in Korea, entrepreneurs can register their businesses on line at a state-run website, Home Tax, if they attach the necessary documents, such as the registration form and a lease agreement (National Tax Service of Korea, 2015[88]). The mobile application also allows businesses to check the status of the registration process, which usually takes up to three days. Argentina and Estonia also offer good examples of using technology to simplify and quicken the registration of workers and businesses (Box 4.3).

Table 4.5. Online platforms for registering workers and businesses in Southeast Asia

Country	Website	Description	Bounce rate
Brunei Darussalam	One Common Portal (OCP)	The OCP initiative by the Ministry of Finance and Economy brings all online services together onto a single online platform. It allows users to register their new businesses and maintain them, providing them with resources and guides on a wide variety of topics.	22.8%
Cambodia	The Single Portal	The Single Portal is Cambodia's new online business registration portal that unifies all procedures to set up a business. It improves on previous business registration procedures such that it no longer requires applicants to register their businesses at different ministries through different methods.	n/a
Lao PDR	Inventory of Business Licenses	The portal contains all relevant information needed to operate businesses, including how to register a company and search for information about tariffs and measures. It also consolidates all relevant links and information about trades and investments in Lao PDR and relevant policies related to business and trade.	n/a
Malaysia	MalaysiaBiz	The portal provides several services, such as business licensing applications, business registration applications and the purchase of business or company profile data.	42.35%
Myanmar	Myanmar Companies Online (MyCO)	Run by the Directorate of Investment and Company Administration, MyCO allows applicants to register their companies and find information on all companies registered in Myanmar.	32.11%
Philippines	Central Business Portal (CBP)	The CBP provides a single site for all business-related information and transactions, such as securing business permits, licences and clearances. It involves all agencies involved in the business registration process, such as the Securities and Exchange Commission, Bureau of Internal Revenue (BIR), Social Security System, PhilHealth and the Home Development Mutual Fund (Pag-IBIG) Fund.	41.37%
Singapore	Bizfile+	BizFile+ is the business filing portal of Singapore's Accounting and Corporate Regulatory Authority. It provides multiple services and covers all steps, from starting to closing a business.	21.16%
Viet Nam	National Business Registration Portal	The portal is a website for organisations and individuals to implement online business registration, access information about business registrations and receive business registration certificates.	67.14%

Note: Bounce rate refers to the average percentage of visitors who view only one page before leaving the website.
Source: Brunei Darussalam Ministry of Finance and Economy (2021[89]), *One Common Portal*, www.ocp.mofe.gov.bn/; Cambodia Ministry of Economy and Finance (2020[90]), *Single Portal*, www.registrationservices.gov.kh/; Government of Singapore (2020[91]), *Bizfile+*, www.bizfile.gov.sg/; Indonesia Investment Promotion Center (2017[92]), *One Stop Service Center (PTSP Pusat)*, www3.investindonesia.go.id/en/how-we-can-help/one-stop-service; Lao PDR Department of Enterprise Registration and Management (2020[93]), *Inventory of Business Licenses*, http://bned.moic.gov.la/en; Malaysia Ministry of Entrepreneur Development and Cooperatives (2019[94]), *MalaysiaBiz,* https://malaysiabiz.gov.my/ms*;* Myanmar Directorate of Investment and Company Administration (2017[95]), *Myanmar Companies Online (MyCO),* www.myco.dica.gov.mm/; Philippine Anti-Red Tape Authority and Philippine Department of Information and Communication Technology (2021[96]), *Central Business Portal*, https://business.gov.ph/home; Thailand Board of Investment (2009[97]), *One Start One Stop Investment Center*, https://osos.boi.go.th/One-Stop/home/; Viet Nam Ministry of Planning and Investment (2018[98]), *National Business Registration Portal*, https://dangkykinhdoanh.gov.vn/en/Pages/default.aspx.

Improving the enforcement of labour laws and regulations

Another barrier to formality is the weak enforcement of laws and regulations. Ineffective and insufficient labour inspection contributes to the prevalence of informality, which prevent people from using their skills effectively (ILO, 2019[83]). Stronger and more effective labour inspections help ensure that labour codes are followed in the workplace and that workers are registered and work under decent working conditions. Evidence suggests that a rise in labour inspections can lead to an increase in formal employment and a decrease in informal employment (Almeida and Carneiro, 2012[99]).

However, several stakeholders consulted during the project noted that weak enforcement is one of the main challenges to expanding formal sectors in Southeast Asia. While some policies to reduce informality are in place, their implementation has been challenged by institutional limitations, such as a lack of

capacity for conducting inspections and inefficient inspection mechanisms, among others. Some Southeast Asian countries have promising initiatives that aim to address these problems, however. For example, Cambodia's Ministry of Labour and Vocational Training launched an online platform in 2021 to facilitate firms' participation in labour inspection practices by digitalising the inspection process, particularly during the COVID-19 pandemic. The platform covers various enterprises working in textiles, garments, footwear and travel goods (Rendall, 2021[100]).

Southeast Asian countries should put further efforts into strengthening enforcement mechanisms. While strengthening enforcement mechanisms can lead to benefits of expanding the formal labour market, it is important to implement these in such a way that they do not constitute unnecessary higher administrative workloads (Maiti and Bhattacharyya, 2020[101]). Evidence suggests that technologies can significantly raise the efficiency of enforcement mechanisms (e.g. inspection procedures). Technologies can offer many benefits to inspection bodies and workers, such as simplifying the work of inspectors, enabling better monitoring and follow-up on inspections, generating systematic statistics and improving transparency (ILO, 2017[102]). For instance, Sri Lanka has introduced the Labour Inspection System Application (LISA) – a tablet-based application to support labour inspection – which allows inspectors to take pictures, write inspection reports and upload them directly using their tablets. The application helps to monitor cases, ensuring better efficiency and compliance with labour laws, compared to previous methods, which required inspectors to carry more than ten different forms and a bulky record book. Argentina provides another good example that uses a digital tool to improve the efficiency and effectiveness of labour inspections and contributes to increasing formality (Box 4.3).

Box 4.3. Country examples relevant to facilitating the transition of workers from the informal to the formal labour market

Estonia's electronic employment registration

The Estonian Tax and Customs Board launched the electronic register in July 2014 to enable employers to easily register all employees with the board, providing workers with access to information about medical insurance and pensions. Due to simplified compliance procedures, the electronic register reduces the costs of becoming formalised in the labour market. In addition, the electronic solution eliminates the need for in-person visits to a service bureau for registration. Registration can now occur in a variety of ways, including web registration through the e-Tax Board/eCustoms websites; via a machine-to-machine interface using Xroad technology; and mobile registration via a phone call or SMS message. Furthermore, employers no longer need to submit employment information to the Estonian Health Insurance Fund or the Estonian Unemployment Insurance Fund, as the information is available and easily accessible from the national register.

Argentina's Digital Inspector Scheme

Argentina adopted a tool called Digital Inspector in 2011 to reduce labour informality and improve the accuracy and effectiveness of verifying all workers in the inspected firm as registered at the time of inspection. Under the scheme, labour inspectors have been provided with Netbooks (tablets), which have installed the Digital Inspector software and are equipped with a wireless Internet connection. The software is linked to the databases of the National Social Security Administration and the Employment Registry (Simplificación Registral), managed by the Federal Administration of Public Revenues (AFIP), where employers are obliged to register all workers. Using Digital Inspector, inspectors can enter the identification number of the worker and verify if they are registered and if their contributions have been paid in real-time during their field visits by consulting the databases. If the inspector detects an infraction, he or she immediately sanctions the firm for not registering their workers. If there are outstanding contributions, he or she alerts AFIP and estimates the debt and fines.

Indonesia's vocational training programme to help informal workers find jobs in the formal sector

The Ministry of Manpower and Transmigration oversees TVET centres known as Balai Latihan Kerja (BLK). The BLK centres provide vocational training so that informal workers can receive a formal education qualification, enabling them to find jobs more easily in the formal labour market. Courses are free and are offered in all provinces and some districts. The BLK programmes cover sectors such as hotel, tourism, information technology, agriculture, construction and commerce, among others. Provincial and district governments administer the majority of BLK centres.

Source: Bai and Paryono (2019[103]), *Vocational Education and Training in ASEAN Member States: Current Status and Future Development,* https://doi.org/10.1007/978-981-13-6617-8; Chacaltana, Leung and Lee (2018[84]), *New Technologies and the Transition to Formality: The Trend towards E–formality*, www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_policy/documents/publication/wcms_635996.pdf; ILO (2012[104]), *Social Protection Assessment-based National Dialogue: Towards a Nationally Defined Social Protection Floor in Indonesia*, www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-jakarta/documents/publication/wcms_195572.pdf.

Recommendations for facilitating the transition of workers from the informal to the formal labour market

- **Facilitate the registration of workers and businesses by making online business registration platforms more user-friendly and simplifying registration procedures**. Governments should improve online registration platforms to make navigating and uploading necessary documents easier. In addition, alternative channels should be provided to register (i.e. websites, mobile applications, one-stop-shops for SMEs) so that people can use the channel most convenient for them. Governments should also eliminate unnecessary or repetitive administrative steps and streamline registration procedures to reduce the time needed to process and confirm registration.
- **Improve the effectiveness and efficiency of labour inspection by adopting new technologies to ease the verification of workers' employment status**. Governments should adopt digital tools that facilitate labour inspection to strengthen the enforcement of laws and labour regulations. This could be done, for example, by providing inspectors with tablets linked to employment and tax databases. Such technologies can help inspectors to more easily verify whether businesses and workers are registered and are working formally during field inspections. In addition, with the same labour inspection technology provide the option for inspectors to immediately report employers who are committing infractions (e.g. unregistered workers, failure to pay taxes) and pursue the appropriate penalties and interventions.

Opportunity 2: Making intensive use of skills in work and society

Making full and effective use of people's skills at work benefits individuals, firms, and society. For example, for workers, higher levels of skills use at work are positively associated with higher wages, higher job satisfaction and greater well-being. For firms, making better use of workers' skills is associated with higher productivity, higher profits and lower staff turnover. At the country level, using skills effectively is also associated with higher labour productivity and more inclusive economic growth (OECD, 2015[105]; 2016[27]; 2019[2]).

Intensive use of skills outside of work is equally important. Individuals who report using their skills more fully in everyday life are also more likely to report having higher levels of trust and political efficacy, greater participation in voluntary activities and better health. The more intensive use of skills in everyday life, such as reading books, also indirectly supports the skills development of individuals and their children (OECD, 2012[1]).

Opportunity 2 describes two policy directions to make intensive use of skills in work and society. First, it explores how Southeast Asian countries can strengthen skills use in the workplace through the increased

adoption of HPWPs. Second, it considers how Southeast Asian countries can promote skills use in everyday life through policies that encourage participation in civil society, such as community organisations and associations.

Promoting skills use in the workplace through the greater adoption of high-performance workplace practices

Adopting practices known to positively affect the performance of employees and businesses, referred to as high-performance workplace practices (HPWPs), can lead to more intensive use of skills at work. HPWPs, such as a flexible work environment, teamwork and information sharing, and career progression and performance management polices (see Box 4.4 for more details), as well as the development of managerial skills, are strong determinants of the level of skills use of employees, more so than firm size, skill proficiency of workers, industry, occupation or country effects (OECD, 2019[2]). The recent COVID-19 crisis makes the adoption of HPWPs even more important as firms need to quickly introduce health and safety measures in workplaces and adopt technological solutions and managerial practices to allow workers to work productively from home when possible.

Box 4.4. Definition of high-performance workplace practices and how to measure them

Despite considerable literature on HPWPs, there is no consensus on the exact definition. There is no universal list of HPWPs that can be applied to an organisation as their effect can depend heavily on organisational context.

Organisations should implement a system of practices that complement and reinforce each other and that fit the specific organisation.

The OECD Centre for Skills applies a pragmatic approach and has identified the following four broad categories of HPWPs based on existing taxonomies and driven by available data on underlying indicators:

1. **Flexibility and autonomy**: Including flexibility in working time and tasks, involvement in setting tasks, planning activities and applying own ideas.
2. **Teamwork and information sharing**: Including receiving support from colleagues, working in a team, and sharing work-related information with colleagues.
3. **Training and development**: Including participation in continuing vocational training and on-the-job training.
4. **Benefits, career progression and performance management**: Including bonuses, career advancement, performance appraisal and competency profiles.

Source: OECD (2019[2]), *OECD Skills Strategy 2019: Skills to Shape a Better Future*, https://dx.doi.org/10.1787/9789264313835-en; OECD (2016[27]), *Skills Matter: Further Results from the Survey of Adult Skills*, https://dx.doi.org/10.1787/9789264258051-en; Belt, Giles and CIPD (2009[106]), *High Performance Working: A Synthesis of Key Literature*, http://dera.ioe.ac.uk/id/eprint/9239; Posthuma et al. (2013[107]), *A High Performance Work Practices Taxonomy: Integrating the Literature and Directing Future Research*, https://dx.doi.org/10.1177/0149206313478184; Sung and Ashton (2005[108]), *High Performance Work Practices: Linking Strategy and Skills to Performance Outcomes*, www.longwoods.com/articles/images/High%20Performance%20Work%20Practices_UKReport2011.pdf.

Internationally, higher adoption rates of HPWPs are associated with higher use of information-processing skills, such as reading (Figure 4.9). For example, in Singapore (26.5%), the share of jobs employing HPWPs is close to the average of OECD countries (27.4%), while the share in Indonesia (Jakarta, 5.3%) is very low by international comparison.[1] The adoption of HPWPs has also been found to be positively associated with the use of other skills at work, such as writing, numeracy, ICT and problem solving

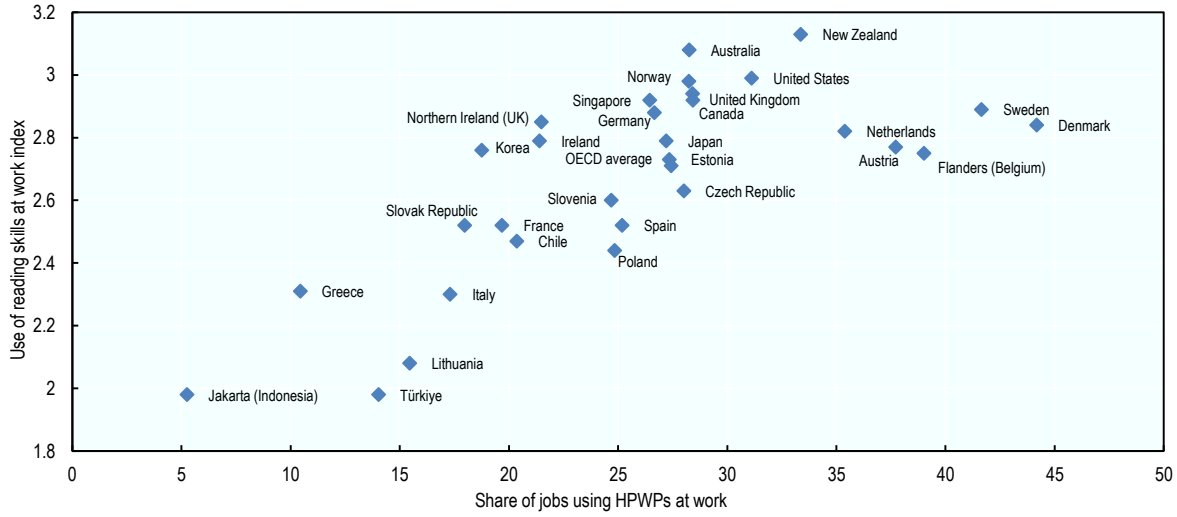
(Figure 4.3). To encourage the adoption of HPWPs among firms and intensify the use of skills in the workplace, Southeast Asia can: 1) provide information on HPWPs; and 2) strengthen managerial skills to facilitate the implementation of HPWPs.

Providing information on HPWPs

Southeast Asian countries face challenges in promoting HPWPs due to a lack of information and managerial skills, particularly among SMEs. Evidence shows that information on HPWPs is rather limited in the region, preventing the adoption of HPWPs and, by extension, intensive use of skills (Asmawi and Chew, 2016[109]). In many countries, HPWPs are more commonly employed in large firms, while SMEs face relatively higher barriers to implementing these practices. SMEs have difficulty accessing and retaining information about HPWPs and lack the capacity to manage human resources to adopt HPWPs (OECD, 2019[2]). This is concerning as SMEs dominate the business environment in Southeast Asia, accounting for about 97% of a country's total firms, on average, in the region (ADB, 2020[110]).

Figure 4.9. Relationship between the use of reading skills at work and the adoption of HPWPs, 2018

Index of frequency of skills usage on a scale of 1 (least frequent) to 5 (most frequent) vs percentage of jobs using HPWPs



Source: OECD (2018[29]), *Survey of Adult Skills (PIAAC)*, http://www.oecd.org/skills/piaac/.

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Policies that make firms aware of the benefits of adopting HPWPs could be an important first step towards improving the performance of firms in the region. Some Southeast Asian countries provide information and resources to firms about HPWPs and have support programmes in place. For example, Viet Nam offers the Sustainable Competitive and Responsible Enterprises (SCORE) programme, which increases awareness of responsible workplace practices and provides consulting and training services on workplace co-operation, quality management and human resources management. The programme helps increase the productivity of SMEs and supports them in accessing global supply chains (Box 4.5). Another example is Enterprise Singapore, the main government agency supporting firms, especially SMEs, to improve productivity by introducing business excellence models and encouraging technology adoption. Enterprise Singapore provides grants, advice, subsidised consultancy and diagnostic toolkits to improve work processes to implement HPWPs and adopt technology to raise productivity (Enterprise Singapore, 2022[111]).

Stakeholders consulted during the project noted that, in many cases, relevant information on HPWPs is often fragmented and difficult to access in Southeast Asian countries. Except for a few countries in the region, such as Malaysia, the Philippines and Singapore, ministries of labour or related agencies often do not have centralised portals to consolidate information on HPWPs and the policies governments offer to assist firms in implementing them. In many cases, information on different types of HPWPs – where such information exists in the first place – is scattered across different webpages or ministries, making it difficult to form a comprehensive view of the whole range of HPWPs that could be tailored and adopted based on firms' needs. Moving forward, Southeast Asian governments could make greater efforts to support all firms, including SMEs, in accessing relevant information on how to organise their workplaces to optimally use the skills of their employees and strengthen business performance.

As noted by many stakeholders consulted during the project, a single portal that centralises all relevant information in a country could be an efficient way to increase awareness and facilitate the adoption of HPWPs in businesses. The portal could share information on adopting HPWPs, guide employers to participate in business support programmes, and provide diagnostic tools with basic business advice (OECD, 2018[112]). Diagnostic tools help businesses identify their business needs, challenges and opportunities by benchmarking their performance and providing direct links to relevant HPWPs and/or business support programmes. Singapore offers several good examples of online assessment tools for businesses (Box 4.5). Many OECD countries have a single online government portal that provides comprehensive information on HPWPs for businesses (OECD, 2019[2]). For example, a business portal in Northern Ireland (United Kingdom) provides comprehensive information on HPWPs and available business support programmes in a user-friendly manner (Box 4.5).

Box 4.5. Country examples relevant to promoting skills use in the workplace through the greater adoption of high-performance workplace practices

Northern Ireland's online portal on HPWPs

The website (nibusinessinfo.co.uk) is an official online channel to share business advice and guidance in Northern Ireland. It provides essential information, support and services for large and small businesses. It also contains guidance on business regulations in the country and government services. The online portal contains a wide range of resources, case studies, checklists and guides for firms, including on how to improve working practices to boost efficiency.

Singapore's Digital business diagnostic tools

In Singapore, several online assessment tools are available to businesses. For instance, the Holistic Industry Productivity Scorecard Calculator assesses SMEs on their productivity performance across ten key indicators (labour productivity, value-added-to-sale ratio, sales per employee, sales per dollar of capital, capital intensity, capital productivity, labour cost competitiveness, labour cost per employee, profit margin, profit-to-value-added ratio). The Scorecard helps SMEs to understand their respective performance percentiles compared to industry-specific benchmarks, what productivity means, how it can be properly measured and what actions may be needed to improve productivity. The Singapore Smart Industry Readiness Index scores SMEs across three dimensions (process, technology and organisation). The scoring is based on eight criteria: operations, supply chain, product lifecycle, automation, connectivity, intelligence, talent readiness, and structure and management. The resulting performance profile helps SMEs prioritise and implement improvements in smart industry readiness. Finally, the self-assessment tool 2SHERPA supports SMEs that aim to internationalise. The tool highlights the strengths and weaknesses in the SME's export capability and potential.

Viet Nam's Sustaining Competitive and Responsible Enterprises programme

Viet Nam's SCORE programme is a practical workplace improvement programme to increase productivity in SMEs and support them in accessing global supply chains. The programme increases awareness of responsible workplace practices and provides consulting and training services. The training offered through SCORE includes topics such as workplace co-operation, quality management, clean production, human resource management, and occupational health and safety.

Source: Invest Northern Ireland (2022[113]), *Homepage*, https://nibusinessinfo.co.uk/; OECD/ILO (2017[114]), *Better Use of Skills in the Workplace: Why It Matters for Productivity and Local Jobs,* https://dx.doi.org/10.1787/9789264281394-en; OECD (2018[112]), *Leveraging Business Development Services for SME Productivity Growth: International Experience and Implications for United Kingdom Policy*, www.oecd.org/industry/smes/Final%20Draft%20Report_V11.pdf.

Strengthening managerial skills to facilitate the implementation of HPWPs

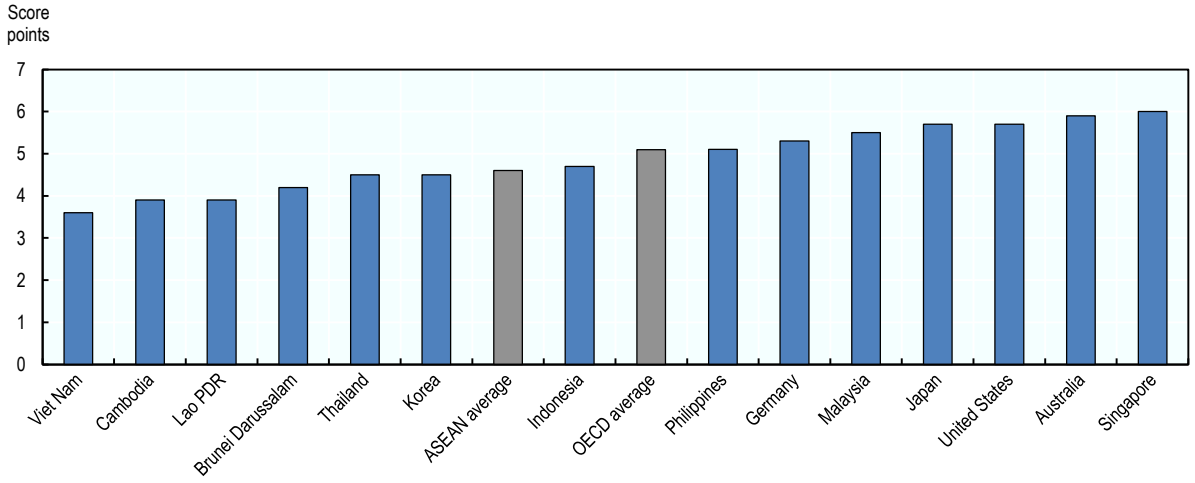
Policies that promote the adoption and development of HPWPs need to be complemented with programmes to develop managerial skills. Higher management capacity can lead to greater adoption of HPWPs and the improved use of employees' skills. Skilled managers are more likely to appreciate the importance of skills and innovation for the success of a business (Le Moueli and Squicciarini, 2015[115]). Various studies show that managers and leaders should have diverse skill sets, with strong leadership and entrepreneurial skills, such as the ability to build teams, motivate, communicate, mentor, think strategically and assess risk (OECD, 2010[116]; 2011[117]). Strong managerial skills are particularly important in the context of megatrends and the COVID-19 crisis, which are driving significant changes in the economy and require firms to adapt accordingly to how they conduct business and organise their workplaces (see Chapter 2). The recent expansion of remote working has created new challenges for managers to implement management approaches that motivate employees, build trust and foster open communication.

Management capacity in Southeast Asian countries can be improved (Figure 4.10). A common indicator to measure management capacity is the extent to which firms engage in merit-based employment in senior management positions. The indicator has a seven-point scale from one, where usually relatives or friends are hired without regard to merit, to seven, where professional managers are chosen according to merit and their qualifications. Across most Southeast Asian countries, the average score for firms in terms of their reliance on professional management is relatively low (4.6 on average) compared to the OECD average (5.1). The exceptions are Singapore (6) and Malaysia (5.5). A lack of managerial skills is often a bigger problem and one of the main barriers to growth for SMEs compared to larger firms since SMEs, relative to larger firms, are more resource-constrained with respect to the recruitment and development of high-quality managers (OECD, 2021[56]).

Considering the large share of SMEs (97% of all firms) in the region, policies that prioritise the development of managerial capacities for SMEs should be promoted. Sufficient formal and informal networking and mentoring opportunities between SMEs and larger firms can help SMEs observe and absorb lessons on effective managerial practices from larger firms (OECD, 2021[56]). Many OECD countries use networks to improve the skills of SMEs. For example, the European Union has a project designed to build SME Learning Networks to enhance their management competency in training and human resource development. In Korea, the government provides financial incentives to large firms to form consortiums with SMEs through the National Human Resources Development Consortium (also known as CHAMP) programme. These consortiums are often formed between larger firms and SMEs that are subcontractors in the same industry and region. The larger firms can share their management know-how and workplace practices through these consortiums. The consortiums also provide training opportunities for SMEs facilitated by the larger firms and in collaboration with universities (OECD, 2020[118]). The government partially covers training costs through the Employment Insurance Fund.

Figure 4.10. Reliance on professional management in Southeast Asia and selected OECD countries, 2019

Score points on a scale of 1 (worst) to 7 (best)



Note: Reliance on professional management measures the extent to which countries engage in merit-based employment in senior management positions. The score runs from 1, where usually relatives or friends are hired without regard to merit, to 7, where professional managers are chosen according to merit and their qualifications.
Source: World Economic Forum (2019[119]), *Global Competitiveness Report*, www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf.

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In Indonesia, Malaysia and the Philippines, the ASEAN Mentorship for Entrepreneurs Network (AMEN) supports networking and mentoring opportunities for SMEs. The network consists of a pool of mentors in the region who share best practices in management and workplace practices with SMEs so that these firms can grow. Furthermore, the network has developed ten AMEN Mentorship Modules, which train mentors on a wide variety of mentoring and pedagogical techniques, so that they can provide quality and relevant mentorship experiences that best address the specific needs of SMEs (ASEAN, 2022[120]).

Recommendations for promoting skills use in the workplace through the greater adoption of high-performance workplace practices

- **Create a single portal in each country to efficiently disseminate comprehensive information on high-performance workplace practices to firms, especially SMEs.** Governments should centralise the currently fragmented provision of information on HPWPs for firms in a single portal. The portal should inform, guide and support firms to benchmark their performance and locate relevant support programmes. This could include, for example, making diagnostic tools available to businesses to support them in identifying their business needs, challenges and opportunities. The information provided on the portal should be made available in a business-friendly manner, for example, by sharing concise information on good practice and success stories. To help firms navigate the portal, simple guides on how to implement specific HPWPs would be helpful. The portal could be part of a broader campaign to raise awareness about the benefits of adopting HPWPs for businesses.
- **Improve the managerial skills in SMEs by providing networking and mentoring opportunities.** Governments should encourage and support network and mentoring opportunities to facilitate sharing of good managerial practices and lessons between SMEs and larger firms.

Such networking and mentoring opportunities for SMEs could be formalised through the formation of consortiums as well as be financially supported. Furthermore, to provide quality and relevant mentorship experiences, mentors for SMEs should be provided with diverse training offers that equip them with the tools and techniques they need to guide their mentees effectively.

Promoting skills use in everyday life through civic engagement and leisure activities

People's skills have important implications for how fully and effectively they participate in everyday life. People use their skills in a variety of ways in everyday life, including through civic engagement (e.g. volunteering and participating in political parties, religious groups) and participation in leisure activities (e.g. sports and recreational groups, reading books). Civic engagement activities, which are typically unpaid and non-compulsory, benefit society and allow people to help others while strengthening their skills and knowledge in ways that may enhance career or employment prospects. Participation in leisure activities, such as sports and recreational clubs, can also help to transfer and strengthen interpersonal skills and develop peer relationships (Ivaniushina and Zapletina, 2015[121]). During sports and recreational activities, people set attainable goals, overcome challenges and learn to manage their thoughts and emotions. These activities also provide opportunities to use interpersonal skills and strengthen relationships with use.

Skills use through civic engagement and leisure activities benefit both individuals and society. The use of skills in everyday life is associated with higher levels of trust in others, institutions and governments and is associated with stronger political efficacy, higher life satisfaction and better health. Moreover, evidence suggests that positive social outcomes reinforce each other. For example, the likelihood of trusting others increases by 5 percentage points when one is active in volunteer work (OECD, 2018[29]). At the societal level, it can contribute to fostering a more inclusive and cohesive society (OECD, 2019[2]).

As mentioned in the section on Southeast Asia's performance in using skills effectively, there are vast differences in participation rates in volunteering across Southeast Asian countries. Participation rates range from 9% (Cambodia), 16% (Thailand), 17% (Viet Nam), the Philippines (35%) to 53% (Indonesia), with the ASEAN average being 26% (Figure 4.4). The differences may be due, in part, to public sector policies. For example, in the Philippines and Singapore, volunteering is included in the school curricula and is sometimes even required of students as a prerequisite for graduation. Southeast Asian countries with relatively low rates of participation in voluntary activities could consider making voluntary activities available as part of the school curricula to build a stronger culture of civic engagement and encourage the fuller use of skills in everyday life in adulthood. Evidence shows that early exposure to volunteerism in school can lead to higher probabilities of volunteering in adulthood, enhanced political activity and more positive views of societal participation (Oesterle, Johnson and Mortimer, 2004[122]).

More can be done to raise awareness in Southeast Asia about the potential benefits of encouraging people to make fuller use of their skills in society and their personal lives (OECD, 2019[2]). While several initiatives exist to promote volunteering in some Southeast Asian countries, such as Indonesia (Box 4.6), stakeholders consulted during this project noted that people are generally not fully aware of the benefits that accrue to individuals and society when people are encouraged and supported to use their skills more actively in everyday life. Southeast Asian governments can introduce awareness campaigns and provide information about the benefits of volunteering, civic engagement and reading for pleasure.

Many OECD countries organise campaigns, contests and events to promote social participation. For instance, Australia's Volunteers Programme is a government-funded programme that matches Australian volunteers with partner organisations in the Indo-Pacific region (Box 4.6). Furthermore, other OECD countries, including Austria, Denmark, Germany, Italy, Norway and Switzerland (among other 22 countries), are a part of EURead, which aims to promote reading by raising awareness of its benefits. The member countries of EURead jointly develop a structural framework for promoting reading on a national and European level. EURead organises campaigns and other events that offer awards and prizes

for reading (EURead, 2019[123]). Adults should also be made aware of the importance of reading to their children to support their development. Schools can play an important role in creating a culture of engagement by promoting community involvement, such as volunteerism and mentorship programmes, and organising discussions and debates on political and social issues. As discussed earlier and in Chapter 3, it is important to build awareness of the benefits of skills use in life and society at a young age as early learning helps develop stronger outcomes in the future (OECD, 2015[105]).

A user-friendly and easily accessible single portal that combines relevant information on volunteering activities and mentorship opportunities could help raise awareness of opportunities to participate more fully in society (OECD, 2019[2]). For example, the Netherlands has an online database that shares information on volunteer initiatives and social enterprises (Box 4.6). The Philippines and Singapore also offer online portals to promote volunteer activities (e.g. www.pnvsca.gov.ph/ in the Philippines and www.volunteer.gov.sg/ in Singapore). The remaining Southeast Asian countries that do not offer similar informational portals may take these sites as inspiration.

While raising civic engagement can be beneficial to all, it is especially important to target groups with lower skill use levels. These include the unemployed, older adults and persons with disabilities. There is a need to encourage them to participate in civic engagement activities where they can make productive use of their skills (Gonzales, Matz-Costa and Morrow-Howell, 2015[124]; Rak and Spencer, 2016[125]). For example, financial incentives could be used to promote greater social participation by these groups. For instance, in Canada (British Columbia), a community volunteer supplement is provided to eligible persons, such as the unemployed and people with disabilities, who participate in a volunteer activity with a non-profit community agency in a designated volunteer position (Box 4.6).

Box 4.6. Country examples relevant to promoting skills use in everyday life through volunteering and civic engagement

Australian Volunteers Programme

The Australian Volunteers Programme is a government-funded volunteer programme that matches Australians with partner organisations in the Indo-Pacific region. The programme provides Australian volunteers with opportunities to develop and use their skills overseas and to realise the value of volunteering. Volunteers lend their expertise to local organisations and governments and help build better businesses, civil society organisations, government departments, and education and health organisations. In 2017-18, 1 097 Australians volunteered in 723 organisations in 26 countries with the programme's budget of approximately AUD 37 million (Australian dollars).

Canada (British Columbia)'s community volunteer supplement (CVS)

In British Columbia, a monthly CVS is provided to eligible disadvantaged groups who participate in a volunteer placement with a non-profit community agency in a designated volunteer position. A CVS with a value of up to CAD 100 (Canadian dollars) for each calendar month facilitates participation in volunteer activities by disadvantaged groups by subsidising the costs associated with the purchase of clothing, transportation or other expenses needed by the eligible person to participate in a community volunteer programme. Eligible persons include those who are 15 years or older and receive disability assistance or income assistance due to a situation making it difficult to participate in the labour market (i.e. a single parent with a young child, a person admitted to hospital for care).

Indonesian Volunteer Society (Masyarakat Relawan Indonesia)

The Indonesian Volunteer Society (Masyarakat Relawan Indonesia, MRI) is an organisation that promotes volunteering that was initially established in response to the tsunami that affected Indonesia in 2004. MRI's core activities include training volunteers to prepare them as coaches, mentors and

facilitators to promote community development. The training covers the principles of volunteerism and includes leadership, natural hazard management and humanitarian programme management, among other things. Trained volunteers are given opportunities to plan and implement action programmes in teams to assist and empower communities, especially in response to natural hazards and humanitarian crises at home or internationally.

Netherlands' online database to share information about volunteering

In the Netherlands, an online database named MAEX provides information about volunteer initiatives and social enterprises. While part of a foundation, it is supported by municipal governments. All local initiatives are published on this website. Each initiative has a profile describing what they do, the value they deliver for their target group, and who can get involved. In addition, MAEX facilitates financial transactions between initiatives on the one hand and funds, volunteer organisations, companies, governments and knowledge institutions on the other hand. For example, money can be donated via MAEX, or people can connect to initiatives, creating an efficient method for companies and individuals to invest in an initiative.

Source: Australian Volunteers Program (2020[126]), *About Us – The Australian Volunteers Programme*, www.australianvolunteers.com/discover/about-us/; Indonesia Volunteer Society (2020[127]), *Masyarakat Relawan Indonesia*, https://relawan.id/; MAEX (2013[128]), *Homepage*, https://maex.nl/; UNDP and ILO (2018[129]), *Youth Volunteerism and Skills Development for Economic Empowerment in the Asia-Pacific* Region, www.asia-pacific.undp.org/content/rbap/en/home/library/democratic_governance/youth-volunteerism-n-skills-development-for-economic-empowerment.html; Government of British Colombia (n.d.[130]), *Community Volunteer Programme*, www2.gov.bc.ca/gov/content/governments/policies-for-government/bcea-policy-and-procedure-manual/general-supplements-and-programs/community-volunteer-program.

Recommendations for promoting skills use in everyday life through civic engagement and leisure activities

- **Make volunteering activities available as part of the school curricula to encourage young people to contribute their skills to society from an early age.** Schools can promote a civic engagement culture by facilitating community volunteering opportunities and organising discussions on political and social issues. Ministries could also consider awarding grants to schools to support students' participation in national or overseas community service.
- **Raise awareness about the benefits of using skills in society and personal life.** Build awareness about the benefits of active and engaged citizenship and leisure activities from a young age. Governments should introduce promotional campaigns to provide information about the benefits of using one's skills in civic and social life and encourage civic engagement and leisure activities, for example, through volunteering, reading and recreational activities. In addition, governments should provide centralised and comprehensive information about civic engagement opportunities and relevant associations to facilitate active participation.
- **Provide financial incentives to encourage adults to use skills in civil society.** Governments could provide subsidies and/or tax deductions to encourage participation in community and voluntary organisations. Subsidies can cover the cost of individual membership in such community and voluntary organisations. Governments could also introduce tax deductions or credits for participation in community and volunteer organisations. These schemes would allow individuals to claim the time spent on community and voluntary work against taxes owed. Financial incentives could be targeted at disadvantaged groups, such as the unemployed and people with disabilities, to support their increased engagement and participation in society, prevent their skills from atrophying, and in recognition that they face tighter income constraints. For example, additional benefits or a supplement, in addition to social assistance payments, could be provided to unemployed or inactive people who engage in volunteer activities.

Opportunity 3: Increasing demand for higher-level skills

While reducing skills mismatches in the labour market is important, so is boosting demand for higher-level skills. In a low-skill equilibrium, the workforce is made up of adults with low skills who are well matched with jobs requiring low levels of skills and which often offer low wages and inferior working conditions. In such an equilibrium, low-skilled workers have little incentive to upgrade their skills since they know it will be difficult to find jobs requiring those skills and rewarding their efforts. At the same time, employers fail to move to higher value-added activities due in part to the low skill levels of their workforce. Thus, low-skills equilibria hinder growth and economic development and make economies vulnerable to economic and technological shocks, such as those related to global value chains or digital transformation (OECD, 2019[2]).

In a high-skill equilibrium, a strong supply of higher-level skills is matched by strong demand for these skills, creating the conditions for sustainable economic growth. Innovation and technological progress depend on a highly skilled workforce with the knowledge and skills to generate new ideas and technologies, bring them to the market, and implement them effectively in firms and society. At the same time, in a high-skill equilibrium, the workforce and its employers have greater incentives to invest in skills development, given that such investments are likely to reap positive returns. Therefore, effective education, training, and lifelong learning policies (see Chapter 3), as well as policies to support firms to engage in innovation and entrepreneurial activity, are important to position economies to engage in higher value-added activities that, in turn, demand and absorb an increasing supply of high-skilled and well-remunerated workers. To this end, Opportunity 3 examines two policy directions for Southeast Asian countries to increase demand for higher-level skills. First, it explores how to promote innovation and then considers how to foster entrepreneurship.

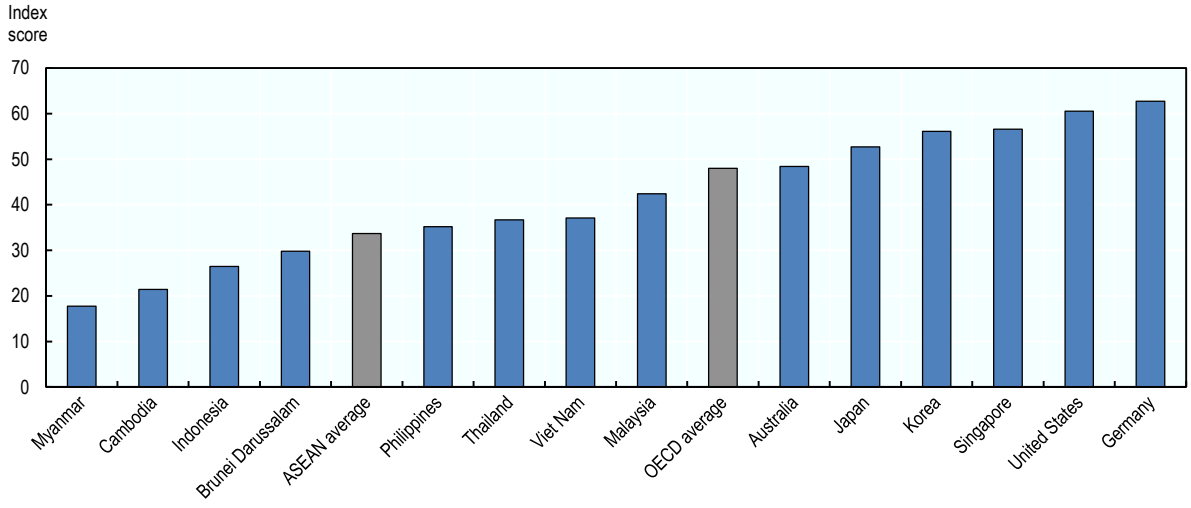
Promoting innovation to increase demand for high-level skills

Innovation varies significantly across Southeast Asian countries. The Global Innovation Index measures innovation on a 0-100 scale (with a higher score indicating high levels of innovation) across multiple dimensions, such as political and business environment, human capital and research, infrastructure, market and business sophistication, knowledge and technology output, and creative output. According to the Global Innovation Index, the score for ASEAN countries on average (34) was lower than for OECD countries on average (48) in 2020. However, innovation across Southeast Asian countries varies significantly. For example, Singapore (57) surpasses not only all ASEAN countries on this measure but also many OECD countries (Figure 4.11). Malaysia (42), Viet Nam (37) and Thailand (35) are performing slightly better than the ASEAN average but are still below the OECD average.

Skills and innovation policies can complement each other in ways that boost countries' socio-economic development. To position economies to move to higher value-added and innovation-intensive activities, education, lifelong learning and labour market policies need to be accompanied by policies supporting firms' innovative activities and entrepreneurship, as well as policies levelling the playing field for firms and removing obstacles to growth (OECD, 2019[2]). When skills policies are well aligned with innovation policies, employers can access the skills they need to move their firms to higher value-added and into innovation-intensive activities. Innovation requires strong STEM skills, as well as soft skills and entrepreneurial skills (see Chapter 3) (OECD, 2019[2]). This policy direction presents the performance of Southeast Asia in two areas related to promoting innovation to increase demand for high-level skills: 1) investing in R&D; and 2) promoting collaborations between higher education institutions and firms.

Figure 4.11. Global Innovation Index, Southeast Asia and selected OECD countries, 2020

Index score on a scale of 1 (low level of innovation) to 100 (high level of innovation)



Note: The Global Innovation Index is the average of two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index. The Innovation Input Sub-Index consists of five input pillars (institutions, human capital and research, infrastructure, market sophistication and business sophistication) that capture elements of the national economy that enable innovative activities. The Innovation Output Sub-Index consists of two pillars (knowledge and technology output and creative output) that capture the result of innovative activities within the economy. See Appendix I of the source for further details.

Source: Cornell University, INSEAD and World Intellectual Property Organization (2020[131]), *Global Innovation Index 2020: Who Will Finance Innovation?*, www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf.

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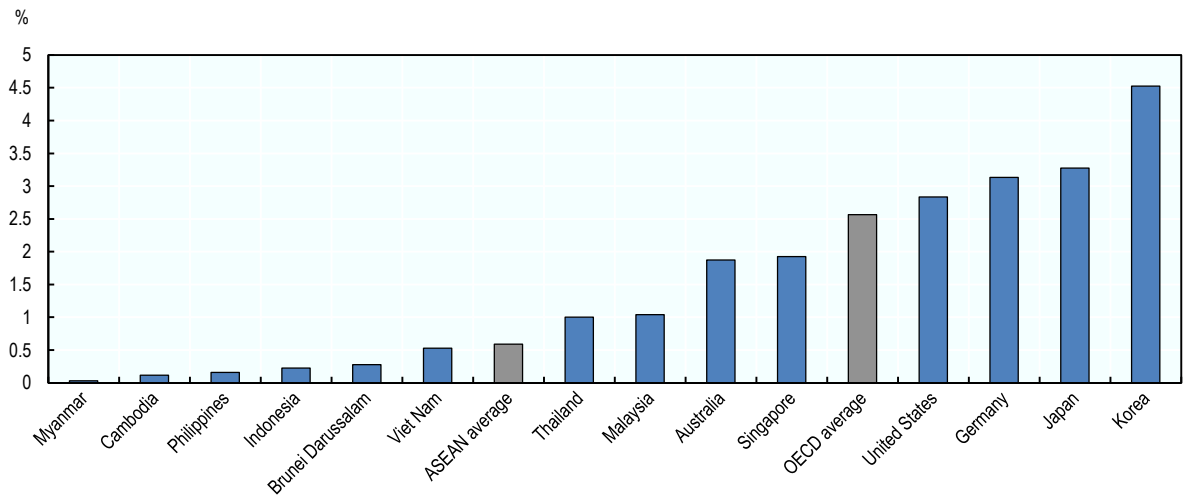
Investing in R&D

Investment in R&D helps develop knowledge and skills and enhances firms' abilities to improve and create new products and services, which in turn raises demand for higher levels of skills. It enables innovative firms to experiment with new ideas, technologies and business models, which helps them grow, increase their market share and reach scale (Cohen and Levinthal, 1990[132]). However, expenditure on R&D as a percentage of GDP is relatively low in Southeast Asian countries. On average, Southeast Asian countries invest significantly less in R&D (0.6% of GDP) as compared to the OECD average (2.6% of GDP) (Figure 4.12). There is substantial variation in R&D spending across countries within the region. Singapore (1.9%) and Malaysia (1%) show relatively high levels of R&D spending, while countries like Myanmar (0.03%), Cambodia (0.1%), the Philippines (0.2%) and Indonesia (0.2%) invest very little.

Financial support from government can play an important role in increasing spending in R&D and innovation. Evidence suggests that government support for business R&D expenditure is instrumental in increasing R&D intensity (OECD, 2019[2]). Government support could contribute to correcting market failures, such as difficulties appropriating the returns to investment in R&D and difficulties finding external finance, particularly for small or young firms (OECD, 2016[133]). Many Southeast Asian countries provide grants to start-ups and SMEs to support their research and innovative activities (Table 4.6) or have established specialised agencies to fund and manage R&D projects (e.g. Thailand in Box 4.7). Some Southeast Asian countries, such as Indonesia, Singapore and Thailand, also provide tax incentives (e.g. reduced tax rates, tax holidays, tax credits and import duty exemptions on R&D equipment).

Figure 4.12. R&D spending in Southeast Asia and selected OECD countries, 2019

Percentage of GDP



Note: R&D spending is measured primarily through the gross domestic expenditure on R&D (GERD), which captures the total intramural expenditure on R&D performed in the national territory during a specific reference period based on performer reports. GERD covers spending by business enterprises, government agencies, higher education institutions, private non-profit organisations and finance sources from abroad. The latest available year was used for the following countries: Cambodia and the Philippines (2015); Australia, Myanmar, Singapore, Thailand and Viet Nam (2017).
Source: UNESCO Institute of Statistics (2021[134]), *Research and development expenditure (% of GDP)*, http://uis.unesco.org/.

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Table 4.6. Government financial support for R&D in Southeast Asia

Country	Programmes, policies and initiatives
Brunei Darussalam	**DARe Financing Scheme** The grant aims to provide co-matching funding with a recipient to "co-match" 30% of the total amount, while DARe will fund the remaining 70%. The objective of the grant is to encourage and assist innovative start-ups, as well as to facilitate meaningful growth for promising MSMEs by increasing revenue and encouraging exports.
Cambodia	**Khmer Enterprise (KE)** The Ministry of Economy and Finance established the Entrepreneurship Development Fund in 2019 and KE as its designated implementation unit. KE aims to mobilise, invest, and manage resources to support the development of a vibrant entrepreneurial system and to provide financial and non-financial support to entrepreneurs. The support types it offers include training sessions, incubation/acceleration/mentorship, funding opportunities with partner investors, and scaling support (through direct investment, mergers and acquisitions or initial public offering).
Philippines	**Start-up Research Grant Program** Initiated by the Department of Science and Technology and the Philippine Council for Industry, Energy and Emerging Technology Research and Development, the programme provides start-ups with funding access, helping them overcome R&D roadblocks and refine business models to transform their early-stage tech into market-ready products.
Singapore	**Start-up SG Founder** The programme aims to encourage first-time founders to start their own innovative businesses through mentorship and financial support. Through a Ministerial Statement on August 2020, it was announced that up to SGD 150 million (Singapore dollars) has been set aside for its enhancement, upon the recognition that start-ups are the bedrock of Singapore's innovation community and that they not only spur new growth opportunities but also create more and new types of job opportunities for Singaporeans.
	Ministry of Education (MOE) Innovation & Enterprise (I&E) Office Decentralised Funding The Ministry of Education supports innovation and enterprise at the Institutes of Higher Learning (IHLs) through the I&E Office Decentralised Funding. The IHLs may use the funding to carry out activities from seeding entrepreneurial intent and developing I&E skills among students, to incubating enterprises and supporting companies in innovation.

Thailand	**Thailand 4.0** The government has been collaborating with local tech start-ups and private companies through the Thailand 4.0 strategy to accelerate Thailand's transition into a digital economy and a regional digital hub. Under this policy, Software Park Thailand, a government agency under the Science and Technology Ministry, has allocated a budget of THB 280 million (Thai baht) to sponsor and support local start-ups as of 2017. The budget contributes to two existing projects: 1) the Start-up Voucher, where free cash-equivalent vouchers worth THB 1 million each are distributed to qualified start-ups; and 2) the Research Gap Fund, which provides financing for start-ups' business development.

Source: Brunei Darussalam DARe (2020[135]), *DARe Financing Scheme: Co-Matching Scheme*, https://business.mofe.gov.bn/Presentation%20Slides/DARe%20Co-Matching%20Scheme.pdf; Khmer Enterprise (2020[136]), *About Us*, https://khmerenterprise.info/about-us; Leesa-Nguansuk (2017), *B280m to support Thailand 4.0 startups*, www.bangkokpost.com/tech/1235686/b280m-to-support-thailand-4-0-startups; Philippines Department of Science and Technology (2021[137]), *Startup Nation: Startup Research Grant Programme*, https://pcieerd.dost.gov.ph/images/downloads/presentation_materials/2017/Startup_Research_Grant/Startup_Research_Grant_Redesigned.pdf; Singapore Prime Minister's Office (2021[138]), *RIE2025 Plan,* www.nrf.gov.sg/rie2025-plan; Startup SG (2020[139]), *Startup SG Founder*, www.startupsg.gov.sg/programmes/4894/startup-sg-founder.

Going forward, Southeast Asian countries should consider increasing government support for expenditure on R&D. All OECD countries provide substantial direct and indirect financial support for R&D. For example, direct financial support for R&D, grants and subsidies are often provided on a competitive basis as seed funding for innovative start-ups and SMEs with high potential. As indirect financial support for R&D, many OECD countries provide R&D tax incentives, such as tax credits or favourable tax deductions for R&D expenditures, to encourage higher expenditures on R&D. Providing a mix of direct grant support and tax incentives would be particularly beneficial (Neubig et al., 2016[140]).

Promoting collaboration between higher education institutions and firms

Promoting collaboration between institutions of higher education and firms is an effective way to foster innovation (Fonseca and Salomaa, 2020[141]). Higher education research-industry linkages help to introduce firms to new technologies and innovative practices and promote knowledge transfers and spillovers. Furthermore, they enable firms to find or tap into workers who have the skill sets required to move to higher value-added types of activities (Ankrah and Al-Tabbaa, 2015[142]; Scandura, 2016[143]). Some Southeast Asian countries already support collaboration between academic institutions and firms. For example, in Singapore, the Future Economy Council gathers stakeholders from various backgrounds, including government, industry, unions, and educational and training institutions, and provides a platform for them to interact and co-operate to drive innovation and growth (Ministry of Trade and Industry Singapore, 2022[144]). In addition, Viet Nam offers innovation and start-up centres at some universities to promote collaboration, build an innovation culture, and nurture entrepreneurship within the education sector. Despite these examples, many stakeholders consulted throughout the project noted that collaboration between academic institutions and firms is limited in Southeast Asia (see Chapter 5).

To improve collaboration between academia and industry, many OECD countries provide local platforms where stakeholders from public, private and academic sectors can engage directly (OECD, 2019[2]). Australia, Canada and Korea provide good examples of this (Box 4.7). Policy measures to encourage collaboration among firms and between firms and universities and research institutions need to pay special attention to engaging SMEs, as they are generally less prone to collaborate with institutions of higher education (OECD, 2017[145]). Together with further trade liberalisation, particularly in the services sector (see Chapter 2), these efforts will help SMEs to enhance their productivity and competitiveness and expand their business across international borders (OECD, 2019[146]).

Box 4.7. Country examples relevant to promoting innovation to increase demand for high-level skills

Australia's Innovation Connections

Australia's Innovation Connections involves a network of research facilitators who provide practical advice and mentorship to SMEs, assess their research needs and direct them to research expertise. It also provides funding for collaborative projects through grants. The duration of Innovation Connections projects ranges between 2-12 months. An eligible firm can: 1) place up to two of its own research employees in a publicly funded research organisation or an Australian university to work collaboratively on a project and/or access specialised equipment and research infrastructure; 2) employ a graduate or postgraduate student to undertake a research project for 6-12 months; or 3) place a researcher in the firm to work collaboratively on a project to develop and implement a new idea with commercial potential. The programme tends to encourage longer-term partnerships between SMEs and research institutions.

Canadian Technology Access Centres (TAC) Grant Programme

The Canadian TAC Grant Programme supports enhancing the innovative capacity of SMEs through collaborative access to specialised talent, expertise, equipment and technology from Canadian colleges. The programme provides financial support to a network of 30 TACs nationwide. TACs are specialised, applied R&D centres affiliated with publicly funded colleges across Canada. Each TAC strengthens an industrial sector of significance to that region, but they are networked with one another.

Korea's Patent Commercialisation Platform (PCP)

The PCP in Korea connects researchers from 24 universities and more than 8 000 SMEs. The PCP employs experts who advise start-ups and SMEs and match SMEs with university technologies to support technology transfer and innovation. The PCP also offers follow-up financing to help the commercialisation of these technologies by SMEs.

Thailand's Science and Technology Development Agency (NSTDA)

The NSTDA was established in 1991 under the National Science and Technology Development Act of 1991 and is tasked to accelerate science, technology and innovation in support of Thailand's goal of boosting competitiveness. The NSTDA works with a wide variety of actors from government, the private sector, academia and civil society to support R&D activities, technological transfer programmes, human resource development and infrastructure improvement. The agency implements Technology and Innovation Implementation Programs, which provide MSMEs with access to technical experts, government and university research projects, testing labs and incentives for R&D activities.

Source: CSIRO (2020[147]), *Innovation Connections*, www.csiro.au/en/work-with-us/funding-programs/sme/innovation-connections; OECD (2019[148]), *University-Industry Collaboration: New Evidence and Policy Options*, https://dx.doi.org/10.1787/e9c1e648-en; Thailand National Science and Technology Development Agency (2019[149]), *At a Glance*, www.nstda.or.th/en/at-a-glance.html; Thailand Office of SMEs Promotion (2021[150]), *Innovation and* technology, www.sme.go.th/en/page.php?modulekey=412.

Recommendations for promoting innovation to increase demand for high-level skills

- **Increase expenditure on research and development through direct grant support and tax incentives.** Southeast Asian countries should consider increasing direct grant support and subsidies to support long-term research, especially in areas with particularly high potential spillover benefits. Governments could help increase R&D in areas with high social returns but low prospects for profits, such as green technology and social innovation. They could target their support especially to innovative small and young firms that often have difficulty securing financing for R&D. Governments should also consider providing and increasing indirect financial support to encourage R&D activities. For example, they could offer and increase credits against income and payroll taxes for expenditures on investments for R&D.
- **Foster collaboration between institutions of higher education and industry.** Southeast Asian countries should facilitate co-operation and networking between higher education and firms. Governments should support the development of networks of intermediary organisations and platforms, such as R&D centres, innovation agencies, technology transfer offices and business incubators, to facilitate knowledge transfer between higher education and industry. They could be established as autonomous agencies or units within a specific university. Such organisations should interact with each other on a regular basis to promote knowledge "co-creation" involving multiple stakeholders from industry, research institutions and government.

Fostering entrepreneurship

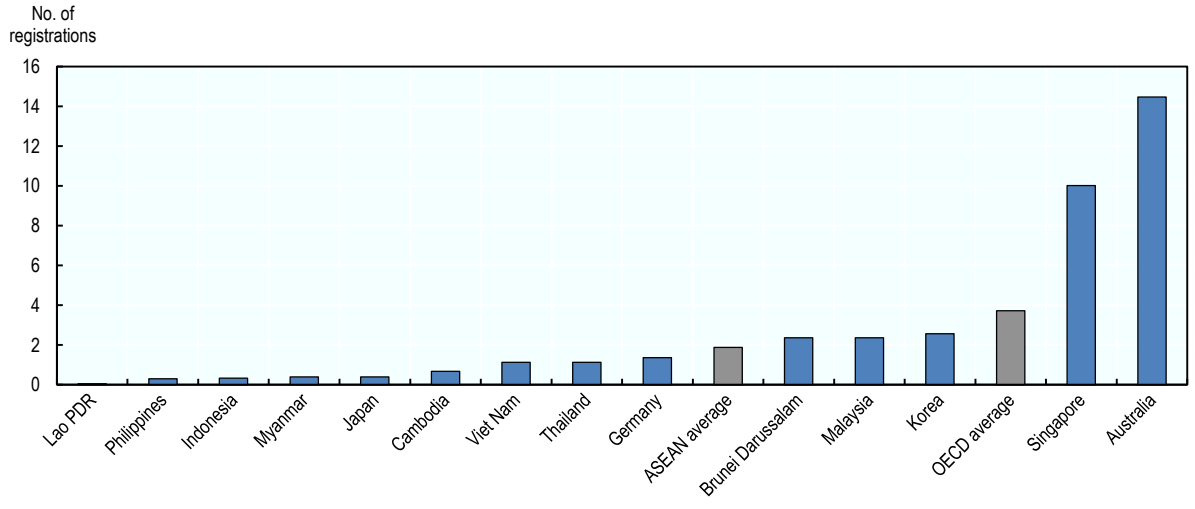
Fostering entrepreneurship by removing barriers to starting a business and enabling firms to scale up is another way to spur innovation and demand for high-level skills. Start-ups introduce new innovations and technologies and encourage better allocative efficiency by challenging the survival of incumbent firms that are not as productive or innovative (OECD, 2019[2]). However, while entrepreneurship contributes greatly to socio-economic growth, many barriers remain in Southeast Asia, especially among disadvantaged groups such as women. This policy direction discusses the many barriers they face in accessing finance and obtaining valuable mentoring and business opportunities through networks and presents several policy solutions to these challenges.

Evidence shows that entrepreneurial activity is lower in Southeast Asia than in OECD countries. On average, Southeast Asian countries score lower (1.8) than OECD countries (3.7) in entrepreneurial activities, as measured by the number of new business registrations per 1 000 people aged 15-64 (Figure 4.13). Singapore (10), Malaysia (2.4) and Brunei Darussalam (2.4) are characterised by relatively high rates of entrepreneurial activity. The share is relatively low in Indonesia (0.3), the Philippines (0.3) and Lao PDR (0.04). In addition, evidence suggests that a significant share of people in Southeast Asia perceive that they do not have the necessary entrepreneurial skills (OECD, 2021[26]).

Government initiatives and programmes to support start-ups can play an important role in fostering entrepreneurship. Many Southeast Asian countries already have such supporting initiatives and programmes in place. Table 4.7 summarises some of the major government initiatives and programmes to promote entrepreneurship in the region, while Box 4.8 provides the example of Thailand's Start-Up Nation, which actively promotes the country as a start-up nation. However, initiatives and programmes that prioritise supporting disadvantaged groups, such as women and youth, are not available in most Southeast Asian countries.

Figure 4.13. Entrepreneurial activity in Southeast Asia and selected OECD countries, 2018

Number of new business registrations per 1 000 people aged 15-64 years



Note: This indicator refers to the number of new limited liability corporations (or its equivalent) registered in a given calendar year. All entries are from 2018 except Indonesia, Korea and Viet Nam (2016).
Source: World Bank (2020[151]), *Entrepreneurship Database*, www.worldbank.org/en/programs/entrepreneurship.

StatLink https://stat.link/0srl1z

Table 4.7. Government initiatives and programmes that promote entrepreneurship in Southeast Asia

Country	Programmes, policies and initiatives
Brunei Darussalam	**iCentre Incubation Programme** The iCentre was established to develop entrepreneurship, technology and innovation-based startups through an incubator program. The iCentre Incubation programme is a one-year incubation programme run by the Darussalam Enterprise (DARe). The programme provides co-working spaces for existing and aspiring entrepreneurs, as well as access to capacity building training, scaling and investment opportunities.
Cambodia	**Cambodia Entrepreneurship Day** First started in 2017 and organised annually by the International Labour Organization (ILO) and Cambodia's Ministry of Education, Youth and Sports, the Cambodian Entrepreneurship Day aims to help Cambodian youth better understand entrepreneurship and raise awareness about the concept of entrepreneurship as a path of opportunity. Across the country, workshops and conferences are organised to teach crucial entrepreneurship skills and facilitate peer learning and networking among young people. Participants come from a wide variety of backgrounds, including those in and out of school, students from TVET schools, students with disabilities and young entrepreneurs.
Indonesia	**Next Indonesian Unicorns Foundation (NextICorn)** In 2019, Indonesia launched NextICorn as part of an effort to boost the country's growing digital ecosystem and entrepreneurship. NextICorn connects start-ups with venture capitalists and offers support related to business models and technology implementation.
Malaysia	**National Entrepreneurship Policy (NEP) 2030** Titled "Malaysia: An Outstanding Entrepreneurial Nation", the Ministry of Entrepreneur Development and Cooperatives formulated NEP 2030 as a long-term strategy. It aims to create a conducive entrepreneurship ecosystem, increasing entrepreneur skills in the workforce and improving MSMEs' capabilities, among others.
Myanmar	**Small and Medium Enterprise Development 2015** The policy recognises that SMEs play a pivotal role in Myanmar's sustainable development and its shift from an agro-based economy to an industrial economy. Its objectives include reducing difficulties and constraints faced by start-ups and enhancing entrepreneurship by providing training, information and networks.

Country	Programmes, policies and initiatives
Philippines	**Kapatid Mentor Me Project** The Katpid Mentor Me Project was initiated by the Department of Trade and Industry and the Philippine Center for Entrepreneurship to assist MSMEs in the country through three key areas: micro-entrepreneurship mentorship, facility sharing, and inclusive business model schemes. The mentoring sessions cover entrepreneurial mind-setting, values formation, market growth expansion, operations management and business law.
	TESDA Training Regulations on Agroentrepreneurship TESDA has created training regulations for agroentrepreneurship, which serves as a basis for which the competency-based curriculum, instructional materials and competency tools are developed for the agroentrepreuenrship industry.
	Sari-Sari Store Training and Access Resources (STAR) Programme Implemented by TESDA and Coca-Cola Philippines, the STAR programme has provided micro-retailing and entrepreneurial skills training to over 200,000 Filipino women since 2011. In 2019, an online version of the programme, the iSTAR programme, was launched and provided online self-paced learning sessions and business coaching lessons through a wide variety of modules: "Safe Stores Education", "Building Business Mindset", "Planning the Business", "Managing Business Operations", "Ensuring Business Sustainability and Success", and "Access to Business Coaching, Resources and Peer Mentoring".
Singapore	**Startup SG Equity** Startup SG Equity is an SGD 300 million scheme that catalyses private-sector investment for start-ups through government equity co-investment. It prioritises DeepTech sectors and encourages entrepreneurship in those markets, such as AI, robotics, biotechnology and more. It is part of the Singaporean government's overall push to integrate DeepTech and innovative solutions into an e-commerce-heavy industry.
	Ministry of Education (MOE) Innovation & Enterprise (I&E) Office Decentralised Funding The Ministry of Education supports innovation and enterprise at the Institutes of Higher Learning (IHLs) through the I&E Office Decentralised Funding. The IHLs may use the funding to carry out activities from seeding entrepreneurial intent and developing I&E skills among students, to incubating enterprises and supporting companies in innovation.
Thailand	**Thailand 4.0** A government agency under the Science and Technology Ministry and Software Park Thailand collaborates to sponsor and support local tech start-ups. The budget of THB 280 million is allocated to two projects: 1) the Start-up Voucher, where free cash-equivalent vouchers worth THB 1 million each are distributed to qualified start-ups; and 2) the Research Gap Fund, which provides financing for start-ups' business development.
Viet Nam	**Directive No. 09/CT-TTg** Signed in 2020, the Directive urges the Ministry of Planning and Investment to provide detailed guidance to start-ups on how to register, facilitate foreign investors in establishing, contributing capital, and purchasing shares in start-up investments in Viet Nam, and build three innovation and start-up centres at the three universities to promote a start-up ecosystem within the education sector.

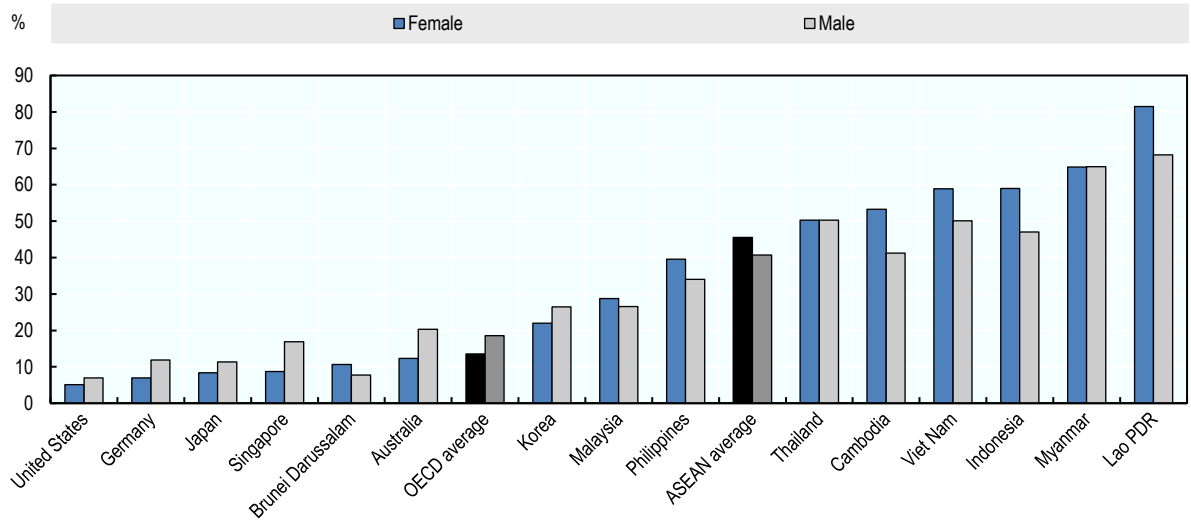
Source: BruneiDarussalam DARe (2020[152]), *iCentre Incubation Programme*, www.dare.gov.bn/icentre; Government of Myanmar (2015[153]), *Small and Medium Enterprise Development Policy (2015)*, www.myanmar.gov.mm/documents/20143/8126610/sme+policy.pdf/9de1161b-e3b6-c246-6779-a1de27dd27de?t=1537510456463; Leesa-Nguansuk (2017[154]), *B280m to support Thailand 4.0 startups*, www.bangkokpost.com/tech/1235686/b280m-to-support-thailand-4-0-startups; ILO (2020[155]), *Cambodia Entrepreneurship Day 2020 moves online – celebrated by 1,800 Cambodian future business leaders*, www.ilo.org/asia/media-centre/news/WCMS_757142/lang--en/index.htm; Malaysia Ministry of Entrepreneur Development and Cooperatives (2019[156]), *NEP 2030: National Entrepreneurship Policy*, www.kuskop.gov.my/admin/files/med/image/portal/NEP2030-Final.pdf; Next Unicorn (2019[157]), *Indonesian government launches NextICorn Foundation to breed more unicorns*, https://nextunicorn.ventures/indonesian-government-launches-nexticorn-foundation-to-breed-more-unicorns/; Philippines Department of Trade and Industry (2020[158]), *Kapatid Mentor Me Project*, www.dti.gov.ph/negosyo/kapatid-mentor-me-project/; Singapore Prime Minister's Office (2021[138]), *RIE2025 Plan,* www.nrf.gov.sg/rie2025-plan; Startup SG (2020[159]), *Startup SG Equity*, www.startupsg.gov.sg/programmes/4895/startup-sg-equity/frequently-asked-questions; TESDA (2017[160]),*Training Regulations – Agroentrepreneurship*, www.tesda.gov.ph/Download/Training_Regulations?SearchTitle=entre&Searchcat=System.Web.Mvc.SelectList; TESDA (2022[161]), *TESDA, Coca-Cola Philippines Open Training Facility for iSTAR Program,* www.tesda.gov.ph/Gallery/Details/12370; Viet Nam Ministry of Science and Technology (2020[162]), *PM issues instructions on facilitating startups*, www.most.gov.vn/en/news/745/pm-issues-instructions-on-facilitating-startups.aspx.

Self-employment rates are high among women across Southeast Asia, but they are often limited to precarious sectors. Self-employment rates, which include individuals working on their own account or with one or a few partners, are often used as a proxy for entrepreneurship.[2] Data from the region show that, on average, across ASEAN countries, women are more likely than men to be self-employed by 4.8 percentage points, unlike in OECD countries and high-income countries in Southeast Asia, such as Singapore, where men are more likely to be self-employed (Figure 4.14). The likelihood of self-employment among women in comparison to men is especially high in Lao PDR (13.3 percentage points), Cambodia (12 percentage points) and Indonesia (11.9 percentage points). Due to the multiple barriers women face in entering the

formal labour market (Opportunity 1), they often must look for alternative sources of income, such as self-employment and entrepreneurship. In cases where women are self-employed, it is often in disadvantaged sectors, such as agriculture, or in a limited number of highly gendered activities, such as selling beauty products, catering, food processing and tailoring (OECD, 2017[40]).

Figure 4.14. Female and male self-employment rates in Southeast Asia and selected OECD countries, 2019

Percentage of total employment



Source: World Bank (2019[163]), *Self-employed, male and female (% of male and female employment)) (modelled ILO estimate)*, https://data.worldbank.org/indicator/SL.EMP.SELF.MA.ZS.

StatLink https://stat.link/6er0s8

Evidence suggests women face particularly high barriers in pursuing entrepreneurial activities (OECD, 2021[50]). While women in the region are technically able to register businesses the same way as men, they still face additional constraints in obtaining full legal capacity when signing legally binding contracts, as shown in Table 4.8. This severely limits women's ability to fully participate in work and conduct their own businesses in many countries in Southeast Asia. Stakeholders consulted also noted that common barriers facing women entrepreneurs in Southeast Asian countries include limited access to financing as well as knowledge and information on starting and/or running businesses.

In Southeast Asia, female entrepreneurs are less likely to take out bank loans than their male counterparts for various reasons. Women in Southeast Asia often have lower levels of financial literacy, and evidence suggests that many lack the confidence and skills needed to negotiate a loan (associated with financial literacy needs). Furthermore, they often lack credit histories and assets (i.e. land ownership) that they can use as collateral when borrowing from traditional financial institutions (OECD, 2021[50]). In addition, gender stereotypes and biases remain prevalent among financial institutions, which often behave insensitively to the needs of women and are often reluctant to lend to women-owned SMEs (OECD, 2021[50]). As access to credit and collateral is fundamental for business growth and innovation, this partly explains why there are fewer female-owned enterprises and why they tend to be smaller and less productive (OECD, 2017[40]).

Table 4.8. Differences between men and women in starting businesses and signing contracts in ASEAN countries, 2021

Indicator	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
A woman can register a business in the same way as a man	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
A woman can sign a contract in the same way as a man		✓		✓			✓			✓

Source: World Bank (2021[164]), *Gender Data Portal,* https://genderdata.worldbank.org/.

Southeast Asian countries should provide financial services that meet the needs of women entrepreneurs and are easy to access. The most common approaches are to offer grants, loan guarantees and microfinance targeting women entrepreneurs. Attracting more women investors and advisors into venture capital and business angel networks could be one way to increase investment in women-owned enterprises (OECD, 2021[50]). To be successful, it is important to adapt the application process to the literacy levels of women to ensure they can easily complete and submit their applications (OECD, 2017[40]). Some Southeast Asian countries provide targeted financial services to women. For example, in Indonesia, the Mondelez International's Cocoa Life Programme aims to close the gender gap in economic activities and provides rural farmers with access to finance through village savings and loan associations. In addition, Women in Micro and Small Business Groups, which operate at the village and district level, provide microfinancing and training opportunities to women entrepreneurs (OECD, 2021[50]). Across OECD countries, such as the United Kingdom, and in the European Union (EU), financial services are also provided to help women entrepreneurs (Box 4.8).

On the other hand, many female entrepreneurs also face higher barriers to accessing networking and mentoring guidance. The lack of access to business networks and a general lack of networking activity in the region, which provides connections to mentorship opportunities and facilitates women's participation in them, inhibit them from obtaining useful guidance on how to start, manage and grow a business (ADB, 2018[165]). Evidence suggests that access to networking and mentoring is particularly important during the start-up phase of a new business. The transfer of expertise, new practices and emotional support from peer entrepreneurs play a critical role in their success (OECD, 2017[40]). In addition, people who receive mentoring through networks are likely to be more business savvy, acquire business skills and have better success in accessing financing (OECD, 2021[50]).

Southeast Asian countries should actively promote women's organisations (e.g. unions organising female workers) and business associations that support women. Such organisations and associations provide a variety of benefits to women, such as support to improve their conditions in the workplace, but also access to new entrepreneurial relationships and mentoring opportunities (ILO, 2022[166]). Awareness that the challenges they face are not unique but are shared by other women also helps to build confidence. Some Southeast Asian countries have women's associations to help their entrepreneurial activities. For example, the Thai Woman SMEs Association (TWoSA) devotes special attention to enhancing the promotion of new entrepreneurial activities led by women. TWoSA absolves this role by providing opportunities for training courses, supplemented by regular networking sessions among women entrepreneurs to share experiences and knowledge. Viet Nam Women's Union is another good example that supports women-led business start-ups (Box 4.8). Further support for women's unions and associations would benefit inclusive entrepreneurship in Southeast Asia countries.

Box 4.8. Country examples relevant to fostering entrepreneurship

European Union's Women Business Angels for Europe's Entrepreneurs

In EU countries, the European Parliament funds the Women Business Angels for Women Entrepreneurs initiative. The initiative aims to connect women business angels, a significant untapped source of equity finance that can be invested in women-run businesses, with women entrepreneurs who lack funding. The initiative supports women entrepreneurs in accessing alternative funding sources by helping them present their business ideas to potential investors.

Thailand's Start-Up Nation initiative

The Government of Thailand is actively promoting Thailand as a start-up nation. The National Innovation Agency of Thailand hosts the Start-up Thailand event, the largest tech conference in Southeast Asia, in collaboration with related government alliances, the private sector and the education sector. In addition, the Digital Economy Promotion Agency opened a government start-up centre in Bangkok to help start-ups grow. This start-up centre will partially operate as a pioneer unit of the Internet of Things Institute, located in Thailand's special economic zone, called the Eastern Economic Corridor.

United Kingdom's Aspire Fund

In the United Kingdom, public policies encourage the formation of women-targeted venture capital investments. For example, the programme Aspire Fund was specifically set up in 2008 to support women-led businesses in the United Kingdom. It is a GBP 12.5 million (British pound sterling) fund that makes equity investments to help women-led businesses overcome financial barriers and grow, offering matching funds at both the early stage of the start-up venture and the expansion stage. Eligible businesses must have 30% of the ownership, board, and executive committees composed of women, and the roles of senior women executives are regularly monitored by the programme.

Viet Nam's National Women-led Business Start-Up Program

In Viet Nam, under the aegis of the National Women-led Business Start-Up Program, the Viet Nam Women's Union (VWU) promotes the organisation of – and encourages rural women farmers to take part in – a regular event called "Women's Start-up Day" (WSD). This is an opportunity for women entrepreneurs to pitch their business ideas, build networks and exchange information. Importantly, VWU provides continuous and diverse trainings and support to help them launch their businesses, especially those believed to have a high potential, during the WSD. Many women beneficiaries are particularly appreciative that the support comes from fellow women entrepreneurs, who face the same challenges and can therefore understand their concerns.

Source: Business Angels Europe (2013[167]), *Women Business Angels for Europe's Entrepreneurs*, www.businessangelseurope.com/wa4e; Cornell University, INSEAD and World Intellectual Property Organization (2020[131]), *Global Innovation Index 2020: Who Will Finance Innovation?*, www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf; OECD (2021[50]), *Strengthening Women's Entrepreneurship in Agriculture in ASEAN Countries*; www.oecd.org/southeast-asia/regional-programme/Strengthening_Womens_Entrepreneurship_ASEAN.pdf; European Institute for Gender Equality (2014[168]), *Aspire Fund – Providing equity for women's businesses*, https://eige.europa.eu/sites/default/files/documents/aspire_fund_uk.pdf.

Recommendations for fostering entrepreneurship

- **Improve access to finance for female entrepreneurs by providing targeted financial services combined with financial training.** Governments and financial institutions should improve access to loan programmes targeted at women. For example, they could provide guaranteed loans or microfinancing to women entrepreneurs with high growth potential. Such financial programmes could be offered and combined with other services, such as counselling and financial training. To be effective, the application process for such financial services should be adapted to women's literacy levels to ensure they are easy to understand and apply for.
- **Facilitate the transfer of entrepreneurial knowledge and skills to women by supporting unions for female workers and business associations for women**. Governments should establish and support networks of women's enterprise centres. These networks could provide business development support to women entrepreneurs and build a women-friendly business environment. In addition, governments could strengthen the role of women entrepreneurs in business and industry associations by encouraging chambers of commerce and SME associations to establish businesswomen committees or women entrepreneur working groups.

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Notes

1. Within Southeast Asia, data are only available for Singapore and Jakarta.

2. Self-employment and entrepreneurship are two different concepts but are often closely linked, as both involve flexible, independent individuals who run their own businesses, often at their own risk (Szaban and Skrzek Lubasińska, 2018[169]). In empirical research, self-employment is often used as a proxy for entrepreneurship, especially in cases where data on the latter are limited. There is evidence of the correlation between self-employment and entrepreneurship (i.e. density of business start-ups and innovative firms) (Faggio and Silva, 2012[170]), although interchanging the two has its empirical disadvantages (e.g. the lack of alignment between definitions and data collection methods) (Bjuggren, Johansson and Stenkula, 2010[171]).

5 Strengthening the governance of skills systems in Southeast Asia

Strong governance arrangements are needed to ensure Southeast Asian countries can respond to existing challenges in their skills systems and adapt to labour market changes brought about by megatrends and COVID-19. This chapter assesses the effectiveness of skills governance in Southeast Asia and explores four opportunities to improve skills policies: 1) promoting a whole-of-government approach; 2) promoting a whole-of-society approach; 3) building integrated information systems; and 4) aligning and co-ordinating financial arrangements. The chapter looks at general trends within countries in Southeast Asia, which may have an impact on the above governance components and identifies and showcases good practices, which introduce what has worked to strengthen the relationships of the diverse actors in Southeast Asian skills systems.

The importance of strengthening the governance of skills systems

Effective skills governance systems are crucial to ensuring that Southeast Asia can implement the skills policies needed to adapt to megatrends and recover from the coronavirus (COVID-19) pandemic. Skills governance, defined as the process of decision making and the implementation of skills-related policy interventions (OECD, 2007[1]), aims to improve skills systems by ensuring that skills supply responds effectively to the needs of the labour market and society and promoting greater demand for the use of higher-level skills in the workplace, at home and in communities. This is done through the establishment of inclusive policies and institutions required to take rapid action, counteract the adverse effects of megatrends, and build countries' and individuals' resilience to shocks and disruptions, such as those of COVID-19.

Skills governance involves the contribution of a wide range of actors who work collaboratively to strengthen the skills system. Skills systems consist of the institutions, actors and policies, laws or regulations concerned with the development and use of skills (OECD, 2020[2]), as well as the actors who manage or are affected by them, such as governments, employers, workers, civil society representatives and individuals. Actors in the skills system undertake various activities related to developing and using skills, managing resources (e.g. financial, human, data) and taking decisions related to the supply and demand sides of the skills system. When working collaboratively, these actors' influence increases and they become empowered to link separate components of skills systems and work towards improved skills outcomes for the benefit of all. Effective skills governance allows relevant actors to identify and leverage their strengths, skills, knowledge and networks and use them to complement others to achieve shared policy objectives. As a result, inclusive skills systems are built through the involvement of a wide variety of actors in decision making, fostering buy-in and ownership across the entire skills system and allowing skills policies to contribute to broader socio-economic and societal development objectives (OECD, 2021[3]).

At the regional level, Southeast Asia has established regional skills governance bodies in recognition of their importance in implementing effective skills policies. To name a couple, the Association of Southeast Asian Nations (ASEAN) Technical and Vocational Education and Training (TVET) Council is responsible for the overall co-ordination, research and development and monitoring of regional education programmes to support TVET (RECOTVET, 2020[4]). In addition, the Southeast Asian Ministers of Education Organization (SEAMEO) and its centres bring together ministries of education to promote regional co-operation in education, science and culture (SEAMEO, 2021[5]). These bodies allow countries in the region to exchange good practices, co-ordinate policy implementation at the regional level and improve their respective skills systems. The above-mentioned bodies also engage stakeholders, which contribute funding and mobilise other resources. For example, SEAMEO's centres are funded through different channels, including contributions from all member countries. Furthermore, during the COVID-19 pandemic, such bodies were instrumental in ensuring skills systems' resilience by facilitating discussions on timely solutions and adaptation measures.

However, across Southeast Asian countries, several governance challenges remain. These include: 1) modest horizontal co-ordination arrangements and weak linkages between national and subnational levels of government; 2) low levels of collective bargaining and insufficient engagement of civil society actors, especially of disadvantaged groups; 3) limited capacity and infrastructure to integrate skills data from different sources and use them to inform skills policies; and 4) inadequate diversification of funding arrangements. To overcome these challenges, the OECD project team (OECD, 2019[6]) has identified four building blocks that aim to support effective skills governance systems in Southeast Asia:

- **A whole-of-government approach**, which involves horizontal co-ordination across ministries and vertical co-ordination between national and subnational governments. Engagement across government can vary from ad hoc governance bodies to more formal arrangements, such as skills councils at the national or subnational levels.

- **A whole-of-society approach**, which refers to engagement with actors outside of government and reflecting their needs and interests in skills policies. These actors include actors in education (e.g. teachers) and in the labour market sectors (e.g. employers, chambers of commerce, trade unions), as well as relevant civil society actors (e.g. non-governmental organisations [NGOs]). Engagement can range from opportunities for these actors to voice their concerns through stakeholder consultations or collective bargaining to their full inclusion in formal governance bodies.
- **Integrated information systems,** which refer to mechanisms that link various data sources to inform and support the development and implementation of skills policies. This includes co-ordination among various data collection entities and the standardisation of indicators, which help governance bodies identify current and possible future skills needs and promote sound planning of interventions and career guidance.
- **Aligned and co-ordinated financial arrangements**, which refers to the strategic co-ordination and use of limited financial resources coming from various sources to maximise value. It includes the assessment of financial needs, the identification of adequate and sustainable financial arrangements for skills policy implementation, the diversification of funding sources and the matching of funding needs.

Given these challenges, this chapter aims to suggest future directions for Southeast Asia's skills governance based on an analysis of the current performance of the region. It starts with an overview of the current governance arrangements to implement skills policies and an assessment of Southeast Asian countries' performance on key indicators. Building on this assessment, the chapter then presents four opportunities for the region to strengthen the governance of skills systems in Southeast Asia: 1) promoting a whole-of-government approach; 2) promoting a whole-of-society approach; 3) building integrated information systems; and 4) aligning and co-ordinating financial arrangements. Each opportunity addresses the region's current challenges and proposes concrete, evidence-based policy recommendations.

Summary of recommendations

The policy recommendations presented throughout this chapter are summarised as follows.

Summary of policy recommendations for Southeast Asia for the governance of its skills systems

Opportunity 1: Promoting a whole-of-government approach

Strengthening horizontal co-ordination

3.1. Support skills-related inter-ministerial governance bodies in their engagement of all relevant ministries

3.2. Promote a shared skills goal among relevant ministries through strategic documents, such as national development plans and skills-related policy documents

Strengthening vertical co-ordination

3.3. Support subnational governments in implementing skills policies by providing additional human and financial resources and capacity-building support

Opportunity 2: Promoting a whole-of-society approach

Identifying and engaging relevant labour market actors

3.4. Establish legal frameworks to strengthen engagement with actors in the labour market

3.5. Strengthen the effectiveness of governance bodies engaging labour market actors

Identifying and engaging relevant civil society actors

3.6. Provide financial, technical, and networking resources to facilitate the participation of women, as well as the organisations that represent them, in governance

3.7. Strengthen youth's input in official governance bodies and development of youth strategies

3.8. Support migrant organisations' active participation in governance bodies and influence in skills policies

Opportunity 3: Building integrated information systems

Improving data collection

3.9. Implement robust national data collection processes to address data gaps

3.10. Support participation in international surveys to generate internationally comparable data

Improving the management and use of skills data

3.11. Establish the institutional and legal groundwork for integrating data management systems

3.12. Regularly conduct skills assessment and anticipation exercises to design and updates skills policies

Opportunity 4: Aligning and co-ordinating financial arrangements

Diversifying financial resources

3.13. Promote the use of levies among employers to encourage skills development and mobilise financial resources for training

Allocating financial resources equitably and effectively

3.14. Design a funding formula that allocates adequate financial resources to disadvantaged learners

3.15. Establish strong monitoring and evaluation systems to ensure the effectiveness of allocation arrangements

Overview and performance of Southeast Asia's governance of skills systems

Promoting a whole-of-government approach

Given that skills encompass a wide variety of policy domains, a whole-of-government approach is an integral part of the governance of skills systems. A whole-of-government approach refers to the capacity of various government entities to work together at the national and subnational levels and take advantage of the multiple perspectives, mandates and capabilities of different institutions. The approach aims to improve the government's horizontal and vertical co-ordination, with the overall objective of enhancing coherence in the implementation of skills policies, promoting synergies and improving resource efficiency. A whole-of-government approach should result in increased integration, improved co-ordination and enhanced capacities to develop and implement skills policy (OECD, 2011[7]; Christensen and Lægreid, 2007[8]).

The mandate for skills policies is spread across multiple ministries in Southeast Asia, highlighting the importance of effective horizontal co-ordination

Skills systems are characterised by the involvement of multiple national actors in the development and implementation of skills policies. Horizontal co-ordination includes ministries, departments or agencies at the national level, which are mandated to undertake skills-related functions. The mandate for overseeing skills policies in Southeast Asia falls mainly under the ministries of education and labour. However, other ministries also have related functions, including ministries in charge of affairs related to the economy, industry, innovation, migration, social affairs, culture, sports, agriculture and tourism, as well as specialised national agencies (OECD, 2019[6]). In this sense, horizontal co-ordination promotes coherence in the development and implementation of skills policies and strategies, promotes shared responsibility for decisions and outcomes and fosters a shared commitment to take action (Ferguson, 2009[9]).

However, horizontal co-ordination becomes challenging as the number of national-level actors involved increases. Countries in Southeast Asia usually have diverse ministries with a mandate for skills policies. For example, ministries of education are primarily responsible for overseeing initial and higher education.[1] At the same time, ministries of labour are responsible for managing employment issues and industrial relations, promoting employment, designing, implementing and funding skills-related policies, and collecting information on workers and their rights, including for migrant workers. In some cases, labour ministries are also directly involved in training provision, especially TVET. Ministries of economy, industry and innovation implement skills policies that raise the demand for higher-level skills. Ministries that oversee social affairs, culture and sports are responsible for promoting policies that encourage skills use in everyday life, such as civic engagement and leisure activities. Other ministries, such as those responsible for tourism and agriculture, also offer specialised training to develop skills for their respective sectors. Furthermore, some countries have established oversight bodies that actively co-ordinate the skills or TVET-related activities organised by different actors. A selection of various institutions responsible for implementing elements of skills policies in Southeast Asia is provided in Table 5.1.

Table 5.1. Main national-level skills government institutions in Southeast Asian countries

Country	Ministry/agency responsibilities for implementing elements of skills policies							
	Ministry of Education (or equivalent)	Ministry of Labour (or equivalent)	Ministry of Economy, Industry, and Innovation (or equivalent)	Ministry of Social Affairs, Culture and Sports (or equivalent)	Ministry of Agriculture	Ministry of Tourism	Other ministry*	Specialised agency for skills (e.g. TVET)
Brunei Darussalam	✓		✓	✓			✓	✓
Cambodia	✓	✓	✓	✓	✓	✓		✓
Indonesia	✓	✓	✓	✓	✓	✓	✓	✓
Malaysia	✓	✓	✓	✓				✓
Myanmar	✓	✓	✓	✓	✓		✓	✓
Philippines	✓	✓	✓	✓	✓			✓
Singapore	✓	✓					✓	✓
Thailand	✓	✓	✓	✓				✓
Viet Nam	✓	✓	✓	✓	✓	✓		✓

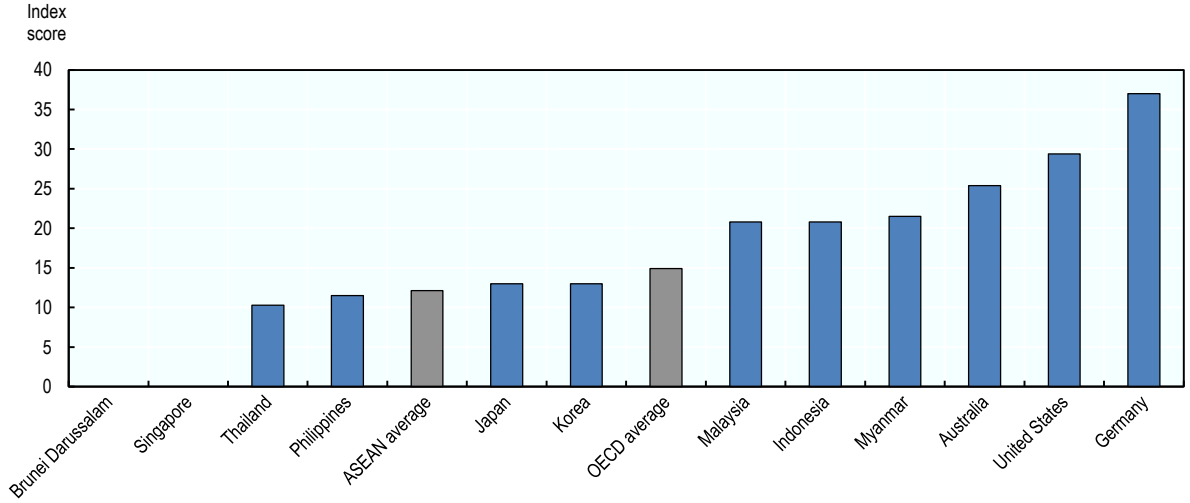
Note: Reference to the ministries' responsibilities on different items of the skills agenda was collected through visits to the official websites and references to their work. The table is not exhaustive; rather, it intends to indicate the type of ministries involved. Other ministries may also be involved in the respective countries; however, the information may not have been publicly available during the drafting of this report.
*Other ministries for: Indonesia - Ministry for Economic Affairs; Myanmar – Ministry of Science and Technology (Department of Technical and Vocational Education and Training); Singapore – Ministry of Health (Ageing Planning Office).

Southeast Asian countries vary considerably in terms of effectiveness of vertical co-ordination for skills policies

Vertical co-ordination enables a close interaction across levels of government and is crucial to ensure that national policy decisions reflect needs at the subnational level. Vertical co-ordination refers to the level of engagement between the national and subnational governments. It allows the latter to participate actively in policy decision making. Furthermore, it aims to make policy development more responsive to subnational needs. Vertical co-ordination offers several advantages. These include boosting knowledge sharing, broadening the scope of skills data collection, improving skills budget use efficiency; reducing disparities in participation (by individuals) in skills development and use across subnational levels; and stimulating skills interventions based on actual needs (OECD, 2021[10]). Vertical co-ordination ranges from dialogue and ad hoc consultations with subnational levels to inclusion in formal governance bodies. Occasionally, it may entail the entire delegation of responsibilities of the national government to subnational governments through decentralisation (Gløersen and Michelet, 2014[11]).

Southeast Asian governments vary considerably in terms of the extent to which regional governments exercise authority for skills policy. Figure 5.1 presents the extent to which different government levels exert authority in policy decision making (Hooghe et al., 2016[12]). The index ranges between 0 and 38, with the higher numbers indicating higher levels of decentralisation and greater authority delegated to regional government structures. While the averages for ASEAN countries (12.1) and OECD countries (14.9) do not differ significantly, considerable differences can be observed among Southeast Asian countries. For example, Myanmar (21.5), Malaysia (20.8) and Indonesia (20.8) are countries where decision-making authority is relatively more decentralised, thus showing more regional authority. At the same time, according to the index, Singapore (0), Brunei Darussalam (0), Thailand (10.3) and the Philippines (11.5) are below the ASEAN average. Therefore, it is assumed that their systems are highly centralised.

Figure 5.1. Regional Authority Index, Southeast Asian countries and selected OECD countries, latest available year



Note: The Regional Authority Index measures the extent to which regional governments can exercise authority (i.e. legitimate, recognised and accepted right to power) in various areas of governance, including taxation, borrowing, national legislation and constitutional reform, on a scale from 0 to 38. All data are from 2010 except for Japan and the United States (2016).
Source: Hooghe et al. (2016[12]), *Measuring Regional Authority: A Post-functionalist Theory of Governance*, *Volume I*, https://doi.org/10.1093/acprof:oso/9780198728870.001.0001.

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Promoting a whole-of-society approach

While horizontal and vertical co-ordination arrangements are necessary among ministries and across levels of government, it is equally important to engage actors outside of government. A whole-of-society approach includes the participation of a wide range of non-governmental actors in policy making. These include employers, workers and civil society representatives, educational institutions and training providers, among others. Employers refer to the actors who can engage other individuals to work with them as employees (OECD, 2002[13]), while workers are all those involved in paid employment (OECD, 2003[14]). Civil society refers to all individuals or organisations of individuals linked by similar interests or pursuing common objectives through partnerships with other individuals for non-commercial reasons. The involvement of these actors in the skills agenda provides a broader perspective on the skills system and valuable, up-to-date information regarding current and evolving skills needs. Promoting a whole-of-society approach requires establishing effective engagement mechanisms and creating avenues for the political participation and inclusion of under-represented groups at all policy decision-making levels.

Southeast Asian countries could do more to improve engagement with relevant labour market actors for skills policies

Co-ordination mechanisms engaging employers and workers can assist in more closely aligning educational and training goals and outcomes with the needs of the labour market. Employers play a key role in skills governance (ILO, 2020[15]), as they possess valuable information and resources – financial, human, and technological – to support and contribute to the development and use of skills. Similarly, workers are well positioned to understand challenges and opportunities in developing and using skills, the skills that workers need for success, and why certain individuals either do not avail themselves of or abandon training and employment opportunities. A variety of co-ordination mechanisms exist for governments to engage employers and workers (e.g. public-private partnerships, councils, co-funding arrangements) and for employers and workers to engage with one another (e.g. collective bargaining mechanisms) (OECD, 2019[6]).

Establishing effective collective bargaining mechanisms is crucial to fostering the socio-political environment that allows workers and employers to participate in skills policy making. Collective bargaining refers to the engagement mechanisms through which trade unions come together to establish agreements with employers regarding their terms of employment (ILO, 2022[16]). The ASEAN average collective bargaining coverage rate stands at 10.1% (for those countries with available data). As shown in Figure 5.2, collective bargaining agreements are virtually absent in Malaysia and the Philippines, where less than 2% of the workforce is covered. In comparison, in Cambodia, one in four (26.3%) employees' conditions of employment are determined by collective agreements. The OECD collective bargaining rate average is 44.6%, with significant differences between countries. For example, in Germany, a country with a governance system wherein social dialogue has traditionally played a central role, 56% of employees have working conditions or wages determined by at least one collective bargaining agreement. In comparison, the United States stands just above the ASEAN average, with 11.5% of workers represented.

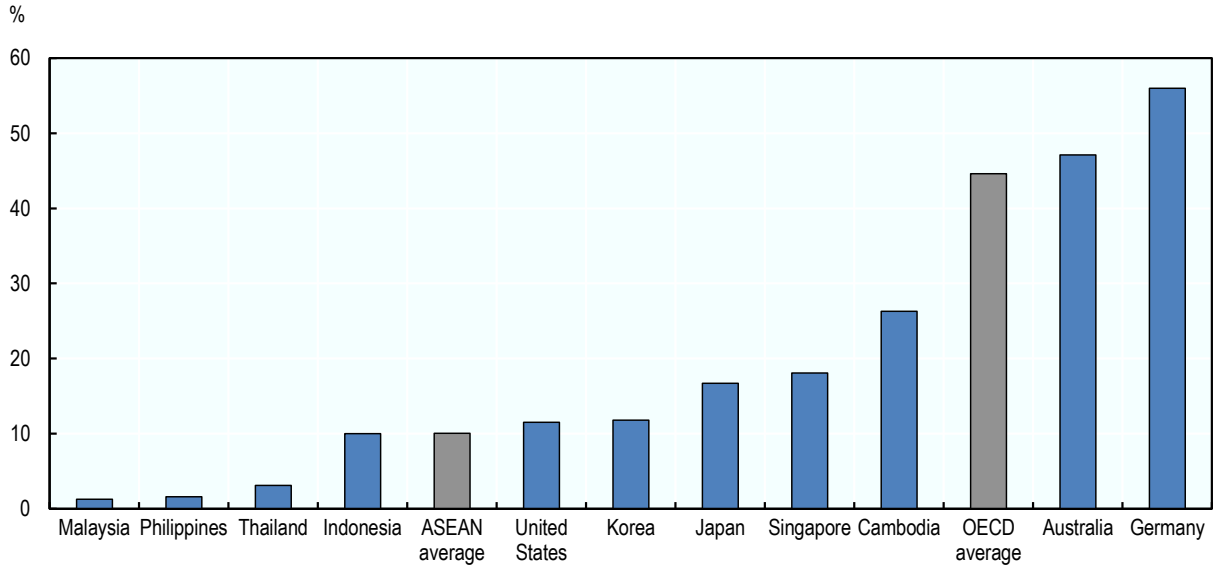
More could be done to improve the participation of civil society in skills policies in Southeast Asia

The engagement of civil society actors is crucial to improving governance at all levels, ensuring that skills policies are adapted to the needs of the most vulnerable and secure the full use of skills for life and work. Organised civil society actors, such as NGOs, are likely to have closer contact than governments with local community leaders and other local actors. Therefore, they can facilitate negotiations at the local level and support the implementation of skills reforms. Moreover, civil society actors are knowledgeable about their local context and aware of the needs of various vulnerable groups. As such, their engagement is crucial to ensure that the needs of vulnerable groups are reflected in policy making and that the skills development

policies are not only demand-driven but also inclusive (ADB, 2021[17]). Furthermore, organised civil society actors often promote employment and entrepreneurship through targeted programmes and support individuals in coping with specific challenges. Therefore, they are strategically positioned to support skills use for life and work. Finally, many of the organised civil society actors in Southeast Asia have a regional or international perspective. They are, therefore, capable of supporting cross-country knowledge sharing and ASEAN-wide initiatives (Makito, 1999[18]).

Figure 5.2. Collective bargaining coverage rates in Southeast Asian countries and selected OECD countries, 2016

Percentage of employees



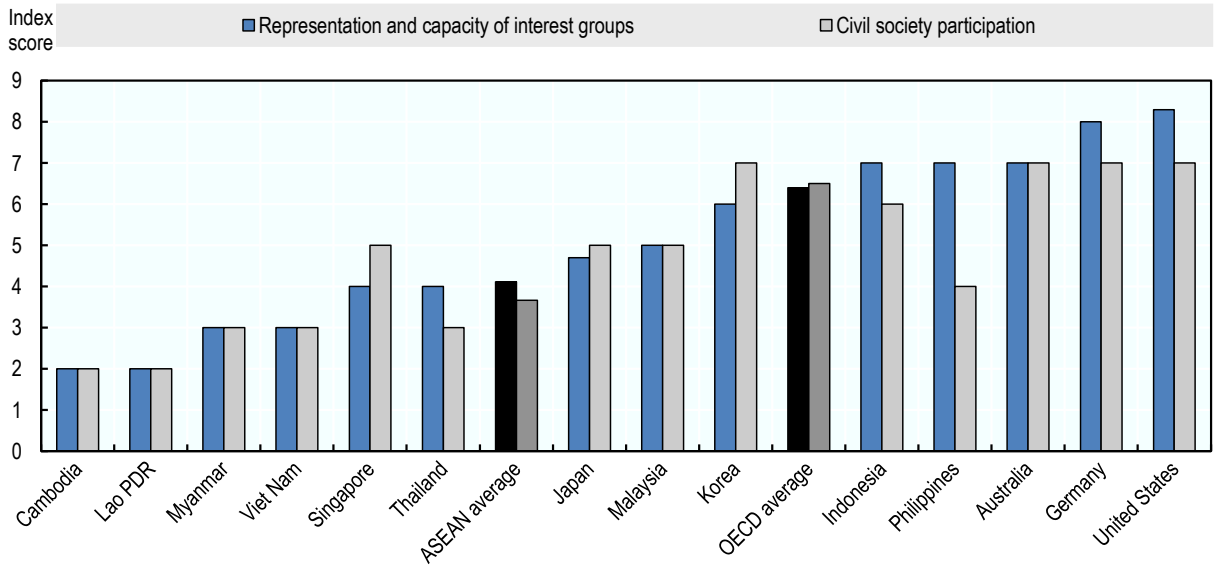
Note: The collective bargaining coverage rate measures the number of employees whose wages and/or conditions of employment are determined by one or more collective agreement(s) as a percentage of the total number of employees. Due to a lack of data, the latest available year was used for the following countries: Indonesia (2008), Cambodia and Singapore (2012), and Korea (2015).
Source: World Bank (2019[19]), *Freedom of association and assembly*, https://govdata360.worldbank.org/indicators/h73d52fde; ILOSTAT (2020[20]), *Statistics on collective bargaining*, https://ilostat.ilo.org/topics/collective-bargaining/.

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Despite the importance of their engagement, more could be done to facilitate the inclusion of civil society actors in Southeast Asian countries. Figure 5.3 shows the extent to which representative and competent civil society groups exist in the region, as well as the level at which these groups participate in the formulation of policies and in the political process. On a scale of 1 (lowest) to 10 (highest), Southeast Asia scores an average of 4.1 in the representation and capacity of interest groups, which is lower than the OECD average of 6.4. Similarly, the region rates only 3.7 in civil society participation, which is lower than the OECD average of 6.5, indicating significant room for improvement. Civil society capacity and participation are highest in Indonesia (7 in representation and capacity of interest groups, 6 in civil society participation) and the lowest in Cambodia and the Lao People's Democratic Republic (hereafter "Lao PDR") (2 for both indicators).

Figure 5.3. Civil society capacity and participation in policy formulation in Southeast Asian countries and selected OECD countries, 2022

Index score on a scale of 1 (lowest) to 10 (highest)



Note: "Representation and capacity of interest groups" refers to the extent to which a network of co-operative and competent interest groups exists to mediate between segments of civil society and government, while "civil society participation" refers to the extent to which political leadership involves civil society actors in agenda setting, decision making, policy development and implementation, and performance monitoring. Equivalent data for OECD countries were taken from the Sustainable Governance Indicators Database, using the indicators "parties and interest associations", which measures the extent to which non-economic associations are capable of representing segments of civil society, and "societal consultation", which refers to the extent to which government consults with economic and social actors in the course of policy preparation.

Source: Bertelsmann Stiftung (2022[21]), *BTI Transformation Index*, https://bti-project.org/en/index/political-transformation; Bertelsmann Stiftung (2022[22]), *Sustainable Governance Indicators*, www.sgi-network.org/2022/.

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Building integrated information systems

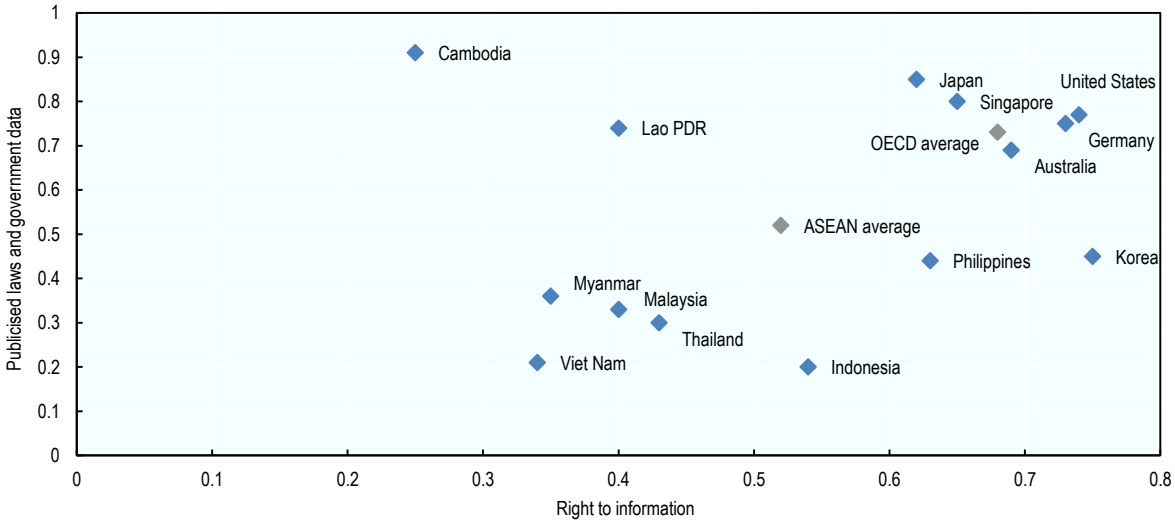
Integrated information systems facilitate decision-making processes by making the necessary data available to draw findings on skills issues. Therefore, building integrated information systems is an essential building block for skills governance. In Southeast Asia, different actors currently collect, process and disseminate data, making data management processes very complex. Having various data sources may also hinder the utilisation of data, as, without integration, any single data source is incomplete and thus has only limited use. For instance, incomplete data from the supply side alone cannot inform career guidance and counselling services. Similarly, demand-side data alone cannot inform skills forecast exercises. Data are only valuable when they can be used effectively, highlighting the importance of establishing the right environment to make information accessible to all.

Southeast Asian countries vary in the extent that they guarantee the right to information and make laws and government data publicly available. Southeast Asian countries like Viet Nam, Indonesia, Thailand, Malaysia, and Myanmar have relatively fewer measures that guarantee the right to information and make laws and government data publicly available. In contrast, like other OECD countries, Singapore has relatively more measures that ensure the right to information (Figure 5.4). Accessibility of skills information could be enhanced through a formal body responsible for managing and disseminating this type of

information. The importance of the availability, dissemination and use of high-quality skills information was underscored during the COVID-19 pandemic, as policy makers, employers and individuals struggled to make informed skills-related decisions.

Figure 5.4. Availability and accessibility of information: Right to information vs. publicised laws and government data in Southeast Asian countries and selected OECD countries, 2020

Index score on a scale of 0 (lowest) to 1 (highest)



Source: World Justice Project (2021[23]), *Open Government Indicators*, www.worldjusticeproject.org/rule-of-law-index/factors/2021/Open%20Government.

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Aligning and co-ordinating financial arrangements

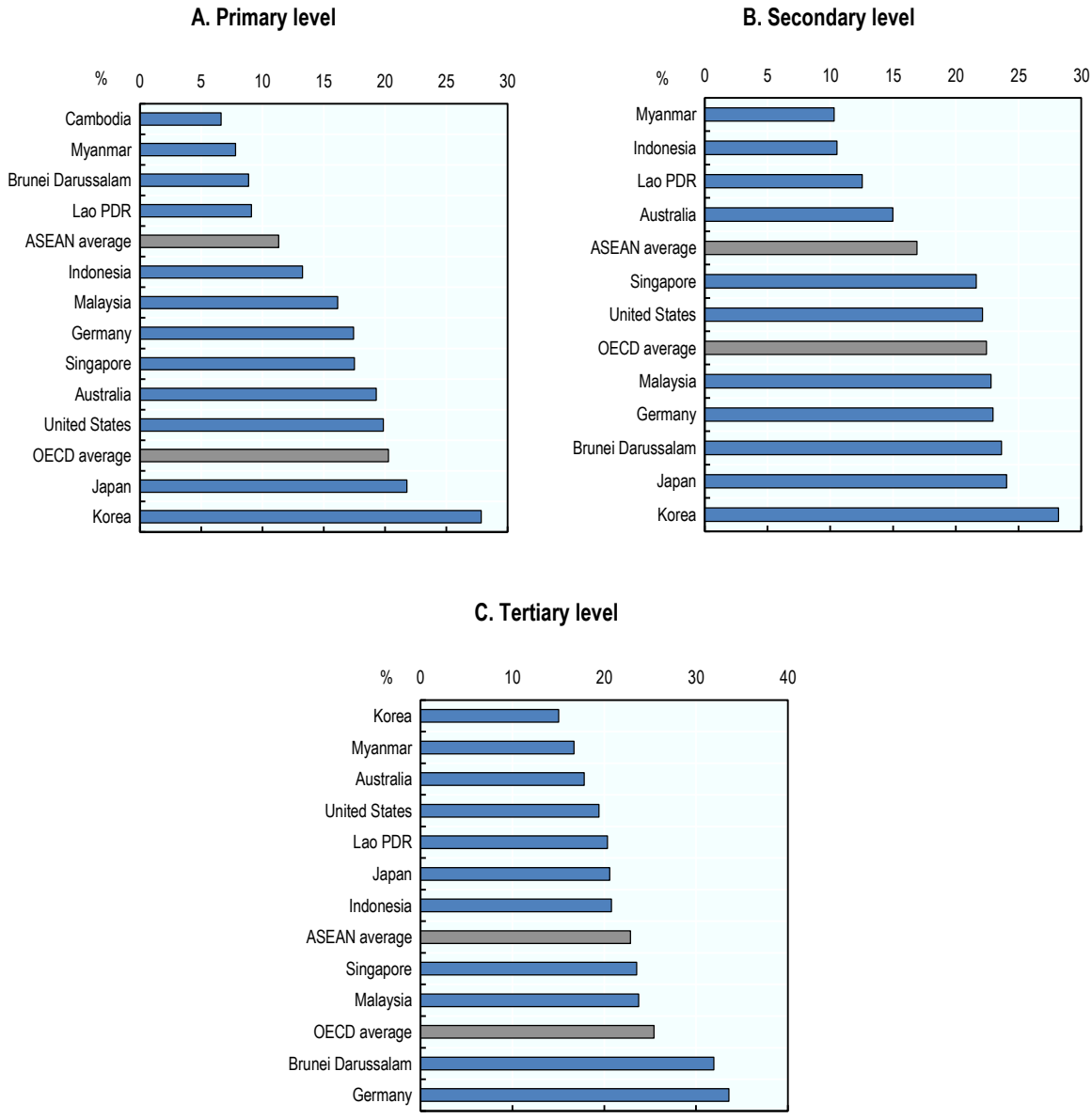
Robust financial arrangements are an essential factor in the sustainability of governance mechanisms and a determinant of the success of skills interventions. Innovative financing mechanisms provide financial resources from different sources, creating an enabling environment for skills systems to plan essential long-term interventions. Moreover, they allow systems to adapt and act rapidly towards tackling the possible adverse effects of labour market megatrends and other disruptive shocks, such as the COVID-19 pandemic. Furthermore, diversified financial arrangements provide increasing resources to skills systems and make a more comprehensive set of actors responsible for the results of skills development and use interventions, promoting joint decision making, which is expected to lead to increased quality.

Regardless of the above, skills development systems in Southeast Asia continue to be mainly financed through household and government contributions, relying heavily on government funding. Figure 5.5 depicts the government expenditure per student (expressed as a percentage of gross domestic product [GDP] per capita, which is among the measures to track the progress of Sustainable Development Goal [SDG] target 4.5.4) across Southeast Asia and OECD countries. A higher indicator value indicates a greater priority to the specific level of education given by public authorities. Across both OECD and Southeast Asia countries, higher levels of education are associated with higher spending per student (per capita terms). Lower spending at earlier stages of education makes it less likely for young learners to develop a strong skills foundation, which then limits their ability to acquire higher-level skills at later stages of education, such as at the tertiary level (OECD, 2017[24]). At all levels, average Southeast Asian government expenditure is below that of OECD countries. For pupils in primary education, countries in Southeast Asia spend 11.3% of GDP per capita on average compared to 20.3% in OECD

countries. The spending gap between countries in Southeast Asia and the OECD narrows though for secondary and tertiary levels of education. For instance, Southeast Asia countries are spending 22.8% of GDP per capita for each student in tertiary education, compared to 25.4% in OECD countries. As discussed in Chapter 3, the number of students decreases by the level of education across countries. This is, in particular, the case for countries in Southeast Asia, which tend to spend an increasing amount of public resources on a relatively small (tertiary) student population.

Figure 5.5. Government expenditure on education per student in Southeast Asian countries and selected OECD countries, latest available year

Percentage of GDP per capita



Note: Government expenditure on education per student refers to the average general government expenditure (current, capital and transfers) per student, expressed as a percentage of GDP per capita. Data include the latest year available for each country at each level of education.
Source: World Bank (2021[25]), *World Development Indicators*, https://databank.worldbank.org/source/world-development-indicators.

StatLink https://stat.link/36zvg1

Opportunities to strengthen the governance of skills systems

Improving the governance of skills systems is essential to ensuring that skills policies are implemented effectively. Moreover, effective implementation is key to guaranteeing that all actors benefit equally from skills policies and that they can sustain the full development and use of their skills over the life course. Based on an assessment of the performance of countries in Southeast Asia, the following opportunities have been identified for strengthening the governance of its skills systems:

1. promoting a whole-of-government approach
2. promoting a whole-of-society approach
3. building integrated information systems
4. aligning and co ordinating financial arrangements.

Opportunity 1: Promoting a whole-of-government approach

Skills policies require a whole-of-government approach. Developing and implementing skills policies rarely depend on a single ministry or level of government. Instead, they often involve multiple governmental actors with responsibilities for, and interests in, skills outcomes. A whole-of-government approach is needed to promote horizontal co-ordination among relevant ministries and vertical co-ordination across levels of government, including regional and local. Such an approach aims to bring different ministries and levels of government together to facilitate their collaboration and foster policy coherence (OECD, 2019[6]).

There are various horizontal and vertical mechanisms to facilitate a whole-of-government approach to skills policies. In all mechanisms, it is important to ensure that all units of government have a common understanding of the skills agenda and its goals and are committed to providing the necessary financial and human resources to facilitate the implementation of skills policies. Opportunity 1 presents two policy directions for promoting a whole-of-government approach. First, it explores how to promote horizontal co-ordination across ministries by establishing oversight agencies, inter-ministerial bodies, and sectoral bodies. Second, it discusses how to strengthen vertical co-ordination across levels of government, such as by implementing vertical mechanisms that bring together national and subnational levels of government in the form of formal bodies, working groups and ad hoc meetings.

Strengthening horizontal co-ordination

Horizontal co-ordination, which fosters collaboration among relevant ministries and other national-level actors on skills policies, improves skills systems in several ways. First, they enhance the coherence of the skills agenda across the whole of government, establishing close linkages between national development plans, economic, industrial, and sectoral growth strategies and skills policies and strategies (ADB, 2015[26]). Second, horizontal co-ordination improves the overall resilience of skills systems by enabling a more efficient and rapid response to tackle shocks, such as the COVID-19 pandemic, facilitating strategic and timely decision making and designing targeted skills activities (ILO, 2020[27]). Third, horizontal co-ordination also promotes other activities required for an efficient skills system, such as improved data collection, management, and dissemination (see Opportunity 3) and the sustainable financing of skills (see Opportunity 4) (OECD, 2019[6]; 2020[2]). In line with these many benefits, this policy direction explores two areas where horizontal co-ordination could be strengthened in Southeast Asia's skills systems: 1) establishing inter-ministerial oversight bodies; and 2) developing a shared skills goal across ministries.

Strengthening horizontal co-ordination through inter-ministerial oversight bodies

Inter-ministerial oversight bodies have shown positive results in promoting coherent implementation of skills policies in some Southeast Asian countries. An inter-ministerial oversight body is an independent entity that co-ordinates skills-related policies across policy domains. Among the activities of different

inter-ministerial oversight bodies is the co-ordination of actors involved in skills development and use, data collection, skills-related research, knowledge sharing, and monitoring and evaluation of skills policies. Often acting with a certain degree of independence, inter-ministerial oversight bodies are typically governed by inter-ministerial boards and bring together national and subnational government representatives. The strategic advantage of inter-ministerial oversight bodies is found in their expertise. By focusing their activities on specific components of skills development and use, oversight bodies can support the implementation of long-term strategies with sustainable results. Countries in Southeast Asia with established oversight agencies include Malaysia (Department of Skills Development, DSD), Myanmar (National Skills Standards Authority, NSSA), the Philippines (Technical Education and Skills Development Authority, TESDA), and Viet Nam (Department for Vocational Education and Training, DVET) (Table 5.2). Inter-ministerial oversight bodies may be created ad hoc to respond to disruptive and pressing issues affecting skills policies. For example, Australia's Industry and Skills Committee (AISC) Emergency Response Sub-Committee was expressly set up to tackle the challenges of the COVID-19 pandemic (Box 5.1).

Table 5.2. Examples of skills-related inter-ministerial oversight bodies in Southeast Asian countries

Country	Inter-ministerial bodies	Mandate	Ministries involved	Other members
Brunei Darussalam	Manpower Planning and Employment Council	To address unemployment-related issues effectively and efficiently	• Prime Minister's Office • Education • Home Affairs • Development • Transport & Info-Communication • Culture, Youth and Sports	• Industries • Regulators/authorities • Training institutions
Cambodia	National Training Board	To co-ordinate a long-term development plan for TVET and orient the TVET system towards the socio-economic needs of the country	• Council of Ministries • Labour and Vocational Training • Social Affairs • Veteran and Youth Rehabilitation Education, Youth and Sport • Commerce • Post and Telecommunications • Tourism • Agriculture, Forestry and Fisheries • Industry, Mines and Energy • Public Works and Transport • Planning • Economy and Finance • Health • Environment • Culture and Fine Arts • Women's Affairs • Rural Development • Labour and Vocational Training's Council for the Development of Cambodia	• Employers • Individual enterprises • Hotel industry associations • Trade unions • Polytechnics • International organisations • NGOs
Indonesia	Coordinating Ministry for Economic Affairs	To plan and co-ordinate economic policies, including manpower development	• Manpower • State Owned Enterprises • Finance • Industry • Trade • Agriculture, Environment and Forestry • Public Works and Public Housing • Land Spatial Planning	• Other relevant state institutions

Country	Inter-ministerial bodies	Mandate	Ministries involved	Other members
Lao PDR	National Training Council	To function as an advisory body regarding the development of skills plans and policies	• Education and Sports • Labour and Social Welfare	• Employers • Youth • Women • Unions
Malaysia	Council of the Department of Skills Development	To manage and co-ordinate training offers for Malaysian citizens and promote career development in all sectors	• Human Resources • Education • Higher Education • Youth and Sports • Rural and Regional Development • Agriculture and Agro-based Industry • Public Works	• Employers • Individual enterprises • Trade unions • Sectoral associations • Academic institutions
Myanmar	Board of the National Skills Standards Authority	To support labour-market-relevant skills development opportunities and improve the quality of the skills development programmes (e.g. through the development of skills assessment criteria and a certification system)	• Labour, Immigration and Population • Planning, Finance, and Industry • Agriculture, Livestock, and Irrigation • Commerce • Transport and Communications • Natural Resources and Environmental Conservation, Electrical and Energy • Planning, Finance and Industry • Education • Health and Sports • Construction • Social Welfare, Relief and Resettlement • Hotels and Tourism • Labour, Immigration and Population	• Employers • Trade unions
Philippines	Philippine Qualifications Framework – National Coordinating Council	To harmonise qualification levels across initial education, TVET and tertiary education, in line with the Philippines Qualifications Framework, as well as to improve quality assurance mechanisms throughout the skills system	• Education • Labour and Employment • Commission of Higher Education • Technical Education Skills Development Authority (TESDA) • Professional Regulation Commission	• Economic sector • Industry sector
	The Philippine Skills Framework Initiative	To co-ordinate inter-agency efforts to improve the skills of the Philippine workforce through the development of sector-specific skills frameworks	• Trade and Industry • Agriculture • Education • Information and Communications Technology • Labour and Employment • Science and Technology • Tourism • Commission on Higher Education, Professional Regulatory Commission • TESDA	

Country	Inter-ministerial bodies	Mandate	Ministries involved	Other members
Singapore	SkillsFuture Singapore	To drive and coordinate the implementation of the national SkillsFuture movement, promote a culture and system of lifelong learning through the pursuit of skills mastery, and strengthen the ecosystem of quality education and training in Singapore	• Health • Education • Info-Communications Media Development Authority of Singapore	• Enterprises • Employers • Trade associations • Unions • WorkForce Singapore
	Future Economy Council	To develop and implement new strategies for 23 strategic industries	• Deputy Prime Minister and Coordinating Minister for Economic Policies • Prime Minister's Office • Education • Sustainability and the Environment • Trade and Industry • Transport • National Development • Social and Family Development • Health • Manpower • Communications and Information • Finance	• Trade Associations and Chambers (TACs) • Unions • Businesses • Institutes of Higher Learning (IHLs) • Training institutes
Thailand	Committee of Thailand's Equitable Education Fund	To provide financial support to disadvantaged children and youth and reduce educational inequalities	• Prime Minister • Education • Finance • Social Development and Human Security • Interior • Public Health	

Source: APEC (2021[28]), *APEC Economic Policy Report 2021: Structural Reform and the Future of Work,* www.apec.org/docs/default-source/publications/2021/11/2021-aepr/2021-aepr---annex-a_individual-economy-reports.pdf?sfvrsn=b601ebf_4*;* Brunei Darussalam, Manpower Industry Steering Committee (MISC) Working Group for Energy (2023[29]), *About Us*, https://miscenergy.com/about/; National Training Board (2008[30]), *National Training Board Profile and History*, www.ntb.gov.kh/profile.htm; UNESCO International Centre for Technical and Vocational Education and Training (2020[31]), *TVET Country Profile: Lao People's Democratic Republic*, https://unevoc.unesco.org/home/Dynamic+TVET+Country+Profiles/country=LAO; Malaysia Department of Skills Development (2020[32]), *Department Profile*, www.dsd.gov.my/index.php/profil-jabatan/latar-belakang; Myanmar National Skills Standards Authority (2021[33]), *NSSA Organizational Structure*, www.nssa.gov.mm/en/about-us/organizational-structure; Philippine Business for Education (2020[34]), *A Future That Works: Where We Are So Far*, www.pbed.ph/projects/13/A%20Future%20That%20Works; Philippine Department of Trade and Industry (2021[35]), *DTI leads launching of national skills upgrading initiative*, www.dti.gov.ph/archives/news-archives/national-skills-upgrading-launching/; Singapore Ministry of Trade and Industry (2020[36]), *The Future Economy Council*, www.mti.gov.sg/FutureEconomy/TheFutureEconomyCouncil; SkillsFuture (2016[37]), *Homepage*, https://www.skillsfuture.gov.sg/; Workforce Singapore Agency (2016[38]), *About Workforce Singapore,* www.ssg-wsg.gov.sg/about.html?activeAcc=7; Thailand Department of Skill Development (2014[39]), *About the Department: Vision/Mission*, www.dsd.go.th/DSD/Home/Vision.

While governance bodies, such as inter-ministerial oversight bodies, are essential to facilitating horizontal co-ordination, it matters how they are established. Having unnecessary multiple bodies with the same or similar mandates and engaging many of the same actors across bodies would be counterproductive and ineffective. When the responsibilities and membership of these bodies overlap, this can impede co-ordination by overloading members' agendas; creating confusion about objectives, roles and responsibilities; and reducing efficiency. Thus, the mandates, scope and composition of bodies should be clarified and co-ordinated relative to each other through, for example, creating clear terms of reference

specifying the roles and responsibilities of each body. These terms should be based on the specific body's mandate, capacity and expertise (Charbit and Michalun, 2009[40]).

Furthermore, the effectiveness of governance bodies depends on the active participation of its members and available financial and human resources. While the active participation of members is critical for governance bodies to co-ordinate effectively, common constraints include lack of time and availability to meet. This constraint is particularly challenging when the members include senior government officials from different ministries and require their presence to convene. A frequent turnover among members can also be a problem. To make more frequent meetings possible and ensure continuity, governance body members could form smaller working groups on specific issues, brief new members, discuss relevant issues in advance, prepare input for the main meetings, document the outcomes of the meetings, and follow up on specific decisions (OECD, 2021[10]). Convening members, preparing meeting documents, booking meeting venues, and following up on and implementing decisions made during meetings require financial and human resources. In Korea, the Social Affairs Ministers' Committee (SAMC), led by the Minister of Education, consists of senior representatives from nine ministries and co-ordinates a variety of social policies, including those related to skills. The SAMC has smaller working groups to monitor the implementation of its decisions and to raise policy results. Furthermore, a dedicated team of 18 members within the Ministry of Education's Social Policy Cooperation Bureau support the work of the committee (Box 5.1) (OECD, 2021[10]).

Strengthening horizontal co-ordination through a common goal across ministries

Besides co-ordination bodies, horizontal co-ordination can also be strengthened through promoting a common goal across ministries. When ministries share a common goal, they are incentivised and expected to co-ordinate with one another. A shared goal could be formalised through strategic documents, such as national development plans and skills-specific policy documents. The shared goal should consist of an overarching vision for skills outcomes that all relevant ministries share and can contribute to.

National development plans foster horizontal co-ordination in skills policies. When national development plans include skills-related objectives, relevant ministries are incentivised to co-ordinate with one another to align their respective contributions to reach the skills-related objectives. Table 5.3 shows that most national development plans in Southeast Asian countries feature skills-related priorities. All countries recognise the importance of skills policies in equipping individuals with the skills to meet the evolving demands in the labour market and society due to megatrends. In a few cases – notably Cambodia, Lao PDR, Myanmar and Viet Nam – skills constitute a standalone objective within their national development plan.

Table 5.3. Skills as a priority in Southeast Asian countries' development plans

Country	Title of national development plan	Skills-relevant priorities
Brunei Darussalam	National Vision Wawasan Brunei 2035	To make Brunei Darussalam a nation widely recognised for its well-educated and highly skilled people, measured by international standards
Cambodia	The National Strategic Development Plan 2019-2023	To improve the quality of education, science and technology, and vocational training
Indonesia	Long-term National Development Plan of 2005 to 2025	To improve the inclusion and accessibility of education
Lao PDR	Five-Year National Socioeconomic Development Plan 2021-2025	To improve workforce skills and productivity and organising a systematic labour market database
Malaysia	Twelfth Malaysia Plan 2021-2025: A Prosperous, Inclusive, Sustainable Malaysia	To enhance the talent and skills required to drive both the digital economy and the 4th Industrial Revolution
Myanmar	Myanmar Sustainable Development Plan 2018-2030	To develop human resources and social development for a 21st Century Society

Country	Title of national development plan	Skills-relevant priorities
Philippines	Philippine Development Plan 2017-2022	To ensure lifelong learning opportunities for all and provide all citizens with the 21st-century skills necessary to engage in meaningful and rewarding employment
Singapore	Next Bound of SkillsFuture	To enable individuals to continue learning, enhance the role of enterprises in developing their workforce, and have a special focus on mid-career workers to help them stay employable and move to new jobs or new roles
Thailand	The Twelfth National Economic and Social Development Plan 2017-2021	To increase knowledge and skills for the 21st century
Viet Nam	Five-Year Socio-Economic Development Plan 2021-2025	To improve the quality of human resources together with promoting innovation, application and robust development of science and technology

Note: Information on Singapore's Development Plan was not available. Thailand's Twelfth Development Plan ended in 2021, and a newer plan was not available.

Source: Government of Brunei Darussalam (2018[41]), *National Vision Wawasan Brunei 2035*, www.gov.bn/SitePages/Wawasan%20Brunei%202035.aspx; Ministry of Planning (2019[42]), *The National Strategic Development Plan (NSDP)*, www.mop.gov.kh/DocumentEN/NSDP%202019-2023%20in%20English.pdf; Government of Malaysia (2021[43]), *Twelfth Malaysia Plan 2021-2025: A Prosperous, Inclusive, Sustainable Malaysia*, https://rmke12.epu.gov.my/en; Philippine National Economic Development Authority (2021[44]), *Updated Philippine Development Plan 2017-2022*, https://rmke12.epu.gov.my/en; https://pdp.neda.gov.ph/updated-pdp-2017-2022/; Office of the National Economic and Social Development Board (2022[45]), *The Twelfth National Economic and Social Development Plan 2017-2021*, www.nesdc.go.th/ewt_dl_link.php?nid=9640; SkillsFuture Singapore (2023[46]), *The Next Bound of SkillsFuture*, www.skillsfuture.gov.sg/nextbound.

Besides national development plans, skills-specific policy documents can also foster horizontal co-ordination. Table 5.4 provides an overview of Southeast Asian countries' main strategic policy documents covering skills development and use. These documents describe governments' commitments to achieving certain skills objectives by outlining concrete policy initiatives, identifying resources and mapping all relevant actors involved. The relevant actors include representatives from multiple ministries. However, while most skills-related policy documents in Southeast Asian countries list the relevant actors involved, responsibilities and modalities for engagement are generally not specified, and actors usually agree on their roles only during the policy implementation stage. Thus, there remain opportunities for countries in the region to identify the specific contributions of each actor across relevant ministries and designate co-ordination mechanisms (such as those discussed earlier) that allow them to work with one another and pursue common objectives.

Table 5.4. Horizontal co-ordination in Southeast Asian countries' key policy documents

Country	Skills policy document	Description of skills-related objectives	Main governance body in charge	Reference to horizontal co-ordination
Brunei Darussalam	Education Strategic Plan 2018-2022	To improve government-wide human resource planning and the execution of a government-wide human resource development strategy	Ministry of Education	To co-ordinate with all relevant ministries and government agencies
Cambodia	National Technical Vocational Education and Training Policy 2017-2025	To improve the quality of TVET in line with national and international standards, increase equitable access to TVET to support employment, and improve the governance of the TVET system (e.g. strengthening of labour market forecasts and the assessment of skills needs)	Ministry of Labour and Vocational Training	To strengthen the National Training Board in co-ordination with other ministries (e.g. Education, Youth and Sport; Planning; Tourism; Economy and Finance) and other relevant institutions

Country	Skills policy document	Description of skills-related objectives	Main governance body in charge	Reference to horizontal co-ordination
Malaysia	National Skills Development Act 2006	To manage and approve national occupational skills standards, as well as to advise the minister on skills-related concerns	National Skills Development Council	To manage co-operation with the Economic Planning Unit of the Prime Minister's Department, the Public Services Department, as well as other ministries (e.g. Education; Higher Education; Human Resources; Youth and Sports; Entrepreneur Development and Cooperative; Agriculture and Food Industries; Public Works)
Myanmar	Employment and Skill Development Law 2013	To manage employment and skill development issues throughout the country (e.g. creation of employment opportunities, reduction of unemployment, skills development among workers)	Ministry of Labour, Employment and Social Security	To form and co-ordinate skills development bodies comprised of relevant ministries and departments, chambers, technical associations, employer and employee federations
Philippines	National Technical Education and Skills Development Plan 2018-2022	To create an enabling environment for the development and delivery of high-quality TVET, especially among disadvantaged groups, based on the objectives of the Philippine Development Plan and the Labour and Employment Plan	NTESDP Inter-Agency Committee, Technical Education and Skills Development Authority (TESDA)	To improve inter-agency co-ordination with the Department of Education, as well as with other relevant departments (e.g. Agriculture; Agrarian Reform; Trade and Industry; Labour and Employment; Science and Technology; Social Work and Development , among many others)
Thailand	Skills Development Promotion Act	To provide advice to the minister regarding skills development activities (including the creation of national skill standards) and the management of the Skills Development Fund	Department of Skill Development	To co-ordinate across ministries (e.g. Labour and Social Welfare; Finance, Science, Technology and Environment; Education; Industry), agencies (e.g. Budget Bureau; Board of Investment; Tourism Authority of Thailand) and stakeholders.

Source: Brunei Darussalam Ministry of Education (2018[47]), *Ministry of Education Strategic Plan 2018-2022*, www.moe.gov.bn/DocumentDownloads/Strategic%20Plan%20Book%202018-2022/Strategic%20plan%202018-2022.pdf; Government of Cambodia (2017[48]), *National Technical Vocational Education and Training Policy 2017-2025*, http://tvetsdp.ntb.gov.kh/wp-content/uploads/2018/02/NTVET-Policy-2017-2025.ENG_.pdf; Malaysia Commissioner of Law Revision (2006[49]), *National Skills Development Act of 2006*, www.ilo.org/dyn/natlex/docs/ELECTRONIC/95630/112654/F-998717512/MYS95630.pdf; Myanmar Law Information System (2013[50]), *The Employment and Skill Development Law*, www.mlis.gov.mm/mLsView.do;jsessionid=529614ABDABC2CFD2FA642396B7C6425?lawordSn=7822; TESDA (2018[51]), *National Technical Education and Skills Development Plan (NTESDP) 2018-2022*, www.tesda.gov.ph/About/TESDA/47; Thailand Department of Skill Development (2002[52]), *Skill Development Promotion Ac (B.E. 2545 (A.D.2002)*, https://ilo.org/dyn/natlex/docs/ELECTRONIC/82881/128497/F-833541087/THA82881%20Eng2.pdf.

The process of developing strategic documents, such as national development plans and skills-specific policy documents, affects how engaged relevant ministries are. The process of developing strategic documents needs to include all relevant ministries from their inception, throughout their development and implementation, as well as their evaluation. When relevant ministries are fully engaged and have sufficient opportunities to provide input and contribute, they have greater ownership of the final document and hence greater commitment to implementing the tasks laid out in the document. These engagement efforts are particularly important when one ministry is leading the drafting process of the plan. When Latvia developed its Education Guidelines 2021-2027, it established a national project team with representatives from all relevant ministries to facilitate the process of determining what the Education Guidelines should contain, who should be responsible for what, how relevant actors would co-ordinate with one another and what the key indicators would be used for measuring progress (Box 5.1) (OECD, 2020[53]).

Box 5.1. Country examples relevant to strengthening horizontal co-ordination

Australian Industry and Skills Committee (AISC) Emergency Response Sub-Committee

As part of the Australian government's response to the COVID-19 pandemic, the former Council of Australian Governments Skills Council established the AISC Emergency Response Sub-Committee in April 2020. The sub-committee consisted of the chair and members of the AISC, as well as representatives from the Australian Council of Trade Unions and the Australian Skills Quality Authority. The sub-committee was established with the objective of "driving rapid and flexible development of training packages during the COVID-19 crisis". The success of the sub-committee was based on several factors: the clearly defined function of the sub-committee, with focused roles and responsibilities; direct communication with actors and the organisation of regular meetings, which supported better environmental scanning and more rapid detection of issues and solutions by the sub-committee; a small group of experts who supported rapid but well-informed decision making; and streamlined training product processes.

Korea's Social Affairs Ministers' Committee (SAMC)

The SAMC was established to promote horizontal co-ordination across nine ministries on a variety of social policies, including those related to skills. The committee is chaired by the Minister ofEducation and includes senior representatives from the different ministries. The ministerial meetings of the SAMC are held twice a month to co-ordinate social policies, assess the achievements of each ministry and consider specific policy actions. Participating ministries can propose topics for the agenda to be put to a vote, which takes place two or three times a year. Examples of skills policies that the SAMC has discussed include measures to innovate in open and lifelong education and training, and measures related to adult learning in higher education. The SAMC has smaller working groups that monitor the implementation of decisions. A dedicated team of 18 members within the Ministry of Education's Social Policy Cooperation Bureau support the work of the SAMC.

Latvia's Education Development Guidelines 2021-2027

The formulation of Latvia's Education Development Guidelines (EDG) 2021-2027 was based upon a whole-of-government approach involving all relevant ministries and levels of government, as well as a whole-of-society approach with all relevant stakeholders. One of the important enabling factors that supported the initiative's success was the establishment of an inter-ministerial team led by the Ministry of Education and Science and composed of all relevant ministries. This inter-ministerial team served as a focal point for organising meetings and consultations with government and stakeholder representatives. A series of workshops were conducted to convene representatives from different ministries and experts outside of government to gather their insights on which policy priorities should be outlined in the EDG, the roles and responsibilities of each actor, concrete actions and indicators to measure progress.

Source: Australian Ministers of the Education, Skills and Employment Portfolio (2020[54]), *Fast-tracking training and skills during COVID-19*, https://ministers.dese.gov.au/cash/fast-tracking-training-and-skills-during-covid-19; Council of Australian Governments Skills Council (2020[55]), *COAG Skills Council Communiqué: April 2020*, www.dese.gov.au/skills-commonwealthstate-relations/resources/coag-skills-council-communique-april-2020; OECD Consultations with the Australian Government Department of Education, Skills and Employment; OECD (2021[10]), *OECD Skills Strategy Implementation Guidance for Korea: Strengthening the Governance of Adult Learning*, https://doi.org/10.1787/f19a4560-en; OECD (2020[53]), *OECD Skills Strategy Implementation Guidance for Latvia*, https://doi.org/10.1787/ebc98a53-en.

Recommendations for strengthening horizontal co-ordination

- **Support skills-related inter-ministerial governance bodies in their engagement of all relevant ministries**. The mandates, scope and composition of bodies should be clarified and co-ordinated relative to each other to minimise unnecessary overlap, confusion and ineffective co-ordination. Each body should have clear terms of reference specifying the roles and responsibilities. These terms should be based on the specific body's mandate, capacity and expertise. To raise the effectiveness of and ensure continuity between governance body meetings, members of the body could form smaller working groups on specific issues, brief new members, discuss relevant issues in advance, prepare input for the main meetings, document the outcomes of the meetings and follow up on specific decisions. Each body should have sufficient financial and human resources so that all related administrative tasks and logistical arrangements of the governance bodies can be covered.
- **Promote a shared skills goal among relevant ministries through strategic documents, such as national development plans and skills-related policy documents.** Strategic documents should provide an overarching vision for skills outcomes that all relevant ministries share and can contribute to. The strategic documents should require relevant ministries to co-ordinate with one another in implementing skills policies. The process of developing these strategic documents should include all relevant ministries from their inception, throughout their development and implementation, as well as their evaluation. When relevant ministries are fully engaged and have sufficient opportunities to provide input and contribute, they have greater ownership of the final document and hence greater commitment to implementing the tasks laid out in the document. These engagement efforts are particularly important when one ministry is leading the drafting process of the plan.

Strengthening vertical co-ordination

Vertical co-ordination contributes to effective skills governance in multiple ways. Vertical co-ordination mechanisms bring together national and subnational levels to support joint policy decision making, implementation and management of skills policies across levels of government, which provides two main benefits. First, vertical co-ordination improves coherence across levels of government while promoting a more efficient system (OECD, 2020[2]). Resources allocated through a vertical co-ordination approach are usually used more efficiently given that roles, responsibilities and objectives are expected to be more harmonised and agreed upon with a broader range of government actors. Second, effective communication between national and subnational levels enables a more co-ordinated implementation of policies allowing the national level to take rapid action on arising needs at the subnational level and target specific challenges more effectively.

In recent years, Southeast Asian countries have begun to increasingly decentralise by providing subnational governments with greater authority to make skills policy decisions (Park and Kim, 2020[56])**.** Cambodia, Indonesia, Malaysia, the Philippines, Thailand and Viet Nam have all begun to delegate greater responsibility for skills policy to subnational governments, and, in particular, those relating to the provision of education and training (ASEAN, 2013[57]; Bodewig and Badiani-Magnusson, 2014[58]; Nor, Hamzah and Razak, 2019[59]). For example, Thailand's National Education Act of 1999 mandated the decentralisation of education administration and the delegation of management responsibilities to subnational education committees (Thailand Office of the Prime Minister, 1999[60]). Similarly, Indonesia reformed its Law 23/2014 on Local Government to delegate authority to subnational governments, such as provincial, district and city governments. Cambodia's ongoing Education Strategic Plan 2019-2023 intends to strengthen the autonomy of subnational levels and education institutions (Ministry of Education, Youth and Sport, 2019[61]).

However, with a shift towards more decentralised skills systems in Southeast Asian countries, new co-ordination challenges have emerged. Decentralisation efforts have provided subnational governments with increased responsibilities for skills policy implementation. However, in many cases, this has not been matched with the provision of additional capacity or financial resources (ILO, 2015[62]). As a result, decentralisation efforts have often led to disparities in the implementation of skills policies in distinct subnational regions of the same country. These include difficulties in evenly applying national education quality standards, effectively managing skills development institutions, and providing quality training to educators throughout the whole country (ASEAN, 2013[57]; ILO, 2015[62]; Martinez-Fernandez and Powell, 2010[63]).

These challenges could be addressed through greater collaboration and support to subnational levels facilitated through vertical co-ordination mechanisms. First, vertical co-ordination mechanisms enhance clarity regarding the respective roles and responsibilities of national and subnational actors; second, vertical co-ordination mechanisms facilitate the allocation of resources that match the responsibilities assigned to subnational governments; third, through vertical co-ordination mechanisms, the national government can support the human, institutional and strategic capacity of subnational governments; fourth, vertical co-ordination mechanisms support flexibility and adaptability to respond effectively to varying skills needs across subnational governments; finally, vertical co-ordination mechanisms provide a dialogue platform where all involved are considered on equal terms (Allain-Dupré, 2018[64]). For the specific needs of Southeast Asian countries in transition to decentralisation, vertical co-ordination mechanisms could help even out differences in institutional capacity across levels of government and make the development and implementation of skills policies more efficient and equitable throughout the country.

Vertical co-ordination mechanisms come in different forms. Vertical co-ordination mechanisms can be formal bodies, working groups and ad hoc meetings. Formal bodies, such as those described in the previous section, can, while strengthening horizontal co-ordination, promote vertical co-ordination as well. Subnational levels are more commonly involved through working groups, often established to address specific skills issues (OECD, 2020[2]). Working groups are established through a top-down approach, where the national government identifies stakeholders at a subnational level working in each thematic area (for example, the inclusion of people with disabilities in training); these are established through agreements such as Memorandum of Understandings and guided by specific terms of reference. Working groups regularly convene to discuss and monitor the implementation of jointly identified solutions (in the example of a working group on disability inclusion, they could meet to discuss the accessibility challenges in schools and identify measures to ensure appropriate premises). Another form of vertical co-ordination involves the organisation of ad hoc meetings with representatives from various levels of government who participate in policy development voluntarily and per their areas of interest. These provide more accessible opportunities for dialogue and trust building, helping build more permanent networks over time (Charbit and Michalun, 2009[40]).

Finally, international forums can empower subnational governments' capacity to participate in national-level policy development forums more actively. For example, the World Organization of United Cities and Local Governments (UCLG) brings together local and regional governments to amplify their global voices through collaboration, dialogue, co-operation and knowledge sharing (World Organization of United Cities and Local Governments, 2021[65]). The organisation also promotes e-learning and organises forums where mayors can engage at a regional level to discuss issues pertinent to their capacity. Other similar forums are the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) Forum of Mayors, which advocates for local governments' indispensable roles and contributions to the ASEAN and global development, as well as the Asia Mayors Forum, which shares similar knowledge-sharing principles (UN ESCAP, 2019[66]).

Recommendations for strengthening vertical co-ordination

- **Support subnational governments in implementing skills policies by providing additional human and financial resources and capacity-building support.** Through these various mechanisms, best practices and insights can be shared vertically between subnational and national governments and horizontally across subnational governments. The co-ordination mechanisms should clearly define the respective roles and responsibilities of national and subnational actors and ensure that the allocation of resources matches the responsibilities assigned to subnational governments. When there are capacity constraints in subnational governments, additional human and financial resources should be provided to them, so that they can effectively engage in these mechanisms and follow through with any decisions made through them. Subnational governments could also benefit from their participation in international forums such as the UCLG, which hosts a learning platform to increase the capacity of subnational governments.

Opportunity 2: Promoting a whole-of-society approach

Skills policies in Southeast Asia can benefit from a whole-of-society approach in many ways. Global megatrends and disruptive challenges, such as the COVID-19 pandemic, cannot be dealt with by governments alone, highlighting the need for strong engagement with key actors in the labour market and civil society when developing and implementing skills policies (OECD, 2019[6]). Engagement with these actors through social dialogue and co-ordinated action improves the responsiveness of skills policies to the needs of vulnerable groups in Southeast Asia, ensures alignment between skills development and labour market needs, and enables a more sustainable and forward-looking skills system.

Promoting a whole-of-society approach in Southeast Asia involves engaging a wide variety of labour market and civil society actors. In the labour market, these actors include employers and workers and the organisations that represent them, such as employer associations, trade unions and skills sectoral councils. In civil society, these actors include non-governmental and non-commercial institutions, such as NGOs representing vulnerable groups such as women, youth and migrants (OECD, 2019[6]). Across Southeast Asia, the participation of these actors in skills policies depends on various factors, such as the countries' legislations, governance bodies and engagement approaches, highlighting the need for a clear governance framework on how to engage with them. In line with this, Opportunity 2 explores two policy directions for promoting a whole-of-society approach to skills policies: first, identifying and engaging relevant labour market actors; and second, identifying and engaging civil society actors.

Identifying and engaging relevant labour market actors

Employer organisations play a central role in strengthening skills systems in Southeast Asia, both at the regional and country levels. At the regional level, the Confederation of Asia-Pacific Employers (CAPE), which consists of 21 member countries (CAPE, 2020[67]), and the ASEAN Confederation of Employers, which consists of 7 member countries (ACE, 2020[68]), are active in strengthening the regional competitiveness of Southeast Asian employers and ensuring the sustainability of firms in the face of megatrends. Nearly half (45.5%) of employer organisations that form part of CAPE see issues relating to skills, education and training as part of their mandate (CAPE, IOE and ILO, 2017[69]). At the country level, all ten ASEAN member states have established organisations that represent the interests of a wide range of employers (Table 5.5). While these organisations represent a wide range of employer types, from self-employed individuals to multinational enterprises, the level of representation has been generally limited by high levels of informality throughout the region (ILO, 2015[62]).

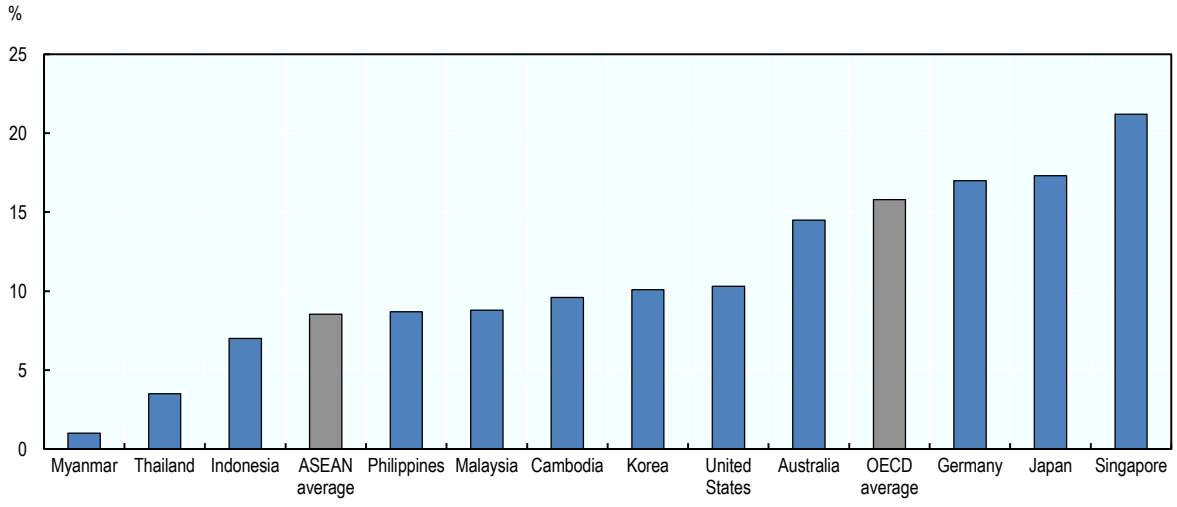
Table 5.5. Representation of employers in Southeast Asia

Country	Examples of employer organisations	Approximate number of employers/members represented
Brunei Darussalam	National Chamber of Commerce and Industry	1 300
Cambodia	Cambodian Federation of Employers and Business Associations	2 000
Indonesia	Employers' Association of Indonesia	5 000
Lao PDR	Lao National Chamber of Commerce and Industry	4 000
Malaysia	Malaysian Employers Federation	No information available
Myanmar	Myanmar Federation of Chambers of Commerce and Industry	30 000
Philippines	Employers Confederation of the Philippines	600
Singapore	Singapore National Employers Federation	3 350
Thailand	Employers' Confederation of Thailand	No information available
Viet Nam	Viet Nam Chamber of Commerce and Industry	No information available

Source: ACE (2020[68]), *Members of the ASEAN Confederation of Employers,* http://aseanemployers.com/ace_website/members-of-the-asean-confederation-of-employers/; DECP (2021[70]), *ECOP: Employers' Confederation of the Philippines,* www.decp.nl/partners/ecop-employers-confederation-of-the-philippines-3989; ILO (2022[71]), *Indonesia: Employers' Organization,* www.ilo.org/jakarta/info/WCMS_421178/lang--en/index.htm; World Economic Forum (2022[72]), *Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI),* www.weforum.org/organizations/union-of-myanmar-federation-of-chambers-of-commerce-and-industry-umfcci.

Figure 5.6. Trade union density in Southeast Asian countries and selected OECD countries, 2016

Percentage of employees who are members of a union



Note: Trade union density is defined as the proportion of employees who are members of a union relative to the total number of employees. This indicator thus does not include workers or labour market participants who are not in paid employment (self-employed, unemployed, unpaid work, retired, etc.). Due to a lack of data, different years were used for the following: Cambodia and Indonesia (2012), the Philippines (2014), Myanmar, Singapore and Korea (2015). Values for ASEAN countries and comparison countries (Australia, Germany, Japan, Korea and the United States) were taken from ILOSTAT, while the value for the OECD average was taken from OECD.stat.
Source: ILOSTAT (2020[73]), *Trade union density rate (%) | Annual*, https://ilostat.ilo.org/topics/union-membership/; OECD (2020[74]), *Trade Union Dataset*, https://stats.oecd.org/Index.aspx?DataSetCode=TUD.

StatLink https://stat.link/0t2k76

In addition to employer organisations, trade unions represent workers in the region; however, membership represents a relatively small share of the ASEAN workforce. As shown in Figure 5.6, trade union density, defined as the share of salaried workers that are trade union members, is low overall in Southeast Asia, averaging at only 8.5%, significantly lower than the OECD average (15.8%). There is also considerable variation in trade union density among ASEAN countries, ranging from 21.2% in Singapore – higher than the OECD average – to low rates in Myanmar (1%), Thailand (3.5%) and Indonesia (7%). This means that a relatively low share of workers in most Southeast Asian countries is formally represented to bargain with employers for better protection of their rights in the workplace, to participate in skills initiatives offered by trade unions, and to inform the development of skills policies by government.

One factor explaining low trade union participation is the lack of a strong social dialogue on labour market matters. Social dialogue traditions, including negotiations, consultations and exchange of information among representatives of governments, employers and workers concerning common issues relating to economic and social policy (ILO, 2017[75]), are still relatively recent in the region. Trade unions emerged in the region only at the start of the 1900s, with the first trade unions gaining traction in the Philippines, while many other countries, such as Cambodia, Lao PDR and Viet Nam, only starting in the 1940s. Over 70 years after the launch of the Freedom of Association and Protection of the Right to Organise Convention of 1948, only five Southeast Asian countries have ratified the convention so far (Bosma, 2020[76]). According to stakeholder consultations, trade unions in the region remain highly fragmented at present. Many trade union organisers face strong hostility from employers and, in some cases, arbitrary arrest and imprisonment by governments. The antagonistic environment for organised labour deters workers from actively participating in trade unions or employee federations, even if skills governance mechanisms are present in countries.

Another major factor explaining low employer and trade union representation in Southeast Asia is the high level of informality in the region. Throughout Southeast Asia, over 70% of all employment is informal (see Chapter 4). Employers and workers in informal employment relationships do not usually participate in formal organisations such as employer confederations and trade unions. In some cases, they do not wish to be identified for fear of their obligations (i.e. formalisation and taxation). As a result, informal workers often go unobserved, making it difficult for formal governance bodies to determine their characteristics, labour market outcomes, challenges and skills needs (USAID, 2013[77]) and to include them.

In addition to a high level of informality, the prevalence of temporary work also inhibits workers' participation in trade unions in Southeast Asia. Definitive statistics on these types of working arrangements are difficult to come across in the region, although estimates show that temporary work ranges from 30.7% of all total employment in Viet Nam to 53.2% in the Philippines (ILO, 2016[78]). Throughout the region, workers are being hired by firms on a temporary contract basis to significantly cut recruitment costs, resulting in a lack of job security among workers and the withholding of employee benefits, including social security and opportunities for training and further skills development (ILO, 2016[78]). According to stakeholder consultations, workers in these temporary working arrangements are not readily organisable in Southeast Asia since many fear that joining a trade union could be regarded unfavourably by their current employer and lead to a loss of employment.

Despite the low levels of employer and worker representation in Southeast Asia, there is still a critical need to engage these actors due to the value they bring to skills policies. Employers have important insights for governments about the needs in Southeast Asian labour markets, helping ensure that skills policies are demand-driven and relevant. Employers have perspectives on current and future skills needs in their respective firms and industries, which is a valuable source of information on labour market trends. Such information can help governments build flexible, forward-looking skills systems while implementing national development strategies (OECD, 2019[6]). Additionally, workers, through the trade unions that represent them, possess equally important information that could inform skills policies. As direct users and beneficiaries of skills systems, workers have relevant perspectives about workplace conditions, gaps between educational outcomes and labour market needs, real-time reskilling and upskilling requirements,

and the quality and relevance of existing training offers, among others. Trade unions can represent workers' needs and advocate for the protection of vulnerable workers in the region, such as women, youth, and migrants, who are often employed in precarious working conditions. Engagement with trade unions promotes inclusion, facilitates social dialogue regarding a wide variety of labour issues, and increases the ability of skills initiatives to reflect the actual needs of workers (OECD, 2019[6]).

Engaging employers and trade union representatives in skills policies can be done through a variety of mechanisms. In some countries in Southeast Asia, such mechanisms are already in place, or there are plans underway to establish concrete measures to consult with various stakeholders and foster a whole-of-society approach to skills policies (Table 5.6). In all these mechanisms, countries need to specify the role of employers and workers and facilitate social dialogue at multiple levels (e.g. international, national, subnational, sectoral and firm). This policy direction presents an in-depth examination of two areas that are central to the process of identifying and engaging labour market actors in Southeast Asia: 1) through the formulation of legal frameworks; and 2) through the establishment of governance bodies.

Table 5.6. Measures in place to foster a whole-of-society approach to skills policies in Southeast Asian countries

Different measures for a whole-of-society approach	Cambodia	Malaysia	Myanmar	Singapore	Thailand
Establishing public-private partnerships between industry and skills development institutions	X	X	O		X
Having a formal engagement body	X	X	O	X	O
Having a public-private partnership unit in the government to support stakeholder engagement	X	X			O
Having a strategy including clear responsibilities for civil society actors					X
Having town-hall meetings for stakeholders to provide their insights	X	X		X	O
Informing stakeholders through a public information system	X	X		X	O
Organising policy dialogues involving stakeholders	X	X	X		X
Organising subnational activities to reach out to local community groups	X	X		X	X
Using an online platform for consultations and stakeholder engagement	X	X			O

Note: X indicates that governments have existing policies in place, while O indicates that such policies are being planned.
Source: OECD (2021[79]), *OECD Skills Strategy Southeast Asia Policy Questionnaire*.

Strengthening engagement of labour market actors through legal frameworks

As Southeast Asian countries prioritise skills policies in their national agendas, legal reforms are essential to strengthen the engagement of labour market actors. A strong legal framework that supports the meaningful engagement of both employers and workers serves as a pre-condition for developing lasting partnerships between government and labour market actors in skills policies. A strong framework includes the recognition of the right to freedom of association at the constitutional level and the ratification of international conventions that signal countries' commitments to international labour standards. Southeast Asian countries must also ensure that sections of their labour codes are devoted to collective bargaining contracts and agreements (including those related to skills issues, e.g. training) and that there are specific laws that facilitate the creation – and, more importantly, protection – of employers' and workers' organisations (ILO, 2005[80]). Strong legal frameworks have helped keep trade union traditions strong in OECD countries, such as Iceland, and have been successful in not only negotiating agreements between unions and employers but also in protecting the most vulnerable workers during times of crises (Box 5.2).

A starting point in strengthening the legal framework in some Southeast Asian countries is the signing of recognition agreements. A recognition agreement is a formal agreement that provides a framework for industrial relations and sets out the rules and procedures that employers and unions should follow in representing their interests, carrying out consultations and participating in collective bargaining (UNISON, 2016[81]). Such agreements formally recognise each other as bargaining representatives and determine the scope of issues, including those related to skills and training, to be discussed (ILO, 2015[82]). The lack of recognition agreements across Southeast Asian countries explains the generally low collective bargaining coverage rates throughout the region and the practical absence in some countries, such as Malaysia and the Philippines (Figure 5.2).

There is also significant room for Southeast Asian countries to formally recognise in their legislation the role that various labour market actors play in skills policies. Myanmar, Thailand and Viet Nam do not yet clearly stipulate the role of employers in providing training, although initial steps are being made to reflect this in their skills legislation. For instance, Viet Nam initiated a reform of its Labour Code in 2018, intending to introduce a more comprehensive definition of apprenticeships and specify the roles of employers and apprentices. Other Southeast Asian countries have legislations that recognise the role of labour market actors in skills policies. For instance, in Lao PDR, Article 28 of the Labour Law specifies that employers have an obligation to provide training to workers (ILO, 2019[83]). Article 12 of the TVET Law recognises dual-co-operative training, wherein companies bear some training costs and play an active role in training management, as one of three skills development approaches in the TVET system (GIZ, 2021[84]).[2] In the Philippines, the National Apprenticeship Act of 1057 specifies the roles of employers in training (Republic of the Philippines, 1957[85]). When the roles and responsibilities of labour market actors in skills policies are clearly defined on a legal basis, this provides clear parameters for identifying areas for collaboration and developing partnerships.

Strengthening engagement of labour market actors through governance bodies

Besides legal frameworks, governance bodies can play an important role in engaging labour market actors in skills policies. Governance bodies serve a wide variety of functions, including facilitating a platform for employers and workers to engage with one another and with the government, allowing labour market actors to provide advisory services to policy makers, and monitoring the implementation of agreements between labour market actors. Such governance bodies differ in terms of which types of actors are involved and whether they are based on a specific sector or are overarching (Table 5.7).

Table 5.7. Bodies enabling the participation of employers and trade unions in skills policies

	Permanent oversight bodies	Bodies governing the implementation of multi-sector collective agreements	Bodies governing the implementation of tri-partite training strategies	Sectoral skills councils
Description	Independent tripartite bodies that oversee skills policies, such as vocational training, apprenticeships or education	Bodies that govern and monitor the implementation of legal agreements covering skills-related issues	Bodies that govern and monitor training strategies implemented by government, employers and unions	Tripartite sectoral skills councils supporting the negotiation of skills-related issues at the sectoral level
Examples	Malaysia (Department of Skills Development), Myanmar (National Skills Standards Authority)	Australia (Jobs and Skills Australia, formerly the National Skills Commission)	Norway (Skills Policy Council)	Viet Nam (Sectoral Skills Council in Agriculture)

Source: Adapted from Australian National Skills Commission (2020[86]), *About us*, www.nationalskillscommission.gov.au/about; Bridgford (2017[87]), *Trade Union Involvement in Skills Development: An International Review*, www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_585697.pdf; ILO (2020[88]), *Skills Development and Lifelong Learning: Resource Guide for Workers' Organizations*, www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_761035.pdf; OECD (2020[2]), *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries*, https://doi.org/10.1787/3a4bb6ea-en.

Southeast Asia is home to various country-level governance bodies that facilitate the participation of employer and worker organisations in skills policies. Within each country, employers and trade union representatives often participate in permanent oversight bodies, such as Malaysia's Department of Skills Development and Myanmar's National Skills Standards Authority. In addition to these, there are other effective ways in which employer and trade union representatives are involved in skills governance, such as through bodies that govern the implementation of multi-sector collective agreements or the implementation of tri-partite training strategies. Furthermore, employer-led skills sectoral councils (SSCs) have started to gain traction throughout the region and have successfully been piloted in Cambodia (Box 5.2), Thailand and Viet Nam (ILO, 2015[62]). SSCs allow employers to contribute to skills assessments, determine the range of available skills development activities (i.e. TVET, apprenticeships, internships) that have the most potential to spur job growth and productive employment, and support the creation of a skilled workforce that could help firms reduce recruitment costs and decrease staff turnover due to high employee satisfaction (UNDP, 2017[89]).

Regardless of the type of governance body, a body's effectiveness depends on various factors. Governance bodies need to have a clear mandate and well-defined responsibilities, so that all engaged actors know their roles and how they can contribute to the design and implementation of skills policies. The primary purpose of engaging labour market actors should not be to legitimise decisions and policies already decided beforehand. All relevant actors should be able to provide input to the agenda of governance meetings and promote bottom-up initiatives. For example, the German Alliance for Initial and Further Training allows engaged actors to develop and experiment with practical solutions to concrete problems in labour market placement services (Box 5.2). Furthermore, a fine balance is required in the number of actors engaged in such governance bodies. Having too many actors involved can make it difficult to have real deliberations during meetings. At the same time, it is important to ensure that economically less influential groups, such as informal and temporary workers, as mentioned earlier, also have a seat at a table. The governance bodies require a sufficiently high level of political support and enough financial resources, so that the decisions made by the bodies are carried out in practice. A well-functioning secretariat should prepare the governance bodies' meetings, document the meetings' main outcomes and implement and monitor the actions (OECD, 2020[2]).

Various governance bodies bring together employers and workers in Southeast Asia at the regional and international levels. For example, governance bodies such as the ASEAN Confederation of Employers and the ASEAN Trade Union Council have been established to allow employer and trade union representatives to collectively represent the interests of workers throughout the region in various ASEAN processes, such as contributing to discussions on skills policies in the ASEAN TVET Council (ASEAN Trade Union Council, 2017[90]; ASEAN Confederation of Employers, 2020[91]). Similarly, through the International Organisation of Employers and International Trade Union Confederation, trade unions can contribute to the adoption of recommendations on the improvement of the labour conditions of workers and trainees and promote the establishment of internationally competitive labour markets in Southeast Asia (International Organisation of Employers, 2022[92]; International Trade Union Confederation, 2022[93]). Furthermore, at the international level, international forums such as those convened by international organisations allow employers and trade union representatives in Southeast Asia to further express their perspectives on various skilling issues.

Box 5.2. Country examples relevant to identifying and engaging labour market actors

Cambodia's sectoral skills councils

Within the framework of the TVET Sector Development Programme, Cambodia has piloted the establishment of SSCs that link the skills development system with labour market needs by allowing industry representatives to provide advice on industry requirements, suggest timely responses to labour market trends and participate in the development of training programmes. SSCs were established in priority sectors, such as auto-mechanics, construction, electrical works and manufacturing. The government has secured the assistance of the Cambodian Federation of Employers and Business Association to facilitate the participation of representatives from a wide variety of sectors, with the aim of expanding the number of industries covered by SSCs.

Germany's Alliance for Initial and Further Training

Germany's dual system of apprenticeship training is widely recognised as a successful model for the effective development of skills, as it provides many mechanisms for industry representatives to get involved in curriculum design, financing and training provision, among others. Numerous Pacts for Vocational Education and Training have been passed through the years, with the latest pact establishing the Alliance for Initial and Further Training. These pacts improve co-ordination across levels of government and with a wide range of stakeholders. The alliance includes senior government officials, which has helped raise skills policies in the government's agenda and create new solutions to co-ordination problems that long existed.

Iceland's legal framework for engaging labour market actors

Iceland's legal framework for collective bargaining is strong at all legislation levels. Article 74 of the country's constitution enshrines people's right to independently form associations for any lawful purpose, including trade unions, without having to seek authorisation from the government. Collective bargaining in Iceland is also regulated through specific laws dedicated to trade unions, such as the Act on Trade Unions and Industrial Disputes No. 80/1938, which serves as the main collective labour legislation in the country. The law recognises trade unions as legal parties that may determine their members' wages and employment terms and sets out provisions on industrial disputes. Through the National Pact of 1990, trade unions, employer organisations and the government were able to work co-operatively on various policy measures to combat high inflation and economic instability and protect the lowest-paid workers during the country's frequent financial crises.

Source: Chan (2018[94]), *Labour Ministry and business association tackle skills gap*, www.khmertimeskh.com/499724/labour-ministry-and-business-association-tackle-skills-gap/; Pind (2019[95]), *Key concepts and changing labour relations in Iceland*, www.fafo.no/images/pub/2019/Nfow-wp6.pdf; OECD (2021[96]), *OECD Economic Surveys: Iceland 2017*, https://doi.org/10.1787/19990308; OECD (2020[2]), *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries*, https://doi.org/10.1787/3a4bb6ea-en; Sila (2017[97]), *Collective bargaining in Iceland: Sharing the spoils without spoiling the shares,* https://oecdecoscope.blog/2017/07/07/collective-bargaining-in-iceland-sharing-the-spoils-without-spoiling-the-shares/; ADB (2019[98]), *Sector Assessment (summary): Education (Technical and Vocational Education and Training)*, www.adb.org/sites/default/files/linked-documents/50394-002-ssa.pdf.

Recommendations for identifying and engaging relevant labour market actors

- **Establish legal frameworks to strengthen engagement with actors in the labour market.** Since many countries in Southeast Asia do not have national legislation in place to formally recognise the importance of employers' organisations and trade unions and guide their corresponding roles in skills policies, adopting reforms to address this gap is crucial to building

effective long-term partnerships between governments, workers, trade unions and employers in skills policies. A starting point could be to facilitate recognition agreements, which are formal legal frameworks between employers and trade unions, and which would lay the foundation for consultations and negotiations on a variety of skills issues. Legal frameworks should also clearly define the respective roles and responsibilities of employers and workers in skills policies to facilitate identifying areas for collaboration and developing partnerships.

- **Strengthen the effectiveness of governance bodies engaging labour market actors.** Governance bodies should allow labour markets to provide input into the agenda of governance meetings and promote bottom-up initiatives. While having too many actors involved can make it difficult to have real deliberations during meetings, it is important to ensure that economically less influential groups, such as the large number of informal and temporary workers across Southeast Asian countries, also have a seat at a table. Governance bodies require a sufficiently high level of political support and enough financial resources, so that the decisions made by the bodies are carried out in practice. A well-functioning secretariat should prepare the governance bodies' meetings, document the meetings' main outcomes, and implement and monitor the actions. Labour market actors should also be actively engaged in skills policies through their representations at the regional level (e.g. ASEAN Confederation of Employers and ASEAN Trade Union Council) and the international level (e.g. International Organisation of Employers and International Trade Union Confederation).

Identifying and engaging relevant civil society actors

Promoting a whole-of-society approach to skills policies also entails the engagement of civil society. Civil society actors are diverse in Southeast Asia and active throughout a wide range of skills-related areas, such as education, employment, entrepreneurship, agriculture and environment, among others (Chong and Elies, 2011[99]). Due to the diversity of civil society actors, it is often challenging to identify them and know how to engage them in the design, development and evaluation of skills policies (OECD, 2019[6]). Southeast Asian countries' approaches are largely influenced by the demographics, political priorities at the national level and the willingness of countries to deliver with regard to their international commitments (UN ESCAP, 2014[100]).

Civil society actors representing disadvantaged groups, such as women, youth and migrants, play an important role in skills policies. Such actors can support governments in the implementation of skills policies. Many Southeast Asian governments have gaps in institutional capacity and funding, which inhibit their ability to singlehandedly deliver skills-related services (e.g. education and employment programmes) to their populations. In these cases, civil society actors have taken over, or strongly supplemented, the provision of skills services in geographical areas that governments do not, or fail to, reach. Actors, such as NGOs, community-based organisations and religious groups in Southeast Asia, for example, are active in providing lifelong learning opportunities outside of the formal schooling system, as well as securing livelihoods for many workers found in informal economies (Chong and Elies, 2011[99]; Weaver, 2006[101]).

Despite the important role that civil society actors play in representing disadvantaged groups in skills policies, only a few Southeast Asian countries formally recognise this in relevant policy documents. Table 5.8 presents key skills policy documents in the region and the wide range of actors engaged when adopting a whole-of-society approach to skills policies. While most Southeast Asian countries recognise the contributions of governments and labour market actors in these documents, only Brunei Darussalam, Malaysia and Myanmar specify specific roles to actors from civil society in skills-related policy documents. While formally recognising disadvantaged groups in skills policy documents is an important first step, more needs to be done to specifically engage disadvantaged groups in the skills policy-making process. This policy direction discusses three areas where relevant civil society actors could be engaged to foster a whole-of-society approach to skills policies: 1) women; 2) youth; and 3) migrants.

Table 5.8. Civil society actors in Southeast Asian skills policies

Country	Policy document	Actors with a designated role in the respective skills policy document					
		Inter-ministerial representatives	Subnational governments	Employer representatives	Employee representatives	Civil society actors	Skills providers and education institutions
Brunei Darussalam	Ministry of Education Strategic Plan 2018-2022	✓		✓		✓	✓
Cambodia	National Technical Vocational Education and Training Policy 2017-2025			✓			✓
Lao PDR	National Human Resource Development Strategy to 2025						
Malaysia	National Skills Development Act 2006	✓		✓		✓	✓
Myanmar	Employment and Skill Development Law 2013	✓	✓	✓		✓	
Philippines	National Technical Education and Skills Development Plan 2018-2022	✓	✓	✓			
Singapore	Industry Transformation Programme (2016-present)	✓		✓			✓
	SkillsFuture Skills Movement (2015-present)	✓		✓	✓	✓	✓
Thailand	Skills Development Promotion Act 2002	✓		✓	✓		
Viet Nam	Law on Employment 2019	✓		✓	✓		

Source: Brunei Darussalam Ministry of Education (2018[11]), *Ministry of Education Strategic Plan 2018-2022*, www.moe.gov.bn/DocumentDownloads/Strategic%20Plan%20Book%202018-2022/Strategic%20plan%202018-2022.pdf; Cambodia Ministry of Labour and Vocational Training (2017[12]), *National Technical Vocational Education and Training Policy 2017-2025*, http://tvetsdp.ntb.gov.kh/wp-content/uploads/2018/02/NTVET-Policy-2017-2025.ENG_.pdf; Malaysian Commissioner of Law Revision (2006[13]), *National Skills Development Act 2006*, www.ilo.org/dyn/natlex/docs/ELECTRONIC/95630/112654/F-998717512/MYS95630.pdf; Myanmar Law Information System (2013[14]), *The Employment and Skill Development Law*, www.mlis.gov.mm/mLsView.do;jsessionid=529614ABDABC2CFD2FA642396B7C6425?lawordSn=7822; Philippine Technical Education and Skills Development Authority (2018[15]), *National Technical Education and Skills Development Plan (NTESDP) 2018-2022*, www.tesda.gov.ph/About/TESDA/47; Singapore Ministry of Trade and Industry (2019[16]), *Industry Transformation Programme Overview*, www.mti.gov.sg/ITMs/Overview; SkillsFuture Singapore (2023[46]), *The Next Bound of SkillsFuture,* www.skillsfuture.gov.sg/nextbound; Thailand Department of Skill Development (2002[18]), *B.E. 2545 (A.D. 2002): Skill Development Promotion Act*, https://ilo.org/dyn/natlex/docs/ELECTRONIC/82881/128497/F-833541087/THA82881%20Eng2.pdf.

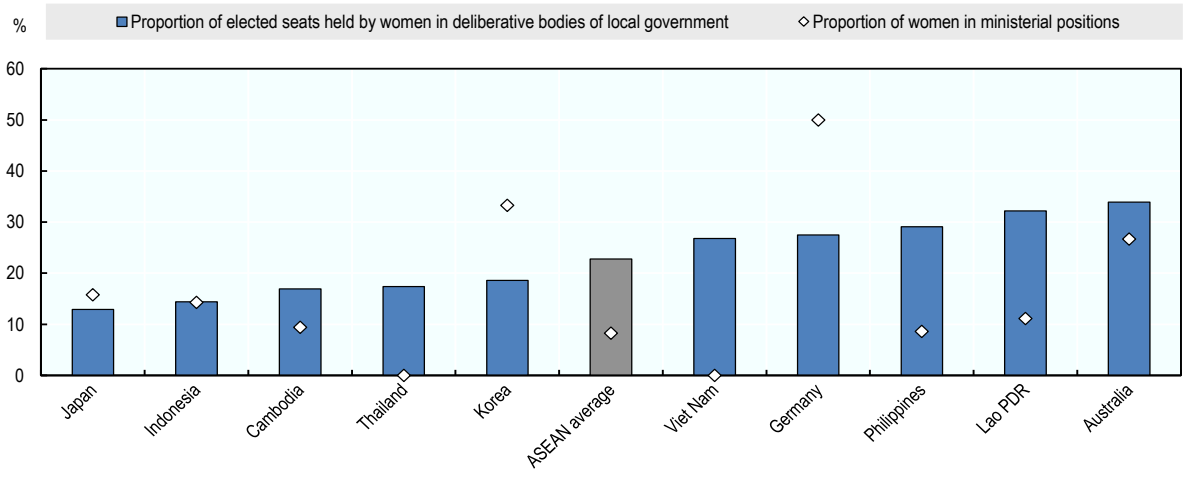
Strengthening the engagement of women

Women's lack of representation in government affects their influence in the design of skills policies. On average, only 8% of ministerial positions across Southeast Asian countries are held by women, with several countries, such as Brunei Darussalam, Thailand and Viet Nam having no women ministers at all (Figure 5.7). The representation of women in government, however, improves at subnational levels, with an average of 22.8% of elected seats in deliberative bodies of local government being held by women across Southeast Asia. However, this is still lower than in baseline OECD countries, such as Australia (33.9%) and Germany (27.5%). The reduced presence of women representatives in government at national and subnational levels risks leaving out essential considerations in the design of skills policies, such as the gender differences in skills outcomes and choosing career pathways, as well as increased obstacles for women to participate fully in the labour market and access for further learning opportunities due to childbirth and family responsibilities (OECD, 2019[6]). Common barriers hindering women's participation in government include cultural norms and patriarchal attitudes (OECD/ADB, 2019[102]).

Increasing women's participation across government levels requires comprehensive measures, such as mentoring schemes, media training and financial support to campaigns that support the capacity, network and resources of women running as candidates. In addition, quotas ensuring a minimum level of women's representation can also be useful. Some form of statuary and or legislated quotas exist, for example, in Indonesia, Korea and Viet Nam. However, quotas need to be accompanied by accountability and monitoring mechanisms to ensure their implementation (OECD/ADB, 2019[102]).

Figure 5.7. Political participation of women in Southeast Asian governments, 2018

Percentage of government seats or ministerial positions



Note: For the "Proportion of elected seats held by women in deliberative bodies of local government", all entries are from 2018 except for Japan (2017), Cambodia (2019), Germany (2019 for seats held by women in deliberative bodies of local government and 2021 for women in ministerial positions) and the Philippines (2019).
Source: Inter-Parliamentary Union (2020[103]), *Women in Politics: 2020*, www.ipu.org/resources/publications/infographics/2020-03/women-in-politics-2020; UN Women (2020[104]), *SDG Indicator Dashboard*, https://data.unwomen.org/data-portal/sdg.

StatLink https://stat.link/aro6yc

Besides improving the representation of women in government, engagement with women's organisations and professional associations is also necessary. Women's organisations and professional associations can advocate for the needs and interests of women when designing skills policies and programmes. A common challenge across countries is that many different women's organisations and professional associations exist. The fragmentation of these organisations and associations makes it difficult for them to advocate with a single voice, reduces their legitimacy and limits their influence. In some countries, such as Cambodia, the Philippines and Thailand, women organisations and associations have formed a single umbrella organisation in order to represent their concerns at the national and international level, such as the ASEAN Women's Entrepreneurs Network (AWEN) (ASEAN Business Advisory Council, 2020[105]). Having such national-level umbrella organisations for women across all Southeast Asian countries would allow them to be more influential in skills-related policy design and implementation.

Strengthening the engagement of youth

Like women, young people in Southeast Asia also have specific skills needs. The pandemic has hit Southeast Asian youth particularly hard, affecting their educational outcomes and reducing their employability in an already-challenging labour market (ADB and ILO, 2020[106]). To overcome these challenges, engaging youth in the design of skills policies is crucial to enable governments to reflect their

needs (OECD, 2020[107]). Most countries in Southeast Asia – except for Lao PDR and the Philippines – have established ministries specifically dedicated to youth, which are mandated to implement youth policies and manage related budgets. Furthermore, Southeast Asian youth groups are relatively well organised, with all countries in the region having a youth organisation representing youth at the national level. However, most countries are not engaging these youth organisations in official governance bodies, where youth could directly provide their perspectives on skills policies (Table 5.9). Noteworthy exceptions are the Government of Myanmar's engagement of youth through advisory platforms such as the Brunei Youth Council, as well as Singapore's National Youth Council (Box 5.3) (National Youth Council, 2018[108]; UNICEF, 2018[109]). In Korea, the Economic, Social and Labour Council has representatives of government labour and employers, as well as disadvantaged groups, such as youth, women and non-regular workers, to discuss a variety of issues, such as jobs, minimum wage and adult learning, among others (OECD, 2021[10]). Inviting youth organisations to participate in skills governance bodies and help formulate, implement and monitor skills policies would enhance the relevance and responsiveness of educational and employment services, ultimately leading to outcomes in the labour market and society.

Table 5.9. Youth representation and participation in governance bodies in Southeast Asia

Name of country	Ministry (or equivalent) in charge of youth-related affairs	Main youth-led organisation(s)	Youth strategy	Youth participation through specific governance bodies
Brunei Darussalam	Ministry of Culture, Youth and Sports	Brunei Youth Council	Brunei's National Youth Policy and Strategy (2020)	The Brunei Youth Policy (2022) was established to promote national values and tenets incorporated in the constitution among the youth and to provide them with a clear sense of belonging, patriotism, purpose, and direction in their lives. Furthermore, the policy aims to help the youth acquire the necessary skills and knowledge, as well as to become responsible, disciplined, dynamic, adaptable and self-reliant, which Brunei Darussalam considers essential for the social, cultural and economic development of the country.
Cambodia	Ministry of Education, Youth and Sports	Youth Council of Cambodia	National Policy on Youth Development (2011)	The National Policy on Youth Development (2011) promotes youth's representation in national commissions or national councils and other commissions at the subnational and regional levels and guarantees youth integration into the process of decentralisation and co-decentralisation
Lao PDR	No information available	Lao People's Revolutionary Youth Union	No information available	No information available
Indonesia	Ministry of Youth and Sports	National Committee of Indonesian Youth	Youth Law of Indonesia (2009)	No information available
Malaysia	Ministry of Youth and Sports	Malaysian Youth Council	National Youth Development Policy (1997)	No information available
Myanmar	Ministry of Social Welfare, Relief and Resettlement	Myanmar Youth Forum, the National Youth Congress, and the National Youth Network	No information available	The Government of Myanmar has established formal youth participation and advisory platforms, built linkages between education opportunities in different spaces, and developed and supported trade and economic policies and key partnerships, especially with and for small- and medium-sized enterprises (SMEs) and with entrepreneur communities and associations
Philippines	National Youth Commission	No information available	Youth in Nation Building Act (1995)	The National Youth Commission provides a forum for continuous dialogue between the government and youth on planning and evaluating policies, programmes and projects affecting youth

Name of country	Ministry (or equivalent) in charge of youth-related affairs	Main youth-led organisation(s)	Youth strategy	Youth participation through specific governance bodies
Singapore	Ministry for Culture, Community and Youth	National Youth Council Singapore	The Children and Young Persons Act (1993)	The National Youth Council Singapore participates in decision-making activities related to youth development
Thailand	The Office of Promotion and Protection of Children, Youth, the Elderly and Vulnerable Groups	National Children and Youth Council and the National Council for Child and Youth Development	The Youth Development Act (2007) and the National Child and Youth Development Plan (2012)	No information available
Viet Nam	Ministry of Home Affairs	Viet Nam Youth Federation	Viet Nam's Youth Law and Youth Development Strategy (2011)	Before making decisions on youth-related policies, government agencies need to consult the Viet Nam Youth Federation

Source: ASEAN/UNICEF (2018[110]), *ASEAN-UNICEF Conference on 21st Century Skills and Youth Participation*, www.unicef.org/eap/media/3496/file/ASEAN-UNICEF%20Conference%20on%2021st%20Century%20Skills%20and%20Youth%20Participation.pdf; Brunei Darussalam Centre for Strategic and Policy Studies (2020[111]), *High hopes rest on youth shoulders*, www.csps.org.bn/2020/12/02/a-recent-successful-project-conducted-by-csps-for-the-ministry-of-culture-youth-and-sports/; Brunei Darussalam Ministry of Culture, Youth and Sports (2018[112]), *Homepage*, www.kkbs.gov.bn/Theme/Home.aspx; Brunei Youth Council (2015[113]), *Homepage*, www.bruneiyouthcouncil.com/; Thailand National Commission on the Promotion of Child and Youth Development (2012[114]), *The National Child and Youth Development Plan B.E. 2555-2559*, www.youthpolicy.org/national/Thailand_2012_Youth_Development_Plan.pdf; Youth Policy Labs (2022[115]), *National Youth Policy Overview*, www.youthpolicy.org/nationalyouthpolicies/#nav-I.

Clear and comprehensive youth strategies help prioritise youth-related skills policies, but the input of youth is critical to make them relevant. In Southeast Asia, all countries – except for Lao PDR and Myanmar – have a national youth strategy to prioritise policies for youth, including skills-related policies (Table 5.9). For countries without a youth strategy or with a dated youth strategy, it would be beneficial to develop a new youth strategy, given the recent challenges youth faced due to COVID-19. During the development, implementation, and monitoring of a youth strategy, it would be critical to include youth representatives throughout the process. Youth should be able to propose their own ideas and provide input on the actions featured in the strategy (OECD, 2019[6]).

Strengthening the engagement of migrants

In addition to women and youth, migrants represent another disadvantaged group in Southeast Asia that could benefit from engagement in skills policies. Migrants significantly contribute to the region's stock of human capital. As a result, there is a growing desire among Southeast Asian countries to take advantage of their value in labour markets, prompting discussions at the ASEAN level on how to attract, retain and circulate a skilled workforce (Gentile, 2019[116]). However, despite the progress of integration and labour mobility, migrants remain vulnerable to discrimination and abuse during recruitment and employment, face challenges in having their qualifications recognised, and suffer from limited access to reskilling and upskilling opportunities in their host countries.

In the face of these challenges, it is important for countries in Southeast Asia to support migrant organisations' active participation in governance bodies and influence in skills policies. Since needs among migrants may vary greatly depending on their home country, context of migration and background (e.g. legal status, education level), it could be relevant to engage multiple migration organisations in governance bodies. For example, in the State Advisory Board on Migration and Integration in Berlin in Germany, elected representatives of seven migrant organisations meet regularly to provide recommendations on policies and even approve the appointment of the Integration Commissioner of the city of Berlin (OECD, 2018[117]). Governments could also collaborate with migrant organisations in determining the types of services migrants need and providing those together. For example, migrant worker resource centres (MRCs) are spaces for migrant workers to find information on labour migration

and lodge complaints (see Chapter 4). These services are delivered through partnerships with government institutions, trade unions and migrant organisations in countries of origin and destination. Currently, there are 24 MRCs in Southeast Asia, spread across Cambodia, Lao PDR, Malaysia, Myanmar, Thailand and Viet Nam (ILO, 2022[118]). Migrant organisations could also play an important role in monitoring countries' compliance with regional policy frameworks, such as the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers, and exert pressure on governments to raise workplace standards for migrant workers (Legaspi, 2011[119]).

Due to the cross-border nature of migration, the interests and needs of migrants need to be also discussed and addressed at an international level. At the regional level, the Task Force on ASEAN Migrant Workers (TF-AMW) was formed in response to the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers and represents an important step towards the recognition of the rights of labour migrants in the region (ASEAN, 2022[120]). The TF-AMW comprises trade unions, human rights NGOs and migrant organisations, who all work with individual Southeast Asian governments to establish policy frameworks that guarantee migrants' access to social protection measures, decent pay and safety standards in the workplace (ILO, 2012[121]). Furthermore, in 2021, Cambodia, one of Southeast Asia's major migrant-sending countries, initiated national consultations in co-ordination with the national government, civil society, workers' organisations and the private sector to promote fair and ethical labour migration practices between the Cambodia-Thailand corridor (Box 5.3).

Box 5.3. Country examples relevant to identifying and engaging relevant civil society actors

Brunei Youth Council

The Brunei Youth Council is a national body for youth development and the focal point for all youth affairs in Brunei Darussalam. With the Ministry of Culture, Youth and Sports as a primary partner, the council aims to ensure that youth are proactively involved in the implementation of the Wawasan Brunei 2035, the country's national vision to develop a highly skilled workforce with a high quality of life. The council organises various initiatives, such as visits to the Wawasan Brunei 2035 Secretariat, as well as the PERSPEKTIV community platform, where youth representatives can meet with leaders about issues related to young citizens' education and employability.

Cambodia's National Consultation on Promoting Fair and Ethical Recruitment between the Cambodia-Thailand Labour Migration Corridor

In 2021, the Ministry of Labour and Vocational Training (MOLVT) organised, in co-ordination with international partners, a consultation that gathered over 80 participants from the national government, civil society and workers' organisations, as well as the private sector. The discussions focused on creating a national legislative framework for regulating recruitment in the Cambodia-Thailand migration corridor, specifically eliminating human trafficking, forced labour and modern slavery in the region's supply chains. The discussions covered a wide variety of industries, including agriculture, apparel manufacturing and construction. Stakeholders were tasked to create recommendations and practical solutions on how to ensure fair and ethical recruitment of migrant workers in Cambodia, which were considered by the MOLVT for the design and implementation of their policies.

Singapore's National Youth Council (NYC)

The Singaporean government established the NYC in 1989 as the national co-ordinating body for youth policies in the country, and since 2015 has been lodged under the Ministry of Culture, Community and Youth as an autonomous agency. It has three main functions, namely to: 1) serve as a platform for youth to provide policy input to government agencies and provide a civil society viewpoint; 2) to equip youth with access to resources, networks and development opportunities to meet their needs over the

life course; and 3) to co-ordinate with government agencies for the implementation of youth-focused programmes and policies. The NYC has several flagship initiatives, such as the National Youth Dialogues, which they organise in partnership with the Global Shapers Community (Singapore Hub). The dialogues bring together stakeholders from the public and private sectors, as well as civil society, to discuss future-oriented issues, including those in relation to jobs and industry transformation.

Source: Brunei Youth Council (2015[122]), *About Us*, www.bruneiyouthcouncil.com/motto-vision-mission; IOM (2021[123]), *National Consultation on Promoting Fair and Ethical Recruitment between Cambodia-Thailand Labour Migration Corridor*, www.iom.int/news/national-consultation-promoting-fair-and-ethical-recruitment-between-cambodia-thailand-labour-migration-corridor; National Youth Council (2018[124]), *National Youth Dialogues*, www.nyc.gov.sg/en/initiatives/programmes/national-youth-dialogues.

Recommendations for identifying and engaging relevant civil society actors

- **Provide financial, technical, and networking resources to facilitate the participation of women, as well as the organisations that represent them, in governance.** Increase women's participation across all levels of government through comprehensive measures, such as mentoring schemes, media training and financial support to campaigns. These measures can help build the capacity, networks and resources to help women run for political office and engage in policy dialogue at subnational and national levels. Quotas for ensuring a minimum level of women's representation across levels of government in elected and non-elected positions should also be considered. However, such quotas need accountability and monitoring mechanisms to ensure their implementation. Furthermore, to facilitate the participation of women's organisations and professional associations in policy dialogue, encourage them to form a national umbrella organisation that could help overcome fragmentation issues and more effectively represent women's concerns in skills-related issues at the national and international level.
- **Strengthen youth's input in official governance bodies and development of youth strategies.** Provide national youth organisations seats in official governance bodies, so that youth can directly provide their perspectives on and influence skills policies. Their input should be used to enhance the relevance and responsiveness of skills policies to their specific needs. For countries without a youth strategy or with a dated youth strategy, it would be beneficial to develop a new youth strategy given the recent challenges youth faced due to COVID-19 and the uncertain future they face post-COVID. During the development, implementation and monitoring of a youth strategy, it would be critical to include youth representatives throughout, so that they can propose their own ideas and provide input into the actions featured in the strategy.
- **Support migrant organisations' active participation in governance bodies and influence in skills policies.** Since the needs of migrants may vary depending on their home country, context of migration and background (e.g. legal status, education level), it could be relevant to engage multiple migration organisations in governance bodies. In such bodies, meetings with diverse migrant organisations should occur regularly, so that they can provide ongoing input into skills policies. Governments could also collaborate with migrant organisations in determining the types of services migrants need and providing those together. Initiatives, such as MRCs, which are delivered through partnerships between government institutions, trade unions and migrant organisations in countries of origin and destination to support migrants and advocate for them, should be expanded in Southeast Asian countries where they do not yet exist. Migrant organisations should play an important role in monitoring their host countries' compliance with regional policy frameworks, such as the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers, and pressure governments to raise workplace standards for migrant workers.

Opportunity 3: Building integrated information systems

Integrated information systems serve a wide variety of purposes for different users. Students and workers require up-to-date information on skills development programmes and job opportunities where they can use their skills. Education and training providers require data on the number of prospective students, as well as insights on students' career and labour market aspirations, to guide and adjust their programmes. Employers require information on the available skilled workforce to guide their growth and recruitment strategies. Finally, policy makers require data on skills supply and demand gaps to steer the development, implementation, financing and evaluation of skills systems with a forward-looking perspective (OECD, 2019[6]). Serving these different purposes requires not only collecting data but also managing (i.e. storing, cleaning and analysing) data in such a way that would allow different actors to use the information to make decisions on how to effectively develop and use skills.

Building an integrated information system in Southeast Asia is a complex process of improving both data collection and the management and use of skills data. It requires multiple components as a foundation, such as effective co-ordination between relevant data collection agencies, agreements on methodologies for data collection, management and use, as well as the availability of technology and protocols to store and process data safely. Data collection requires access to quantitative and qualitative data from a wide variety of sources (e.g. from students, training providers, workers and employers), while effective data management requires data compatibility, clarity regarding regulations on data integration, and strong data protection frameworks (OECD, 2019[6]). Given the complex requirements of building integrated information systems, Opportunity 3 presents two general policy directions for Southeast Asian countries to consider. First, it discusses how to improve data collection by addressing information gaps at the national and international levels. Second, it presents opportunities on how to effectively manage and use data to better inform skills policies.

Improving data collection

Most countries in Southeast Asia face challenges in collecting quality, up-to-date and relevant data on the development and use of skills. At the national level, there are significant gaps in the collection of educational data regarding disadvantaged groups, such as out-of-school youth, learners from remote areas and children with disabilities, among others (UNESCO, 2017[125]), as well as regarding participation in adult learning offers (UNESCO Institute for Lifelong Learning, 2016[126]). Countries in the region do not have adequate information about the skill levels of their populations, nor about the effective use of skills in work and society using important indicators, such as what skills firms currently need, whether employers provide training, and what proportion of employees participate in such training opportunities. Furthermore, at the international level, not all countries in the region participate in international surveys, which provide valuable insights into their performance on key skills indicators compared to other countries. For instance, only Indonesia and Singapore participate in the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). While participation among Southeast Asian countries is greater for the OECD Programme for International Student Assessment (PISA), Lao PDR and Myanmar still do not partake in this international survey. The lack of data collection practices in Southeast Asia stems from multiple constraints, such as a lack of political support, financial resources and technical capacity. In line with these challenges, this policy direction explores two areas for improvement: 1) addressing data gaps in national data collection; and 2) addressing data gaps in international data collection.

Addressing data gaps in national data collection

Southeast Asian countries collect a variety of skills data at the national level. One common method of collecting data on key skills indicators is through high-stakes summative assessments, which are often managed by specialised government agencies or examination boards, often in close co-ordination with the Ministry of Education. These assessments facilitate students' completion of one level of education and

their transfer into the next and measure the acquisition of skills in accordance with countries' national curricula. Moreover, statistical agencies in Indonesia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand and Viet Nam also undertake specific surveys on different aspects and levels of education. Other countries collect skills data through their ministries of education or with the help of international development partners. Based on OECD desk research, the most common data collected by different statistical agencies in Southeast Asia cover students' programmes, their achievements, the number of graduates and dropouts, as well as administrative data, including human and material resources of schools (SEAMEO INNOTECH, 2015[127]; Stagars, 2016[128]).

Southeast Asian countries face difficulties in regularly collecting data on skills development, especially regarding disadvantaged groups. Updated data on useful education indicators remain missing for several countries in Southeast Asia, such as on enrolment rates in TVET (e.g. missing in Indonesia, Viet Nam), the proportion of schools with access to the Internet (e.g. missing in Brunei Darussalam, Indonesia and Lao PDR) or the proportion of children with access to learning environments at home (e.g. missing for Brunei Darussalam, Indonesia, the Philippines and Singapore), among others (UNESCO Institute for Statistics, 2022[129]). Similarly, there are significant data gaps on adult learning in Southeast Asia, specifically regarding participation rates, completion rates, certificates or qualifications issued upon completion and social and labour market outcomes (UNESCO Institute for Lifelong Learning, 2016[126]). Furthermore, up-to-date and systematic data on skills development among disadvantaged groups is also scarce in the region. For instance, data on educational participation rates among children with disabilities and the transition from school to work of youth are also limited to household surveys (GPE, 2019[130]; ILO, 2015[62]; OECD and ADB, 2015[131]). Finally, there are also significant data shortages on migrants, their past skills development experiences and their current skills development needs.

Similarly, Southeast Asian countries face significant gaps regarding data on skills use in work and in society. Skills use data collection varies widely from country to country. Statistical offices in Indonesia, Myanmar, Singapore and Viet Nam undertake enterprise surveys, which collect data about the number of employers and workers, relevant economic sectors, number of enterprises per sector and business practices. However, these enterprise surveys often lack skills-specific modules, such as questions regarding employers' perspectives on skills currently available in the firm, whether the firm provides training, and whether employees are supported to participate in training (e.g. subsidy, training leave) (ASEAN, 2019[132]). Furthermore, data on the intensity of use of reading, numeracy, and information and communication technology skills at work and in everyday life, including unpaid care and family work, is currently not covered in regular data collection exercises across Southeast Asian countries. Data on the use of soft skills needed for entrepreneurship, such as management and networking, are also limited (ASEAN, 2019[132]). Data on skills gained and used in informal employment, prevalent across the region (see Chapter 4), are not available. Collecting data on skills use in informal employment is complicated for a variety of reasons, including disagreement among Southeast Asian countries about what constitutes informal employment. For instance, Brunei Darussalam, Lao PDR, Myanmar and Thailand include agriculture when counting informal employment, but Cambodia and Viet Nam do not (ASEAN, 2019[132]).

Several opportunities exist to further improve the national data collection processes across Southeast Asian countries. A common challenge across Southeast Asian countries is to strengthen the capacity of national statistical agencies to co-ordinate with relevant national data-collecting institutions and ensure that their collected skills data are consistent, comparable and can be processed for country-level and eventually cross-country analyses (ASEAN, 2019[132]). Such data collection requires standardising definitions of key statistical concepts and indicators related to skills within the country and across the Southeast Asian region. Furthermore, there needs to be a shared agreement between the national statistical agency and other data-collecting institutions about the methods used for data collection to ensure data quality. For example, Estonia established the Education Information System (EHIS), which is an online skills data platform that collects and centralises skills data from diverse constituencies (e.g. schools, students, teachers) and registries (e.g. exam results and qualifications). The online data entry platform

performs regular logical consistency checks, so that all data entries are valid and compatible following standardised definitions. To ensure that skills data entries are consistent and on time, Estonia has made it a legal obligation to regularly update data and funding for schools contingent upon fulfilling this obligation. Technical support is also available to help with data entry (Box 5.4). Similar skills data collection platforms at the school level are also available in some Southeast Asian countries, such as Brunei Darussalam, where the Integrated National Education Information System (iNEIS) facilitates the collection of data that could help inform education policies (Box 5.4).

Implementing robust national data collection processes requires sufficient funding. Having a competent national statistical agency that can effectively co-ordinate with all relevant data-collecting institutions and establish robust data collection processes, including those implemented through online platforms, takes funding. However, statistical agencies are generally underfunded in ASEAN, and some countries, such as Cambodia and Viet Nam, have seen a downward trend in financing for the implementation of statistical activities in recent years (Viet Nam General Statistics Office and PARIS21, 2016[133]; Cambodia National Institute of Statistics, 2017[134]).

International peer learning would be beneficial for supporting national statistical agencies in Southeast Asian countries. Since Southeast Asian countries share similar data collection challenges, so they could learn from each other and their varying approaches to overcoming these challenges. At the regional level, ASEAN has introduced several initiatives on this. In 2010, ASEAN introduced the ASEAN Framework of Cooperation in Statistics (AFCS), which outlines how ASEAN member countries could co-operate in producing timely and comparable statistics. In the next year, ASEAN established the ASEAN Community Statistical System, which implements the AFCS and consists of the national statistical systems of ASEAN member states (ASEAN, 2020[135]). In addition, to these peer-learning opportunities within the region, Southeast Asian countries could also seek to engage with countries beyond the region.

Addressing data gaps in international data collection

Besides national data collection needs, Southeast Asian countries also have international data collection needs. The participation of Southeast Asian countries in skills-related international surveys varies significantly across the region (OECD, 2019[136]). Table 5.10 presents an overview of the international surveys related to skills development and skills use in which Southeast Asian countries have participated. The surveys related to skills development, which all Southeast Asian countries have joined, include the Catalogue of Learning Assessment 2.0., the Literacy and Educational Attainment Survey and the Survey of Formal Education. Other surveys where a significant number of Southeast Asian countries (but not all) participate include PISA, Southeast Asia Primary Learning Metrics (SEA-PLM) and the Trends in International Mathematics and Science Study (TIMMS). The surveys with low participation are the International Civic and Citizenship Education Study (ICCS), the International Computer and Information Literacy Study (ICILS), PIAAC and the Teaching and Learning International Survey (TALIS). Regarding international surveys related to skills use, the surveys with the highest country participation rates include the Survey of Cultural Employment, the Research and Experimental Development Survey, and the Enterprise Survey. The survey with lower country participation is the Future for Jobs Survey.

Table 5.10. Southeast Asia's participation in selected international surveys

Title of international survey and latest available year with participating Southeast Asian countries	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
Skills development										
Catalogue of Learning Assessment 2.0 2018 *UNESCO*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
International Civic and Citizenship Education Study (ICCS) 2022 *IEA*									✓	
International Computer and Information Literacy Study (ICILS) 2018 *IEA*									✓	
Progress in International Reading Literacy Study (PIRLS) 2021 *IEA*			✓					✓		
Literacy and Educational Attainment Survey 2021 *UNESCO*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Programme for the International Assessment of Adult Competencies (PIAAC) 2015 *OECD*			✓					✓		
Programme for International Student Assessment (PISA) 2018 *OECD*	✓	✓	✓		✓		✓	✓	✓	✓
Southeast Asia Primary Learning Metrics (SEA-PLM) 2019 *UNICEF, SEAMEO*		✓		✓	✓	✓	✓			✓
Survey of Formal Education 2022 *UNESCO*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Teaching and Learning International Survey (TALIS) 2018 *OECD*								✓		✓
Trends in Mathematics and Science Study (TIMSS) 2019 *IEA*			✓		✓		✓	✓	✓	
Skills use										
Enterprise Survey 2019 *World Bank*		✓	✓	✓	✓	✓	✓		✓	✓
Future of Jobs Survey 2020 *World Economic Forum*			✓		✓			✓	✓	
Research and Experimental Development Survey 2021 *UNESCO*	✓	✓	✓	✓	✓	✓	✓		✓	✓
Survey of Cultural Employment 2016 *UNESCO*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Greater participation in international surveys would provide several benefits. Southeast Asian governments could use the results of international surveys to prioritise their reform efforts. Governments could see, through trend analysis, how they are performing over time. They could benchmark their performance relative to other countries within and outside the region. Such information would allow countries to identify other benchmark countries which may have faced similar challenges but have been able to raise their skills outcomes over time (UNESCO, 1999[137]).

Diverse factors can explain relatively low participation in international surveys. Participating in international surveys is a multi-year commitment that requires enough political support, financial resources, and in-house capacity. Based on stakeholder discussions, some governments in Southeast Asia may be hesitant to commit to an international survey when fearing that poor performance, relative to other benchmarking countries, in such a survey would be used to criticise them. Governments may further be concerned that the survey instruments are not adequately adapted to the context (e.g. high number of students out of school; high number of informal workers) of their countries and that any results would thus

have low relevance. Besides political support, significant financial resources are also required, which would be needed to translate the survey questionnaires into local language(s), manage the data collection, analyse the data and use findings for policy design. Since international surveys typically recur in waves, the cost of participating in a survey also adds up over time. Lastly, Southeast Asian countries require robust in-house capacities, typically in their national statistical agencies, to manage the data collection and data use due to the participation in such international surveys.

There are initiatives to raise participation in international surveys. Southeast Asian countries have already and should continue to receive technical assistance and support to participate in international surveys. For example, the OECD, through the PISA for Development (PISA-D) programme and with a financial contribution from the World Bank, has supported lower and middle-income countries, including Cambodia, in developing in-house capacities to administer an international survey, such as PISA (Box 5.4) (Ministry of Education, Youth and Sport, 2018[138]). The capacity-building areas included sample design, instrument development, implementation of data collection and security protocols, statistical analysis, data visualisation and policy research, among others. The PISA-D programme has invested significant efforts in adapting its instruments to lower and middle-income countries by, for example, developing questionnaires and methods to assess the skills of out-of-school children. After Cambodia's experience with PISA-D, it is participating in the PISA 2022 round. Such capacity building and funding support for Southeast Asian participating in international surveys should be expanded. Furthermore, through existing forums in ASEAN, such as the ASEAN Community Statistical System Committee, exchanges could also be fostered across ASEAN member countries with regard to their experiences, including the challenges and benefits, of participating in international surveys (ASEAN, 2022[139]). Best practices of how to overcome participation challenges and reap the most benefits from participation could be shared. Such peer-learning experiences could alleviate some concerns and reservations governments may have about participating. Southeast Asian countries could also play an active role in working with international survey administrators, so that the instruments are sufficiently adapted to their context.

Box 5.4. Country examples relevant to improving data collection

Brunei Darussalam's Integrated National Education Information System (iNEIS)

The iNEIS was established by Brunei Darussalam to gather data from 161 government-run schools under the Ministry of Education, encompassing the primary and secondary levels, as well as 6th form education institutions. The iNEIS serves as a centralised platform for teachers to input data on student attendance and assessments, monitor student progression, and also manage a wide variety of administrative functions relating to co-curricular activities and curriculum materials, among others. The iNEIS forms part of the Ministry of Education's Strategic Plan 2018-2022, which recognises the importance of data in improving the quality of education in the country. The strategy encompasses the entire data cycle – from collecting data in partnership with schools to converting the data into meaningful information and using this information to inform educational policies.

Cambodia's participation in PISA for Development (PISA-D)

In 2017, Cambodia participated for the first time in the PISA-D, a new OECD programme that aims to make PISA testing and analysis more accessible to lower and middle-income economies. Cambodia decided to participate in the programme following policy makers' wishes to understand how the performance of Cambodian students fared in comparison to international benchmarks and to learn from other countries facing similar challenges in their education system. The programme provided Cambodia with access to partners who served as peer-learning countries, such as Korea's Korea Institute for Curriculum and Evaluation, which provided technical and financial support for in-country capacity-building activities regarding the collection of skills data.

Estonia's Education Information System (EHIS)

Estonia created the EHIS, an online platform that collects data from different constituencies (e.g. schools, students, teachers) and registries (e.g. exam results and qualifications). The EHIS covers all levels of education, including kindergarten, primary schools, secondary schools, vocational training, universities and adult education, as well as non-formal learning in hobby schools that provide classes in music and art for Estonian youth. Schools, students, teachers and parents are required by law to enter their data and keep it up to date, and schools are provided funding only when they have fulfilled this obligation. Schools are required to nominate at least two employees responsible for updating their data on the EHIS. Upon entering the data onto the platform, the EHIS performs regular logical consistency checks to verify the validity and reliability of the data. All collected skills data are subject to the same privacy regulations. When users encounter problems with EHIS, there is a help desk that is easily reachable for technical support. The digital infrastructure is designed to make data collection as easy and convenient as possible, and adequate human resources (both from the sides of the schools and the EHIS) are in place to support the data collection process.

Source: Brunei Darussalam (2018[47]), *Ministry of Education Strategic Plan 2018-2022,* www.moe.gov.bn/DocumentDownloads/Strategic%20Plan%20Book%202018-2022/Strategic%20plan%202018-2022.pdf; OECD (2020[2]), *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries*, https://doi.org/10.1787/3a4bb6ea-en; Ministry of Education, Youth and Sport (2018[138]), *Education in Cambodia: Findings from Cambodia's Experience in PISA for Development*, www.oecd.org/pisa/pisa-for-development/PISA-D%20national%20report%20for%20Cambodia.pdf.

Recommendations for improving data collection

- **Implement robust national data collection processes to address data gaps.** Southeast Asian countries should prioritise filling data gaps, including, for example, for specific vulnerable groups (e.g. out-of-school children, migrants, individuals with disabilities, individuals living in rural and remote areas, individuals active in the informal economy) for certain forms of learning (e.g. adult learning, non-formal learning), as well certain skills aspects (e.g. skills use at work). To strengthen the capacity of national statistical agencies to effectively co-ordinate with other data-collecting agencies and ensure that data are comprehensive, consistent, valid and compatible following standardised definitions, they should be provided with sufficient funding and capacity development opportunities (e.g. through peer learning within and outside the region).
- **Support participation in international surveys to generate internationally comparable data.** Southeast Asian countries should continue to seek and receive technical assistance and support to participate in international surveys. The existing forums in ASEAN, such as the ASEAN Community Statistical System Committee, should foster exchanges across ASEAN member countries in their experiences, including the challenges and benefits, of participating in international surveys. Best practices of how to overcome participation challenges and reap the most benefits from participation should be shared. Southeast Asian countries should also play an active role in working with international survey administrators to sufficiently adapt the instruments to their context.

Improving the management and use of skills data

Data collection is only the first step towards an integrated information system; it needs to be complemented with an effective system for managing and using data. Data management involves different components, such as robust digital infrastructure (e.g. access to the Internet and software), strong data protection measures that foster trust among actors that use skills data, and data strategies and legal frameworks that outline data integration measures across different data collection agencies. Moreover, skills data that have been collected and managed could be particularly helpful when they are used in skills analysis exercises,

which aim to understand skills supply and demand trends (OECD, 2019[6]; Australian Bureau of Statistics, 2021[140]; World Bank, 2021[141]). This policy direction explores two areas for building integrated information systems for skills data in Southeast Asia: 1) improving the management of skills data; and 2) improving the use of skills data.

Improving the management of skills data

When skills data are managed well, they can be part of an integrated skills information system. Integrated skills information systems manage the data that governments and stakeholders produce, analyse and disseminate to ensure that policy makers, firms, individuals and others have access to accurate, timely, detailed and tailored skills information. Relevant skills data include, among others, the results of skills assessment and anticipation exercises, data on learning opportunities, data on learning outcomes, as well as data from evaluations of public policies (OECD, 2019[6]). In Southeast Asia, integrated skills information systems have helped manage skills data by streamlining access among different government agencies and cutting down on redundant procedures (e.g. Lao PDR in Box 5.5).

Integrated skills information systems require a robust digital infrastructure. Skills data collected from diverse sources are typically made available in digital format. These data need to be therefore managed on a digital platform, which requires a robust digital infrastructure, including access to a reliable Internet connection, hardware and software (Bank, 2021[142]). In some Southeast Asian countries, poor digital infrastructure poses significant challenges to establishing integrated skills information systems. For instance, Cambodia's Statistical Master Plan highlights that the country's digital infrastructure and institutional arrangements are inadequate. At the same time, Myanmar's National Strategy for Development reports a lack of information technology hardware and software to manage and process statistical data (Open Data Watch, 2020[143]).

Integrated skills information systems need to implement strong data protection measures to build trust. While an integrated skills information system should enable the open sharing of data from various sources, it also needs to implement strong data protection measures to ensure privacy and safeguard against misuse. Otherwise, data providers may not want to share their data, not trusting that their data are sufficiently protected. Southeast Asia countries should include safe data management methods in their data integration efforts and establish the legal frameworks necessary to effectively protect skills data while extracting analytical value from them (UN ESCAP, 2021[144]; World Bank, 2021[141]). In Box 5.5, policy examples from countries in the region (e.g. Malaysia) as well as the OECD (e.g. Illinois, United States) are presented on how data protection measures could be integrated into the management of integrated skills information systems across government agencies.

Establishing integrated skills information systems could be supported through data integration measures in national data strategies. National data strategies can prioritise data integration measures (e.g. digital infrastructure, data-sharing protocol, privacy measures) and allocate responsibilities and the necessary resources for implementing such measures, as exemplified in best policy practices in other countries, such as the United States and its Department of Education Data Strategy (Box 5.5). Similar strategic efforts are underway at the country level in the ASEAN, such as in Cambodia, Myanmar and the Philippines, who have adopted national data strategies that lay out provisions for managing the integration of different data sources to track national development objectives (Table 5.11). At the regional level, ASEAN member countries adopted in 2021 the ASEAN Data Management Framework to have a shared data management approach, which would make it possible to link data sources across member countries. The framework promotes robust data governance practices and guides national statistical agencies throughout the region in terms of the technical, procedural and physical measures they need to put in place to appropriately manage and protect their data (ASEAN, 2021[145]).

Table 5.11. Data integration measures in Southeast Asia's national data strategies

Country	National data strategy	Reference to data integration measures
Brunei Darussalam	Open Data Initiative	Data.gov.bn helps people easily access and use open data created and collected by government agencies. It helps improve public service delivery, enables better decision-making, and facilitates problem-solving for citizens and businesses alike.
Cambodia	Statistical Master Plan for Cambodia	A Statistics Advisory Council and a Statistics Coordination Committee have been established to support data governance and data exchange.
Lao PDR	Strategy for the Development of a National Statistical System	Information not available
Malaysia	Open Data Guidelines	The guidelines provide procedures to facilitate data sharing and require all ministries to appoint Open Data Champions and Data Stewards, who are tasked to review and identify data sets to be published and shared.
Myanmar	National Strategy for the Development of Statistics	The strategy establishes provisions for data integration, including the harmonised definitions and data structures, and encourages data-sharing principles to be clearly established.
Philippines	Philippine Statistical Development Programme	The programme promotes data interoperability and increased integration of data from diverse sources.
Thailand	Open Data Strategy	Information not available
Viet Nam	Development Plan of the Viet Nam Statistical Development Strategy 2011-2020 and Vision to 2025	Information not available

Source: Data.gov.bn (2020[146]), *Homepage*, www.data.gov.bn/Pages/About.aspx; Malaysian Administrative Modernisation and Management Planning Unit (2021[147]), *Open Data Guidelines and Data Stewards*, www.malaysia.gov.my/portal/content/30588; OECD (2022[148]), *Open and Connected Government Review of Thailand*, https://doi.org/10.1787/22190414; Open Data Watch (2020[143]), *Country Profiles*, https://odin.opendatawatch.com/Report/glanceReport.

Data management strategies in Southeast Asia need to be complemented by robust legal frameworks that facilitate data integration processes. Table 5.12 presents data-related legislation across Southeast Asian countries with diverse approaches to data integration measures. In some countries, the legislation identifies a specific entity to promote data integration. For example, in Cambodia, the Statistics Law gives the National Institute of Statistics the mandate to establish a national integrated statistics system and to co-ordinate with all relevant institutions. In the Philippines, the Philippine Statistical Act mandates the Philippines Statistical Authority to promote and develop integrated statistics. In Singapore, the Statistics Act mandates the Chief Statistician to co-ordinate all statistical activities. In some countries, the legislation does not identify a specific entity but still lays out data integration measures. This is, for example, the case in Indonesia and Lao PDR. Overall, legislation can play an important role in providing the necessary legal framework for enabling and/or mandating data integration. However, not all Southeast Asian countries have such legislations in place. In Turkey, the national statistical agency, TurkStat, is legally mandated to access the administrative registers of other ministries and create an integrated database on education and employment (Box 5.5).

Table 5.12. Legal frameworks for data in Southeast Asia

Country	Legal frameworks for data	Reference to data integration measures
Brunei Darussalam	Laws of Brunei Chapter 81: Statistics	The Department of Economic Planning and Statistics (JPES), through the Department of Statistics is the central statistical agency in Brunei Darussalam. JPES serves as the authority on national socio-economic statistics and is responsible for coordinating the National Statistical System.
Cambodia	Statistics Law	The National Institute of Statistics is mandated to establish an integrated national statistics system and to co-ordinate with statistical organisational units of other ministries and institutions.
Indonesia	Law of the Republic of Indonesia No. 16 of 1997 on Statistics	Agencies collecting "special statistics" are requested to provide the National Statistics System with a summary of their statistical activities. However, no governance or data integration approaches are mentioned. Co-operation is encouraged in terms of the standardisation of concepts, definitions, classifications, measurements, and procedures for collecting statistics.

Country	Legal frameworks for data	Reference to data integration measures
Lao PDR	Statistics Law	Data integration is addressed only at the international level.
Malaysia	Statistics Act 1965	Information not available
Myanmar	The Statistics Law (The Pyidaungsu Hluttaw Law No. 1/2018)	The law created the Myanmar National Statistical System, which co-ordinates across ministries about collecting and using data for socio-economic development purposes.
Philippines	The Philippine Statistical Act of 2013	The Philippines Statistical Authority is mandated to promote and develop integrated social and economic statistics.
Singapore	Statistics Act 1973	The Chief Statistician is mandated to co-ordinate all statistical activities undertaken by public agencies.
Thailand	The Statistics Act. B.E. 2550 (2007)	Information not available
Viet Nam	Statistical Law	Information not available

Source: Brunei Darussalam Attorney General's Chambers (1984[149]), *Laws of Brunei: Chapter 81 (Statistics)*, www.agc.gov.bn/AGC%20Images/LOB/pdf/Cap.81.pdf; Brunei Darussalam Ministry of Finance and Economy (2022[150]), *Frequently Asked Questions*, https://deps.mofe.gov.bn/SitePages/FAQ.aspx; Government of Myanmar (2018[151]), *The Statistics Law*, www.csostat.gov.mm/Content/pdf/Stastics law(Eng).pdf; Open Data Watch (2020[143]), *Country Profiles*, https://odin.opendatawatch.com/Report/glanceReport.

Improving the use of skills data

While managing integrated skills information systems, it is important to ensure that such systems satisfy the diverse data needs of the large and heterogeneous number of data users. Skills information is used for a wide variety of reasons, and information systems must be able to address these needs accordingly. Students and their families, for example, may benefit from evidence-based career guidance and counselling services. Employers need information about skills supply to adapt their recruiting and hiring practices. Policy makers need to analyse future skills needs and evaluate the effectiveness of skills policies (World Bank, 2021[141]; OECD, 2019[6]). Without such skills information, the risk of having more skills mismatches in the labour market rises. Skills mismatches imply costs for workers, employers and the economy. For workers, it brings lower wages and lowers job satisfaction. For employers, it increases hiring costs and lowers productivity. For the overall economy, it entails lower economic output, affecting formalisation, taxation, productivity and growth.

Understanding evolving skills supply and demand trends can be done through skills assessment and anticipation exercises. Skills assessment and anticipation exercises consist of various approaches for generating information about the available skills supply and the labour market's demand for current and future skills. Table 5.13 provides an overview of three types that are commonly used in OECD countries: 1) skill needs assessments, which are used by 97% of surveyed OECD countries; 2) skills forecasts (90% of OECD countries); and 3) skills foresight exercises, which are less commonly used (55% of OECD countries) but are nonetheless important. These skills assessment and anticipation exercises can identify short, medium or long-term skills scenarios and provide information about skills needs at the national, regional or sector-specific levels. The frequency at which they are conducted may depend on data availability for each country (OECD, 2016[152]).

Skills assessment and anticipation exercises apply various methodologies to collect data. Across OECD countries, the most common methodologies include: 1) the use of data from labour market information systems (e.g. administrative data) (78.5% of participating countries); 2) sectoral studies, which assess the skilling and economic needs of a given sector (75%); 3) employer surveys, which ask employers about which skills they consider to be in shortage at present and in the future (68%); 4) qualitative sources, which could be collected through discussions (e.g. focus groups, round tables) carried out through governance forums (68%); 5) surveys of workers or graduates, which aim to find out which training offers or programmes they prefer and gain insights into the supply of skills (61%); and 6) quantitative forecasting models, which use historical data on skills to understand future trends (57%) (OECD, 2016[152]). In many

cases, different sources are used, as relying on one source limits the quality of skills analysis exercises. This underscores the need for strong and well-coordinated data integration efforts that simplify the collection of complex data requirements (CEDEFOP, European Training Foundation and International Labour Office, 2016[153]).

Table 5.13. Overview of skills assessment and anticipation exercises

	Skills assessment	Skills forecast	Skills foresight
Description	Evaluates the existing supply and demand for skills, as well as identifies current mismatches or shortages	Provides general insights into future trends in skill supply and/or demand in the labour market	Provides a framework for actors to jointly think about and target future scenarios and actively shape policies to effectively bring those scenarios to fruition
Methodology	Surveys of employers about skill deficiencies and skill gaps	Forecast-based projections and quantitative models at the national level	Focus groups/round tables, Delphi-style methods, and scenario development
Advantages	Directly involves users or customers	Is comprehensive (typically covers all sectors), consistent, transparent, and explicit	Is holistic by considering a broader range of contextual factors other than only economic ones. Directly involves users or customers.
Disadvantages	May be very subjective and inconsistent, focusing too closely on marginal situations	Uses data that is demanding and costly. Does not represent non-quantifiable information and may give a false impression of precision or certainty	Can be non-systematic, inconsistent and subjective
OECD examples	Canada (Assessments carried out by the Office of Literacy and Essential Skills)	Sweden (Arbetsförmedlingen's short, medium, and long-term forecasts), Germany (BIBB-IAB-Qualification and Occupational Fields forecast)	Germany (Foresight Initiative for Skill Needs)
Southeast Asia examples	Malaysia (Talent Corp's Critical Occupations List)	Singapore (Jobs-Skills Insights)	Philippines (Futures Thinking)

Source: Adapted from OECD (2016[152]), *Getting Skills Right: Assessing and Anticipating Changing Skill Needs*, https://doi.org/10.1787/9789264252073-en.

A few Southeast Asian countries have implemented some skills assessment and anticipation exercises. For example, TalentCorp in Malaysia conducts skills assessments based on the Labour Force Survey, Salaries and Wages Survey, and online job-posting data to identify skills demands and create a shortlist of 58 critical occupations, which is updated on an annual basis (Malaysia Talent Corp, 2022[154]). SkillsFuture Singapore conducts skills forecast exercises based on survey data, the SkillsFuture Singapore jobs-skills repository and verification from stakeholders. Results are published as "Jobs-Skills Insights" on a quarterly as well as an annual basis, highlighting priority skills and jobs areas, growth sectors, training needs and career opportunities (SkillsFuture Singapore, 2022[155]) (Box 5.5). In the Philippines, the Philippine Technical Education and Skills Development Authority launched in 2022 a Futures Thinking programme to equip its senior leaders and staff with foresight skills and tools, so that they can identify patterns, threats and opportunities, consider potential scenarios, and develop skills policies accordingly (Philippines, 2022[156]). To promote the use of skills assessment and anticipation exercises in the region, Southeast Asian countries with available data, namely Malaysia and Thailand, may use the *OECD Skills for Jobs* database, which provides regularly updated international evidence on skills shortages, surpluses and mismatches based on quantitative data from large-scale household surveys (see Figure 3.19 in Chapter 3) (OECD, 2017[157]).

Barriers to implementing skills assessment and anticipation exercises need to be addressed. Based on discussions with stakeholders, a common barrier is that the necessary data sources for conducting robust assessment and anticipation exercises are not yet being collected. As discussed in the previous section, many Southeast Asian countries are not systematically, comprehensively, and regularly collecting

skills-related data, which limits the value of any assessment or anticipation exercise based on limited data. Data are also often dispersed and not yet accessible in an integrated skills information system. Furthermore, implementing such exercises requires sufficient funding and human resources with specialised expertise, which is also not readily available across all Southeast Asian countries. To overcome the financial and human resource barriers, some Southeast Asian countries have collaborated with international organisations to receive financial support and capacity building to implement these exercises. For example, the Philippine Future Thinking programme has been funded and supported by the United States Agency for International Development (USAID) (Philippines, 2022[156]). Based on stakeholder consultations, another common barrier across Southeast Asian countries is an insufficient political will to support such exercises, possibly due to the required long-term investments and the challenge of collaborating across different ministries and agencies. To raise the importance of skills assessment and anticipation exercises for senior government officials, ASEAN and its relevant bodies (e.g. ASEAN Community Statistical System) could share best practices with one another, highlighting how these exercises were conducted and how the results from such exercises were useful in guiding skills policies. Regional collaboration on skills assessment and anticipation exercises would also be beneficial in informing migration policies within the region.

Box 5.5. Country examples relevant to improving the management and use of skills data

Illinois' Longitudinal Data System (ILDS)

The ILDS in the United States, defined by Public Act 96-0107 and supported by federal funding, aims to link student test scores, length of enrolment and graduation records over time. The system tracks the outcomes of Illinois students as they move from pre-primary to post-secondary education, as well as when they enter the workforce. The system makes it possible for multiple agencies across initial and higher education to share data with one another through an identity resolution system. To ensure privacy and security, ILDS implements security protocols across all data-providing agencies and has a standardised vetting process for external data users (e.g. researchers) to access data with agency approval.

Lao PDR's Education and Sports Management Information System (LESMIS)

In July 2022, the Ministry of Education and Sports (MoES) launched LESMIS, which serves as a centralised digital platform to provide access to educational data in an integrated manner. MoES aims to use the data to develop policies that improve Lao children's learning outcomes. Before establishing LESMIS, MoES used multiple data management systems operated by different departments, which complicated accessing data and resulted in overlap in data requests. Since its launch, LESMIS has cut down on redundant procedures and facilitated the use of data. LESMIS is available on line and through an app that can be used from multiple levels – from the national government to local schools.

Malaysia's Institute for Labour Market Information and Analysis

Malaysia's Institute for Labour Market Information and Analysis brings together data from various government agencies and industry bodies through the Labour Market Information Data Warehouse (LMIDW). The LMIDW is supported by a Data Flow Management system (or datamart), which facilitates the sharing of datasets by agencies and presents a dashboard that can generate various types of reports in a user-friendly manner.

Singapore's Jobs-Skills Insights

Managed by SkillsFuture Singapore, Jobs-Skills Insights is the umbrella of resources that provides information on skills and jobs that will be in demand in the future. The initiative uses big data and machine-learning models to monitor global, regional, and local jobs and skills trends. It uses various data sources, such as job postings, training consumption, and curriculum vitae data, among others. Assessment results are validated with global and local industry leaders and stakeholders before being disseminated to the public. An annual publication, *Skills Demand for the Future Economy Report*, is available on line and can easily be accessed by individuals to guide their own skills development journeys, as well as by enterprises to inform the design of skills development offers for their employees.

Turkey's Education-Employment Database (EEDB)

The Turkish Statistical Institute oversees the EEDB, which provides integrated data on education, skills and the labour market. A wide range of institutions contributes to this database, including: the Ministry of National Education; the Ministry of Treasury and Finance; the Higher Education Council; the Social Security Institution; the Central Population Administration System; the Turkish Employment Agency; and the Centre for Assessment, Selection and Placement. The data sharing and integrated data management system was made possible through signing Memorandums of Agreement between these institutions and establishing data protection protocols.

United States Department of Education Data Strategy

The Department of Education in the United States adopted its first-ever agency-wide data strategy in 2020 to prioritise data integration measures throughout the agency and make collected data widely accessible to inform policy and be used in research. One of the principal ways data integration is fostered in the policy is through forming a community of principal office data stewards lodged under the department. The community is tasked to improve data management functions, specifically by promoting consistency in how data are managed across government agencies, improving data collection capacity and providing clear inter-agency communication channels for the exchange of data, successful policies and lessons learned.

Source: OECD stakeholder consultations; Illinois State Board of Education (2020[158]), *ISBE Programs: Illinois Longitudinal Data System Project*, www.isbe.net/Pages/Illinois-Longitudinal-Data-System-Project.aspx; US Department of Education (2020[159]), *U.S. Department of Education Data Strategy*, www.ed.gov/sites/default/files/cdo/ed-data-strategy.pdf; Leventoff, Wilson and Zinn (2016[160]), *Data Policy Toolkit. Implementing the State Blueprint*, https://careertech.org/resource/data-policy-toolkit; UNESCO (2022[161]), *New online platform to strengthen education data management in Lao PDR launched*, www.unicef.org/laos/press-releases/new-online-platform-strengthen-education-data-management-lao-pdr-launched.

Recommendations for improving the management and use of skills data

- **Establish the institutional and legal groundwork for integrating data management systems**. Countries in Southeast Asia can kick off their integration processes by formulating strategies and policies that identify relevant data sources at the national, subnational and school levels. Afterwards, it is important to establish data-sharing agreements between these different sources to facilitate data transfer from one actor to another. Such data-sharing practices must align with countries' data protection provisions, especially for information that may be deemed sensitive and private, such as academic performance, qualifications and wages. Governments must deliberate on what raw data on skills could be accessed by the public through agencies' statistical portals and what information must be restricted due to data privacy concerns. Countries in the region must directly address such issues in their data strategies and legislation and set clear guidelines on how government agencies process personal data and use them as evidence for skills policies.

- **Regularly conduct skills assessment and anticipation exercises to design and update skills policies**. Governments must support the collection of comprehensive and up-to-date skills data sources and the management of such data sources in an integrated skills information system in order to make robust skills assessment and anticipation exercises possible. Sufficient funding and human resources should be dedicated for such exercises. Bilateral partnerships (e.g. development agency) and multilateral partnerships (e.g. ASEAN) can support the development and implementation of such exercises. Best practices and lessons learned from using such exercises for skills policy making should be disseminated across Southeast Asian countries.

Opportunity 4: Aligning and co-ordinating financial arrangements

Many factors affect the level of financial expenditure Southeast Asian countries dedicate to skills development initiatives. These include a country's size and demographics, enrolment rates, salaries of teaching staff, the cost of teaching materials and facilities, instruction time schedules, student-teacher ratios and the availability of diversified skills development offers (e.g. work-based learning schemes that supplement school-based education), among others (OECD, 2021[162]). In addition to the direct costs associated with skills development initiatives, there are also expenses related to the maintenance of skills governance bodies and the collection and management of skills-related data. Given the scope of these variables, the ideal financial arrangements in Southeast Asia vary greatly from country to country.

Despite some cross-country differences, Southeast Asian countries still share similar challenges in aligning and co-ordinating financial arrangements for skills policies. Throughout the region, governments remain the primary source of funding for education. However, countries' expenditure in terms of GDP per capita remains well below that of OECD countries, which risks lowering the quality of skills development offers. There is also significant room to encourage private sources, especially employers, to help shoulder public costs and contribute funding for education and training offers. Furthermore, there is a great need for countries in Southeast Asia to expand financing for skills to include disadvantaged learners and ensure that resources are distributed equitably across groups. In line with these needs, Opportunity 4 explores two policy directions for Southeast Asian countries to align and co-ordinate financial arrangements for skills. First, it discusses how countries could diversify financial resources by promoting investments into skills, especially among employers. Second, it presents various mechanisms for allocating financial resources equitably and effectively.

Diversifying financial resources

Southeast Asian skills systems rely on several sources of funding for skills policies. Public sources of funding in the region include national governments, which have the authority to decide on educational budgets and set policy priorities that influence how funding is allocated, as well as subnational governments, which are often closer to schools and local communities and have increased in terms of importance following efforts to decentralise education in many countries in the region (SEAMEO INNOTECH, 2012[163]). In some cases, countries in Southeast Asia also benefit from financial support from international partners in the form of official development assistance (ODA), which often supplements governments' limited financial capacity (UNESCO, 2021[164]). Private sources of funding in the region include individuals who contribute to skills financing through tuition fees for private schools or private tutoring to complement public education, as well as employers who directly provide resources for skills development opportunities through in-house training or contributions to skills funds.

Governments are the primary sources of funding for skills development initiatives in Southeast Asia. Figure 5.5 shows that Southeast Asian governments allot a substantial portion of GDP per capita to education, although still significantly less than OECD countries across all levels of education. Governments in the region spend the least on education at the primary level (11.3% of GDP per capita), which risks lowering the quality of training and inadequately developing foundational skills early on in life. While

Southeast Asian countries' expenditure in terms of GDP per capita rises at the secondary (16.9%) and tertiary levels (22.8%), it is still below the spending of OECD countries. The average investment in TVET in Southeast Asia (0.16%)[3] is also significantly lower than that of OECD countries (0.5%) (AFD, 2019[165]; OECD, 2022[166]). As population growth has surged and the region's demand for education and training has risen, governments have struggled to match the supply at all levels and have looked to other funding sources (Ernst & Young, 2016[167]).

ODA is a common supplementary educational funding source that supports the limited financial capacity of Southeast Asian governments. Countries in Southeast Asia already take advantage of a diverse range of partners who support implementing skills policies and other national development objectives. For example, several countries in Southeast Asia, namely Cambodia, Myanmar, Lao PDR, the Philippines, and Viet Nam, participate in the Global Partnership for Education (GPE), the largest global fund dedicated to educational reforms in low-income countries. The GPE supports the governance of skills systems by mobilising funding, co-ordinating peer-learning activities and strengthening data systems. From 2002 to 2022, the total amount invested in Southeast Asia, including COVID-19-related grants, is over USD 875 million, making the region the second largest recipient after Sub-Saharan Africa (Global Partnership for Education, 2022[168]). In addition to multilateral mechanisms, bilateral partners, such as Australia and Korea, have Southeast Asian countries as their top ODA recipients in the education sector. For instance, Australia alone provided USD 14.8 million to Myanmar in 2019, while Korea provided Viet Nam and Myanmar with USD 13.7 million and USD 10.8 million, respectively (UNESCO, 2021[164]). While ODA funding has supported various important skills projects in Southeast Asian countries, relying extensively on ODA has its downsides. For one, the scale of resources provided through ODA is fairly small in comparison to countries' financial needs and is often used only for short-term projects focusing on specific aspects of skills development (e.g. school feeding programmes, classroom construction, scholarships for girls), rather than systematic and long-term interventions (Riddell and Niño-Zarazúa, 2016[169]).

Besides public funding, private funding is also important, with individuals in Southeast Asia already contributing significantly. Household funding of primary-level education as a percentage of GDP per capita was significantly higher in Cambodia (7.0%) and Indonesia (3.6%) than in some OECD countries, such as Australia (1.8%), the United States (1.5%) and Korea (1.5%). Some Southeast Asian countries rely on private contributions in the form of tuition fees for private schools or private tutoring to complement public education, such as in Singapore, where four out of ten families interviewed in a survey indicated that their children are enrolled in private extra-curricular classes and tutoring sessions (Teng, 2015[170]). Similar systems exist in other countries, such as Cambodia and Myanmar (Silova, 2012[171]; ILO, 2015[62]). At the tertiary level, individuals' funding of education constitutes a significant proportion of GDP per capita, reaching as high as 28.35% in Viet Nam and 16.17% in Indonesia (Figure 5.8).

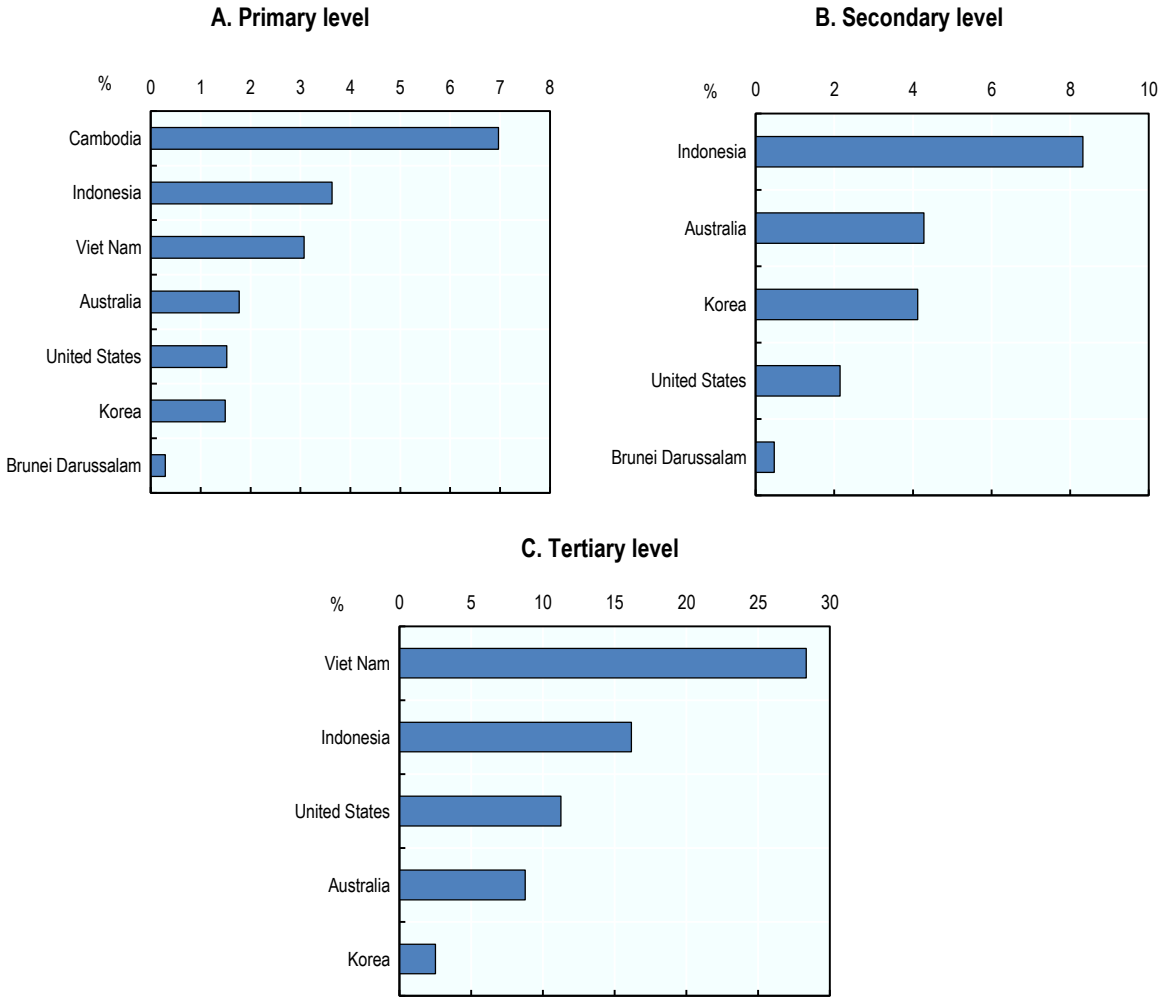
High education costs, especially at higher levels, are a great barrier to accessing skills development offers, especially among disadvantaged learners in Southeast Asia. Governments need to provide a robust regulatory framework to limit excessive private tuition fees and comprehensive financial aid (e.g. scholarships, grants, subsidies) so that learners from disadvantaged socio-economic backgrounds have sufficient access opportunities (see Chapter 3). Given the already relatively high financial burden on individuals in Southeast Asian countries, relying more on private funding from individuals for skills policies could be challenging.

Private funding from employers could be an important source of financing for skills development. Research shows that employers benefit in numerous ways from investments in training and developing the skills of students and employees. Some of these benefits include lower recruitment costs, higher productivity and competitiveness, reduced staff turnover, feelings of being valued and appreciated among employees that lead to higher employee engagement and loyalty, and a better reputation for businesses that helps them attract the best talent in the labour market (ASEAN Secretariat, 2020[172]). In OECD countries, several mechanisms, such as financial incentives, are in place to facilitate employers' contributions to financing

skills. These incentives may include subsidies, tax incentives, payback clauses, public procurement, and levies, which are explored in detail in Table 5.14.

Figure 5.8. Initial household funding on education in Southeast Asia and selected OECD countries, latest available year

Percentage of GDP per capita



Note: Initial household funding refers to spending on education borne by households, collected through consumption surveys. Due to a lack of data, the latest available year was used for the following countries: Brunei Darussalam (2012); Viet Nam (2013); Cambodia (2014); Australia at the primary and secondary levels, and Indonesia (2015); and Australia at the tertiary level and the United States (2019).
Source: UNESCO Institute for Statistics (2016[173]), *Education Finance*, http://uis.unesco.org/en/topic/education-finance.

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Table 5.14. Types of financial incentives for employers

	Subsidies	Tax incentives	Payback clauses	Public procurement	Levies
Description	Decrease the costs of participation through a direct transfer of financial resources from the government to the employer (e.g. through a voucher) or training provider	Lower the amount of tax due to be paid in proportion to investments in training	Allow employers, through a contractual agreement, to recover part of their investments in training in the case that a trained employee leaves	Award public contracts to firms when they provide certain types of training	Collect taxes from employers with the purpose of earmarking them for training and skills development initiatives for employees
Country examples	Japan (Career Keisei Sokushin Joseikin)	Chile (Franquia Tributaria: Precontrato)	Latvia (Apmācību izdevumu atlīdzināšana darba attiecībās)	Switzerland (Provision of public procurement policies in exchange for apprenticeships)	Malaysia (Mandatory levy of 1% for all employers with ten or more workers), Singapore (Skills Development Levy)

Source: OECD (2017[174]), *Financial Incentives for Steering Education and Training*, https://doi.org/10.1787/9789264272415-en.

Among the different types of financial incentives for employers, levies have great potential for generating additional revenue for skills. While the other financial incentives, such as subsidies, tax incentives, payback clauses and public procurement, require the government to either pay out funding to employers or accept lower tax revenue, levies generate additional revenue without generally requiring any public funds. Levies pool resources from employers by imposing a compulsory financial contribution and earmarking them for expenditure on training. Contributions to levy schemes may also ensure a stable and constant flow of funding, making training investments less sensitive to the business cycle. Levy schemes may offer economies of scale and reductions in transaction costs when training is procured collectively (OECD, 2017[174]). Moreover, levies may be used to gather financial resources from employers and be channelled towards the provision of skills development offers to workers in the informal sector, which is particularly relevant for many Southeast Asian countries. Levy-financed training funds across countries (e.g. Malaysia, Thailand) have been used to provide informal workers with access to employer-sponsored training (ILO, 2020[175]).

There are different types of levies. Levies can vary depending on how they have been set up and are implemented. Example levy types include revenue-generating schemes, levy-grant schemes, levy-exemption schemes and cost-reimbursement schemes (Table 5.15). Each of these levies has its advantages and disadvantages, which need to be considered. Different levies exist across OECD countries and in some Southeast Asian countries, such as Malaysia and its Human Resources Development Fund (Box 5.6).

Table 5.15. Type of levies

	Revenue-generating schemes	Levy-grant schemes	Levy-exemption schemes	Cost-reimbursement schemes
Description	Employer contributions are used to finance general training programmes.	Payroll contributions are collected from employers and distributed as grants.	Employers are required to dedicate at least a certain percentage (e.g. 1%) of payroll towards training purposes or submit the equivalent to the government.	Firms pay a compulsory levy but can claim expenses back for any training costs incurred during the year.
Advantages	Raise funds for publicly provided training.	Higher grants can be given to firms with higher training expenses. Grants can also be made conditional on developing specific skills relevant to the labour market.	Cost of training for an employer is zero, up to the amount of tax liability.	Lower administrative burden. Employers have greater freedom in planning training.

	Revenue-generating schemes	Levy-grant schemes	Levy-exemption schemes	Cost-reimbursement schemes
Disadvantages	No incentive for firms to invest in training as contributions cannot be claimed back.	Require many case-by-case decisions and have higher administrative costs. Grant application can be burdensome, especially for small firms with limited resources.	Employers may opt out of training as it is easier to pay the levy than provide training.	In order to get money back, employers may spend money on any type of training, regardless of quality.
Country examples	Brazil (SINAI)	Denmark (Kompetenceudviklingsfonde), Italy (Intersectoral training fund), United States (Arizona Job Training Tax), Singapore (Skills Development Fund)	Greece (ELEKP training fund), Hungary (compulsory VET levy), Thailand (Skills Development Fund)	Denmark (Reimbursement Fund), Belgium, France (Contribution à la formation professionelle continue), Malaysia (Human Resource Development Fund)

Source: OECD (2017[174]), *Financial Incentives for Steering Education and Training,* https://dx.doi.org/10.1787/9789264272415-en; OECD (2019[176]), *OECD Skills Strategy Latvia: Assessment and Recommendations*, https://doi.org/10.1787/74fe3bf8-en; Müller and Behringer (2012[177]), "Subsidies and Levies as Policy Instruments to Encourage Employer- Provided Training", https://dx.doi.org/10.1787/5k97b083v1vb-en.

Examples of levies in Southeast Asia exist at national and sectoral levels. For instance, Singapore's Skills Development Fund is a levy-grant scheme with payroll contributions from public and private employers. The rate employers pay could vary between SGD 2.00 to SGD 11.25 (Singapore dollars) per employee per month, depending on the salary level of employees (UNESCO, 2022[178]). Employers can access grants from the fund to offset training costs and receive wage support during employee training time. In Thailand, the Skills Development Fund is a levy-exemption scheme and applies a "train or pay" approach. Employers with over 100 employees are required to contribute to the fund when they fail to provide yearly training to at least 50% of their employees. The levy rate stands at 1% of the legal minimum wage of the previous calendar year, and the total amount contributed per company depends on the number of employees that they did not provide training for (UNESCO, 2022[179]). Malaysia's Human Resource Development Fund is a cost-reimbursement scheme in that firms pay a compulsory levy (1% of payroll for larger firms; 0.5% for small firms; exemption for micro firms), and firms can claim back all or a portion of skills-related expenses incurred in the year (Box 5.6). Example expenses include joint training provision between multiple firms, recognition of prior learning and the purchase of training equipment (HRDF Malaysia, 2017[180]). In all three country examples, the government also tops up the levy fund from time to time based on strategic initiatives. For example, Malaysia's Human Resource Development Fund disburses grants directly to training providers targeting informal workers and uses for such purposes the government contributions to the levy.

Southeast Asian countries could expand the use of well-designed levy schemes, given their many benefits. When designing policies on levies, it is important to secure employer buy-in and engage them closely in the governance of levy schemes to avoid having levies be perceived as additional tax. Consulting employers on training priorities and how to allocate funds increases their sense of ownership of the scheme, thereby promoting compliance. While countries should promote the use of national levy schemes, they could also encourage establishing levy schemes on a sectoral basis with industry representatives to make the use of funds more responsive to the immediate training needs of the sectoral labour market. For example, Ireland's Skillsnets levy is organised at the sectoral level (Box 5.6). Having national and sectoral levies co-exist could provide a balance between the provision of well-tailored training to sectoral needs and comprehensive training offers in line with national priorities. For example, in Belgium and France, there is a compulsory national levy, while some sectors voluntarily collect a greater contribution used for sectoral training (OECD, 2017[174]). Furthermore, the design of levy schemes must ensure that they do not tend to disproportionately benefit large employers, who often have more technical and human capacity to participate in the governance of skills and influence training priorities. This could be done, for example, by ensuring that the allocation of resources gathered through levies is skewed towards the provision of more

resources to smaller SMEs and also benefits disadvantaged groups, such as informal workers (OECD, 2017[174]).

Box 5.6. Country examples relevant to diversifying financial sources

Ireland's Skillnets

The Skillnets training networks in Ireland are groups of private businesses in the same sector and/or region that have come together to carry out training-related activities that may not be possible if each firm acted independently. There are currently 63 Skillnet training networks active in Ireland. These are all funded through a mixture of government funding and the National Training Fund, which is financed through a levy on employers of 0.7% of reckonable earnings of employees in certain employment classes. Because the levy was introduced simultaneously with a 0.7% reduction in employer social security contributions, it encountered little resistance from employers. An example of such a network is Wind Skillnet, which conducted an extensive training needs analysis with its member companies, working closely with the Irish Wind Energy Association and taking guidance from leaders in the Irish Wind Industry. Wind Skillnet has developed a suite of courses that meet the requirements of trainees in the Wind Industry.

Malaysia's Human Resources Development Fund

The fund is governed by the Pembangunan Sumber Manusia Berhad (PSMB) Act of 2001, overseen by the Ministry of Human Resources, and administered and implemented by Malaysia's Human Resources Development Corporation (HRD Corp). The PSMB Act of 2001 outlines the collection of a human resources development levy to promote the training and development of workers, apprentices and trainees. Under the act, employers with ten or more Malaysian employees must pay a mandatory 1% levy, while employers with five to nine employees pay a voluntary 0.5% levy. HRD Corp uses the funds collected through the levies to organise different types of programmes for employers, training providers, individuals and industries, as well as to provide other training-related support, such as the set-up of internal training facilities, recognition of prior learning and the training of trainers.

Source: Malaysia HRD Corp (2001[181]), *PSBM Act,* https://hrdcorp.gov.my/psmb-act-2001/; Skillnet Ireland (2022[182]), *Homepage*, www.skillnets.ie.

Recommendations for diversifying financial resources

- **Promote the use of levies among employers to encourage skills development and mobilise financial resources for training.** Engage employers in the design and implementation of levy schemes, consulting them regarding decisions on training priorities and mechanisms for allocating financial resources. Establish compulsory payroll levies at the national level to ensure a steady stream of funds that could be used for skills development offers in line with the identified training priorities at the country level. Design these levy schemes in such a way that allocates additional resources to disadvantaged groups, for instance, by earmarking a greater proportion of levy-financed training funds specifically for workers in SMEs and dedicating a portion to workers in the informal economy. Moreover, on top of national levy schemes, consider establishing levies at the sectoral level in partnership with industry representatives in order to align funding with the immediate needs of employers, enabling a more rapid response to sector-specific labour market demands.

Allocating financial resources equitably and effectively

Financial resources allotted for the development and use of skills must be allocated equitably. While it is important to have sufficient financial resources that could support skills policies, it is equally important to ensure that these resources reach those that need them most (OECD, 2021[183]). Therefore, the mechanisms by which governments govern, distribute and monitor financial resources, which are often more limited by technical and human resource constraints in Southeast Asia than in OECD countries (see Chapter 3, Opportunity 2), it is crucial to ensure that learners, especially those from socio-economically disadvantaged groups, receive the support they need to succeed and progress through education and employment. The process of designing formulas that determine funding allocations in skills systems, therefore, needs to consider both equity and effectiveness. Moreover, regular monitoring and evaluation of skills-related expenditures are needed to ensure that funding is translated into better learning outcomes, and that value for money is achieved, especially in resource-constrained settings (Fazekas, 2012[184]; OECD, 2017[24]). To this end, this policy direction explores two areas for Southeast Asian countries to consider when allocating financial resources: 1) adopting an equity approach to allocating financial resources; and 2) monitoring and evaluating funding allocation.

Adopting an equity approach to the allocation of financial resources

There are various mechanisms by which national and subnational governments can allot funding for skills development. Table 5.16 shows four main mechanisms by which financial resources are transferred from the national level to subnational and school levels, namely lump sum transfers, block grants, earmarked grants and school-specific grants. Each mechanism has its potential advantages and disadvantages and varies in the amount of discretion that national governments provide to subnational governments and schools to make decisions on how to spend financial resources. For example, school-specific grants are the most restrictive, while lump sum transfers provide subnational governments and schools with the greatest autonomy over the allocation of financial resources (OECD, 2017[24]). In Southeast Asia, decentralisation efforts have facilitated the use of mechanisms that give schools more authority to use their budgets based on the needs of their student populations. For instance, in the Philippines, this includes an increased ability to address educational priorities in schools, including responding to the needs of disadvantaged groups (Lugaz and De Grauwe, 2016[185]) (Box 5.7).

Table 5.16. Overview of funding transfer mechanisms

	Lump sum transfer	Block grant	Earmarked grant	School-specific grant
Description	Transfers a lump sum to subnational authorities and gives them discretion over the proportion of the lump sum they want to use for education	Provides funds to subnational authorities with requirements to use them for current expenditures in education but allows a certain level of discretion within that	Provides subnational authorities with funds that are required to be used for specific elements or items of current expenditure in education	Consists of funds that subnational authorities are entirely required to use for current expenditure in specific schools
Potential advantages	Leaves subnational authorities with a high degree of discretion over how funds are allocated	Leaves subnational authorities with a medium degree of discretion over how funds are allocated	Makes it easier for national governments to ensure that funding has been spent for its specified purpose	Facilitates administrative efficiency
Potential disadvantages	Increases administrative burden for authorities who also manage the budgets of other policy domains than education	Assumes that subnational authorities have a sufficient level of financial management capacity to make effective use of grants, which may not be the case	Restricts the ability of subnational authorities to decide how to spend funds	Limits or removes completely the administrative discretion of subnational authorities to reallocate funding among different schools and needs

	Lump sum transfer	Block grant	Earmarked grant	School-specific grant
Examples	Belgium (lump sum transfer from the national government to the Flemish and French communities)	Iceland (block grants for compulsory education), Slovak Republic (block grant for salaries and operational costs)	Estonia (earmarked grants for school personnel salaries and professional development, study materials and school lunches)	Chile (school-specific funds rewarded to top-performing schools)

Source: OECD (2017[24]), *The Funding of School Education: Connecting Resources and Learning*, https://doi.org/10.1787/9789264276147-en.

Allocating funding in line with equity objectives depends on the use of well-designed formula funding methods. Formula funding is a tool for delivering funding (most commonly as a lump sum transfer or a block grant) to schools based on estimations of their financial needs. For instance, the Philippines and Thailand consider multiple variables in their formulas, such as the number of student enrolments, teachers and classrooms (Lugaz and De Grauwe, 2016[185]). Such formulas could also help countries determine where to distribute funding by including weights for certain student or school characteristics, which could help channel more resources to individuals with multiple and intersecting risk factors, such as disability status and school location (i.e. rural versus urban). This was, for example, done in Lithuania (Box 5.7). Similarly, in Indonesia, the funding formula was revised in 2013 to account for the specific situation of small schools, which faced fixed operational costs (e.g. utility bills) despite having fewer students, thereby penalising them. While there is no single funding formula that could work for all countries, there are guiding principles that could help, such as aligning the formulas with school system priorities (including reducing inequities), adequately reflecting different student characteristics, and regularly assessing formulas to determine their appropriateness (OECD, 2017[24]).

In addition to regular budgets calculated through formula funding, countries in Southeast Asia have also mobilised additional financial resources for special programmes that target disadvantaged groups. These programmes target a wide range of learners, such as students from low-income households, out-of-school children, students with disabilities, members of indigenous communities and learners in rural areas, among others (Table 5.17). Funding mechanisms for these programmes are often either block grants, where national authorities (e.g. Ministry of Education) provide funding only for current expenditures but provide more leeway for subnational authorities to decide on how to use that funding, or earmarked grants, where national authorities have pre-determined what specific elements, financial resources must be spent on. While most of the programmes in Table 5.17 are targeted towards schools, national governments in Southeast Asia also have initiatives that transfer financial resources directly to students and their families, such as scholarships (e.g. Cambodia's Ministry of Education, Youth and Sports scholarship programmes), stipends (e.g. Myanmar's Student Stipends Program) and conditional cash transfer programmes (e.g. Indonesia's Program Keluarga Harapan) (UNESCO, 2020[186]).

Table 5.17. Policies and programmes to provide resources to disadvantaged learners in Southeast Asia

Country	Programme	Objective	Level of governance in charge of allocation	Description of funding provisions
Brunei Darussalam	Inclusive Education Strategic Initiative (under the Ministry of Education Strategic Plan 2018-2022)	To improve system-wide inclusion by ensuring access to quality learning and educational attainment opportunities for all learners with diverse needs	National (Ministry of Education)	No information available
	Community-Based Rehabilitation Programmes (under the National Framework on Child Protection [NFCP] 2020)	To promote the development, welfare, and well-being of persons with different abilities, with the support of the community, including employers	National (Ministry of Culture, Youth and Sports)	No information available

Country	Programme	Objective	Level of governance in charge of allocation	Description of funding provisions
Cambodia	Basic Education Equivalency Programme	To expand post-secondary education programmes and youth centres for out-of-school youth and increase the number of young people attending basic education	No information available	USD 40 million for the 2018-2023 period (2% of expenditure in education)
Myanmar	Compulsory and Inclusive Education Programme (under the National Education Strategic Plan 2016-2021)	To support access to TVET for disadvantaged students with less opportunities and for persons with disabilities	Subnational (township education offices)	No information available
	Science, Technology, and Innovation Strategic Plan (2022-2027)			
Philippines	Indigenous Peoples Education Program	To implement the development of curricula and learning resources, capacity building, and education planning	Subnational (regional offices)	USD 5.3 million in 2017 (0.05% of the 2017 education budget)
	The Madrasah Education Program	To integrate educational content and competencies which are relevant and of interest to Muslim learners	National (Department of Education)	USD 16.5 million in 2017 (0.12% of the education budget)
	Co-curricular and Special Learning Support Program Development	To provide funding for the organisation of extension classes for all children of school age, the creation of new teaching positions, the construction and repair of school buildings and the provision of learning materials	No information available	USD 193.9 million in 2017 (1.98% of the education budget)
Singapore	Edusave Grants of Edusave Endowment Fund	To enhance the quality of teaching and learning or to support the purchase of additional educational resources for students	National (Ministry of Education)	No information available
	Opportunity Fund Grants of Edusave Endowment Fund	To level up co-curricular development opportunities for Singaporean students from low-income households	National (Ministry of Education)	No information available
Thailand	Office of the Basic Education Commission Funding and the Educational Fund for Students with Disabilities	To support special schools in rural areas and allow them to accommodate students with disabilities	National (Ministry of Education)	USD 300 per year for each inclusive elementary school Additional USD 60 salary pay per month for teachers in special education who work more than 18 hours a week
	Strong Tambon School Project	To support the development of rural schools and improve the quality of education	National (Ministry of Education)	USD 31 000 for 836 schools to renovate and repair their facilities, improve the landscape and obtain instructional materials in 2013.

Source: Brunei Darussalam Ministry of Culture, Youth and Sports (2020[187]), *National Framework on Child Protection (NFCP)*, http://japem.gov.bn/documents/nfcp.pdf; Brunei Darussalam (2018[47]), *Ministry of Education Strategic Plan 2018-2022*, www.moe.gov.bn/DocumentDownloads/Strategic%20Plan%20Book%202018-2022/Strategic%20plan%202018-2022.pdf; Myanmar Ministry of Education (2016[188]), *National Education Strategic Plan 2016-2021,* https://planipolis.iiep.unesco.org/sites/default/files/ressources/myanmar_nesp-english.pdf*;* UNESCO (2020[186]), *Profiles Enhancing Education Reviews (PEER),* https://education-profiles.org/.

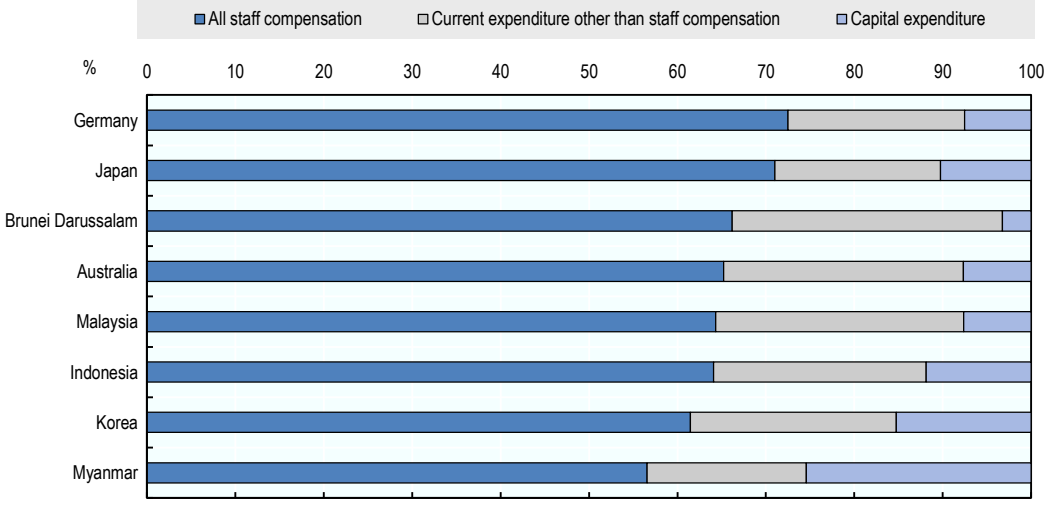
Monitoring and evaluating funding allocation

Methods for equitably allocating funding should also be coupled with strong monitoring and evaluation systems. Monitoring systems must be updated regularly and be capable of clearly tracking the specific elements financial resources are spent on, such as staff compensation, learning materials, utilities, and infrastructure, among others. For instance, information may be collected either by ministries of education or ministries of finance through annual financial reports or through national accounts books managed by the national statistical agency and then reported to international partners to allow for cross-country comparisons (UNESCO, 2022[189]). For instance, Figure 5.9 shows that the composition of expenditure on public education in countries in Southeast Asia remains like those in OECD countries. Across all countries surveyed, all staff compensation constitutes the biggest proportion of educational expenditure, followed by current expenses, such as schoolbooks and teaching materials, food and transport costs, and administrative activities.

Having a monitoring mechanism for educational expenditures upholds transparency in the financial management of skills development systems. At the country level, monitoring expenditures allows national governments to see whether funds have been spent appropriately and in accordance with the approved budget. It also allows governments to regularly gather data on whether initiatives have received their allocated funding. At the more local levels, including within schools, monitoring expenditure helps track the efficient use of resources, allowing school heads to respond quickly in the case of potential overspending and underspending (De Bruin, 2014[190]; Global Partnership for Education, 2022[168]). In Southeast Asian countries, monitoring mechanisms consist of multiple components. For instance, in Indonesia, these mechanisms include the submission of financial reports that are often prepared by head teachers and school accountants, the analysis of these financial reports by national authorities, as well as the conduct of school visits by oversight agencies (Lugaz and De Grauwe, 2016[185]).

Figure 5.9. Educational expenditure by nature of spending in public educational institutions in Southeast Asia and selected OECD countries, 2019 or latest available year

Percentage of educational expenditure



Notes: All staff compensation includes salaries, contributions by employers for staff retirement programmes, and other allowances and benefits. Current expenditure other than for staff compensation includes expenditure on schoolbooks and teaching materials, ancillary services (e.g. food, transport), and administration and other support activities. Capital expenditure includes expenditure for construction, renovation and major repairs of buildings and the purchase of heavy equipment or vehicles. Due to a lack of available data, the latest available year was used: Australia and Indonesia (2015); Brunei Darussalam (2016); Germany, Japan and Korea (2018); and Malaysia and Myanmar (2019).
Source: UNESCO Institute for Statistics (2022[191]), *Education Finance*, http://uis.unesco.org/en/topic/education-finance.

StatLink https://stat.link/rwsl42

Once expenditure data has been monitored and gathered, the use of evaluation exercises can help determine whether financial resources have been effective in achieving policy objectives. Evaluation provides information on what funds have achieved. For instance, it allows policy makers to determine whether money spent on purchasing schoolbooks translates into higher literacy rates among learners or if funds spent on organising remedial classes help close the gap between low-performing and high-performing students. In the United Kingdom, Ofsted is tasked with conducting such evaluations (Box 5.7). Budget evaluation is often the last stage of the budget cycle and involves auditing processes or financial report analyses conducted by both internal (i.e. within ministries of education) and external (e.g. through a supreme audit institution or national audit office) bodies (OECD, 2017[24]). In Indonesia, higher-level authorities from the School Operational Assistance Program evaluate financial reports submitted by schools and regularly provide them with feedback, jointly identifying points of improvement (Lugaz and De Grauwe, 2016[185]).

Evaluating funding for skills programmes could benefit from the participation of a wide range of stakeholders to promote transparency. School boards are composed of a holistic set of stakeholders, such as parents, teachers, the local community, and sometimes even students, who can participate in reviewing the expenditure of schools and help provide accountability through the creation of a system of checks and balances (OECD, 2017[24]). Some countries in Southeast Asia have adopted policies in recognition of the contributions that school boards could make to the budget evaluation process. For instance, in Singapore, the School Boards (Incorporation) Act 1990 outlines the powers and responsibilities of school boards, which includes the management of schools' expenses (Singapore Statutes Online, 1990[192]). In the Philippines, the Local Government Code of 1991 (Republic Act No. 7160) provides for the establishment of a local school board, which has the power to allocate, execute and evaluate budgets. School boards are diverse in membership and include local officials, youth representatives, parent-teacher association members, teacher associations, and non-academic personnel in public schools. However, in practice, the use of school boards in the country has many challenges, such as an inadequate infrastructure for monitoring expenditures, weak planning and budgeting practices, and a lack of mechanisms to ensure transparency and accountability in school budgets (Robredo, 2012[193]).

Box 5.7. Country examples relevant to allocating financial resources equitably and effectively

Lithuania's reforms for funding distribution

In 2001, Lithuania introduced reforms in how funding formulas were designed to support new policy priorities, specifically a renewed focus on eliminating urban-rural disparities in education. The funding formula, computed on a per-student basis, contained 67 weighting coefficient values based on student characteristics (e.g. school year, special education needs, ethnic minority status) and school characteristics (e.g. size, location and type of school). As a result, students with intersecting characteristics associated with disadvantages in learning, such as a student with special education needs in a small school in a rural area, would receive additional funding.

Philippines' Block Grant to disadvantaged schools in Autonomous Region in Muslim Mindanao

In line with the Governance of Basic Education Act of 2001 (Republic Act No. 9155), a block grant of PHP 25 million (Philippine pesos) (around USD 423 000) is provided to the Autonomous Region in Muslim Mindanao to improve the learning outcomes of students in disadvantaged schools. Schools exercise discretion on the specific activities to spend these financial resources on as long as they align with the Department of Education's objectives of enhancing the teaching and learning experience, improving school management and improving learning conditions in disadvantaged schools.

United Kingdom's Pupil Premium Funds

The UK Department of Education has established a funding scheme called the Pupil Premium funds to provide additional resources to schools with disadvantaged students and close the achievement gap between them and their more advantaged counterparts. Such funds are provided on a per-student basis. While schools have the autonomy to make decisions on how to spend the resources based on needs, they are required to publish online information about how funds from the Pupil Premium scheme have been spent, as well as the learning outcomes of the students they are targeting. The Office for Standards in Education, Children's Services and Skills (Ofsted), the English inspection agency, is tasked to closely monitor the reporting of such funds and has the mandate of conducting more thorough evaluations. Ofsted routinely gathers evidence (mostly in-house, although occasionally in partnership with other research organisations) to inform their standards of high-quality education, which are then used as a benchmark when evaluating schools' financial decisions.

Source: OECD (2017[24]), *The Funding of School Education: Connecting Resources and Learning*, https://doi.org/10.1787/9789264276147-en; Ofsted (2020[194]), *Why we do research at Ofsted*, www.gov.uk/government/news/why-we-do-research-at-ofsted; Philippines Department of Education (2015[195]), *Guidelines on School-based Management (SBM) Grants for Fiscal Year (FY) 2014*, www.deped.gov.ph/wp-content/uploads/2015/09/DO_s2015_45-1.pdf.

Recommendations for allocating financial resources equitably and effectively

- **Design a funding formula that allocates adequate financial resources to disadvantaged learners**. In accordance with skills policy priorities, identify target groups of students or schools that most need resources and include their specific characteristics (e.g. gender, socio-economic background, special education needs, ethnic minority status) in the funding formula. Assign greater weights to their characteristics to allocate more funding to these groups. Ensure that such formulas capture the different per-student costs of various types of learners and that the resulting educational budgets account for individual characteristics that compound on each other (e.g. greater allocation for students with disabilities in rural schools in comparison to students without disabilities in the same school).
- **Establish strong monitoring and evaluation systems to ensure the effectiveness of allocation arrangements**. Set up mechanisms for the routine collection of information on expenditure at the school level, such as through the submission of financial reports. Ensure that such reports clearly cover spending on various elements of the entire school system, such as staff compensation, the purchase of learning materials, utility costs and infrastructure maintenance costs, among others. Using the information gathered through continuous monitoring, conduct evaluation exercises that determine whether spending has contributed to improving student outcomes and achieving skills policy objectives in general. This could be done in co-ordination with auditing bodies (whether internal or external), as well as with a wide variety of stakeholders, such as through school boards.

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Notes

1. Indonesia, Malaysia, the Philippines and Thailand have specialised Ministries of Higher Education.

2. The three learning approaches stipulated in the law are: 1) school-based training; 2) competency-based training; and 3) dual-cooperative training.

3. Countries included in the ASEAN average are Viet Nam (0.46%), Thailand (0.15%), Malaysia (0.09%), the Philippines (0.07%), and Lao PDR (0.03%).

OECD Skills Studies

OECD Skills Strategy Southeast Asia

SKILLS FOR A POST-COVID RECOVERY AND GROWTH

Skills are the key to shaping a better future, enabling countries and people to thrive in an increasingly interconnected and rapidly changing world. Megatrends such as globalisation, technological progress, demographic change, migration, and climate change, and most recently COVID-19, are reshaping work and society, generating a growing demand for higher levels and new sets of skills.

The OECD Skills Strategy offers a strategic and comprehensive approach to assessing the skills challenges and opportunities of countries and regions for the purposes of helping them build more effective skills systems. The foundation of this approach is the OECD Skills Strategy Framework, which allows for an examination of what countries and regions can do better to: 1) develop relevant skills over the life course; 2) use skills effectively in work and in society; and 3) strengthen the governance of the skills system.

This report, *OECD Skills Strategy Southeast Asia: Skills for a Post-COVID Recovery and Growth*, applies the OECD Skills Strategy framework to assess the performance of countries in Southeast Asia, identifies opportunities for improvement and provides recommendations based on in-depth desk analysis and consultations with stakeholder representatives.



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