OECD Economics Department Working Papers No. 1702

Kosuke Suzuki,
Zahid Ismail,
Wan Fazlin Nadia Wan Osman,
Sugumar Saminathan,
Mohamad Norjayadi Tamam,
Zafrulla Hussein,
Suriati Zainal Abidin,
Halimahton Sa'diah Let,
Mohamad Muzaffar Abdul Hamid,
Nurrul Nur Aisyah Hamran,
Suhaimi Hamad,
Peter Gal,
Francesco Losma,
Laurence Todd,
Eva Tène,
Patrick Lenain

Restoring the dynamism of Malaysia’s business sector

Organisation for Economic Co-operation and Development

ECO/WKP(2022)3

Unclassified **English - Or. English**

1 March 2022

ECONOMICS DEPARTMENT

RESTORING THE DYNAMISM OF MALAYSIA'S BUSINESS SECTOR

Economics Department Working Papers No. 1702

By Kosuke Suzuki, Zahid Ismail, Wan Fazlin Nadia Wan Osman, Sugumar Saminathan, Mohamad Norjayadi Tamam, Zafrulla Hussein, Suriati Zainal Abidin, Halimahton Sa'diah Let, Mohamad Muzaffar Abdul Hamid, Nurrul Nur Aisyah Hamran, Suhaimi Hamad, Peter Gal, Francesco Losma, Laurence Todd, Eva Tène and Patrick Lenain

OECD Working Papers should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

Authorised for publication by Isabell Koske, Deputy Director, Country Studies Branch, Economics Department.

All Economics Department Working Papers are available at www.oecd.org/eco/workingpapers.

JT03490383

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

OECD Working Papers should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

Working Papers describe preliminary results or research in progress by the author(s) and are published to stimulate discussion on a broad range of issues on which the OECD works.

Comments on Working Papers are welcomed, and may be sent to the Economics Department, OECD, 2 rue André-Pascal, 75775 Paris Cedex 16, France, or by e-mail to eco.contact@oecd.org.

All Economics Department Working Papers are available at www.oecd.org/eco/workingpapers.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

© OECD (2022)

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for commercial use and translation rights should be submitted to **PubRights@oecd.org**.

Abstract/Résumé

Restoring the dynamism of Malaysia's business sector

Before the COVID-19 pandemic, Malaysia undertook a series of vigorous reforms, ranging from the improvement of regulatory framework to the digitalisation of the economy, with the aim of boosting productivity. While the protracted pandemic has inevitably stalled reform efforts in many countries, including Malaysia, strengthening the business climate has become all the more important. This will be essential to achieve a robust recovery, accelerate digitalisation, and adopt a new working environment combining productivity and sanitary precautions. This paper discusses: 1) how Malaysia can reinvigorate business dynamism with new regulatory reforms; 2) how it can boost the uptake by businesses of digital solutions; and 3) based on the recent experience of teleworking, how it can prepare an enabling working environment for the digital age.

This Working Paper relates to the 2021 OECD Economic Survey of Malaysia
http://www.oecd.org/economy/malaysia-economic-snapshot/

JEL classification: D22, J08, O10, O30, O53

Keywords: Malaysia, Regulatory Reform, Product Market Regulation, Firm-Level Labour Productivity, Digitalisation, Online Platforms, Skills Strategy, Telework

****

Restaurer le dynamisme du secteur des entreprises en Malaisie

Avant la pandémie, la Malaisie avait entrepris une série de réformes énergiques destinées, entre autres, à améliorer le cadre réglementaire et à favoriser la transformation numérique de l'économie, en vue d'accroître la productivité. Les tentatives de réforme ayant inévitablement marqué le pas dans de nombreux pays, y compris en Malaisie, sur fond de poursuite de la pandémie, il est devenu plus important que jamais de renforcer le climat des affaires. Un tel effort sera indispensable pour assurer une reprise vigoureuse, accélérer la transformation numérique et créer un nouvel environnement de travail conciliant productivité et précautions sanitaires. Le présent document examine comment : 1) relancer la dynamique des entreprises au moyen de nouvelles réformes de la réglementation ; 2) promouvoir l'adoption de solutions numériques par les entreprises ; et 3) à partir des récentes données d'expérience en matière de télétravail, œuvrer à l'instauration d'un environnement de travail porteur de conditions favorables à l'ère du numérique.

Ce document de travail se rapporte à l'Étude économique de l'OCDE sur la Malaisie 2021

https://www.oecd.org/fr/economie/malaisie-en-un-coup-d-oeil/

Classification JEL: D22, J08, O10, O30, O53

Mots clé: Malaisie, Réformes de la réglementation, Climat des affaires, Productivité, Transformation numérique, Stratégie pour les compétences, Télétravail

Table of contents

Restoring the dynamism of Malaysia's business sector 6
Malaysia needs to re-boost its productivity growth once again 6
Improving the business climate is crucial for the post-pandemic recovery 7
Malaysia has strived to improve its business climate for years 7
The ease of starting a new business has improved, but is still burdensome 9
Improving the insolvency framework can also help improve business dynamism 13
Reducing regulatory complexity can support competition and boost business dynamism 14
Foreign investment needs to be stimulated further to boost post-pandemic recovery 18
Regulatory barriers inhibit competition in some key sectors 20
The pandemic calls for accelerating digitalisation 27
Few SMEs are digitalised, but they are more productive 28
Greater openness of digital trade would benefit SMEs 34
Stimulating private sector dynamism is crucial for better network services 35
Online platforms continue to be an important avenue to SMEs' digitalisation 38
Preventing the widening gaps is utmost important 40
The pandemic has accelerated the transition to new forms of working 42
Demand for higher skills will further intensify after the pandemic 42
Preparing a better working environment is crucial – lessons from forced teleworking 45
References 55

Annex A. Demand fluctuation and productivity 61

Tables

Table 1. Digital uptake boosts firm-level productivity of services sectors 31
Table 2. Composition of respondents 47
Table 3. Table of Recommendations 53

Table A.1. Demand fluctuation affects the level of hotel occupancy rates 63

Figures

Figure 1. Malaysia needs to boost its labour productivity growth 7
Figure 2. Barriers to competition are high in Malaysia 8
Figure 3. Structural reforms are an ongoing process 9
Figure 4. Administrative burdens on start-ups are relatively high in Malaysia 10
Figure 5. Licences and permits to start a business are still burdensome in Malaysia 11
Figure 6. Lowering administrative burdens would stimulate new business creation 12
Figure 7. Improving insolvency regimes further could help stimulate business dynamism 14
Figure 8. Malaysia performs well in regulatory assessment 15
Figure 9. The share of services has increased rapidly 20

Figure 10. Several network sectors are strictly regulated in Malaysia 20
Figure 11. Malaysia's transport markets are more restrictive than those of OECD countries 22
Figure 12. Less restriction in professional services would foster productivity 24
Figure 13. Malaysia's retail services market is more restrictive than OECD countries 26
Figure 14. Online sales keep expanding during the pandemic 27
Figure 15. Digital uptake in Malaysia's businesses was evolving before the pandemic 29
Figure 16. In the services sector, SMEs adopting digital tools show higher labour productivity 30
Figure 17. Malaysia is open to digital trade, but could be more open to computer services 35
Figure 18. Malaysia is advanced in mobile broadband subscriptions, but less in fixed broadband 36
Figure 19. Malaysia's telecom market liberalisation has been progressing 37
Figure 20. Technology advance has changed the landscape of jobs 43
Figure 21. Demand for skilled jobs was robust during the pandemic 43
Figure 22. Demand for high digital skills would continue to increase 44
Figure 23. The pandemic has forced many workers to telework 46
Figure 24. Southeast Asian countries have experienced work from home during the pandemic 46
Figure 25. A number of managers and workers have positive views on teleworking 48
Figure 26. Managers find many obstacles to teleworking 49
Figure 27. Pandemic-induced teleworking will not continue in Malaysia while other countries will 50
Figure 28. Digital infrastructure is a major obstacle to teleworking in Malaysia 51

Figure A.1. Productivity of the accommodation sector could be further improved 62

Boxes

Box 1. The role of technology in empowering economic regulators 17
Box 2. Initiatives to facilitate both domestic and foreign investments in Malaysia 19
Box 3. OECD Competition Assessment and Competitive Neutrality Assessment of the logistics sector in Malaysia 21
Box 4. Malaysia Digital Economy Blueprint – a national strategy for digitalisation 28
Box 5. Digital uptake and productivity – firm-level evidence in Malaysia 31
Box 6. New policy challenges posed by online platforms 39
Box 7. Telework Survey of the OECD Global Forum on Productivity for Malaysia 47

Restoring the dynamism of Malaysia's business sector

By Kosuke Suzuki, Zahid Ismail, Wan Fazlin Nadia Wan Osman, Sugumar Saminathan, Mohamad Norjayadi Tamam, Zafrulla Hussein, Suriati Zainal Abidin, Halimahton Sa'diah Let, Mohamad Muzaffar Abdul Hamid, Nurrul Nur Aisyah Hamran, Suhaimi Hamad, Peter Gal, Francesco Losma, Laurence Todd, Eva Tène and Patrick Lenain[1]

Malaysia needs to re-boost its productivity growth once again

While maintaining robust economic growth before the pandemic, Malaysia's labour productivity growth had declined over the past decades, in contrast with other Southeast Asian countries (Figure 1). The decline of labour productivity growth is not entirely surprising as Malaysia has succeeded in converging to a higher level of labour productivity frontiers. Nevertheless, to restore strong economic growth after the pandemic, it is key for Malaysia to uplift its labour productivity growth. Over the past decades, Malaysia has carried out a range of structural reforms, but the productivity challenge calls for renewed efforts to put forward bold policy reforms back on the agenda. Against this background, the first section of this paper discusses Malaysia's business climate and regulatory reforms necessary to re-invigorate business dynamism. The second section discusses digitalisation that could make Malaysia's business sector, particularly SMEs, more productive and competitive. The final section then discusses the future of work, which is one aspect of the digitalisation of the economy, deriving lessons from the teleworking during the pandemic.

1 Kosuke Suzuki, Peter Gal and Francesco Losma are members of the OECD Economics Department, and Patrick Lenain was a member of the OECD Economics Department at the time of writing. Zahid Ismail, Wan Fazlin Nadia Wan Osman, Sugumar Saminathan, Mohamad Norjayadi Tamam, Zafrulla Hussein, Suriati Zainal Abidin, Halimahton Sa'diah Let, Mohamad Muzaffar Abdul Hamid, Nurrul Nur Aisyah Hamran and Suhaimi Hamad are members of the Malaysia Productivity Corporation. Laurence Todd and Eva Tène were consultants with OECD Economics Department at the time of writing. The authors would like to thank officials of the Malaysian government, members of the OECD Economic and Development Review Committee, Alvaro Pereira, Isabell Koske, Cristiana Vitale (from the OECD Economics Department) for useful comments and suggestions. The paper has also benefited from valuable contributions from Ashikin binti Abdul Razak, Adlina Merican binti Zainuddin Merican, Tan Fung Ling, Zaharel Reeza Bin Ruslan, Mohd Aizuddin Noor Azman (from the from Economic Planning Unit, Prime Minister's Department, the Malaysian government), James Drummond, Mike Pfister (from the OECD Public Governance Directorate), Janos Ferencz, Kazuyo Aoki (from the OECD Trade and Agriculture Directorate), Wouter Meester, Ruben Maximiano, Hans Christiansen, Chung-A Park (from the OECD Directorate for Financial and Enterprise Affairs), Marieke Vandeweyer, Ricardo Espinoza (from the OECD Centre for Skills), and Reiko Odoko (from the OECD Directorate for Science, Technology and Innovation). Special thanks go to Isabelle Luong for statistical assistance and Karimatou Diallo for editorial coordination (from the OECD Economics Department).

Figure 1. Malaysia needs to boost its labour productivity growth

A. Labour productivity growth
Annual average

B. Labour productivity levels
Thousand USD 2017 PPPs

Note: Labour productivity is defined as GDP per worker.
Source: Asian Productivity Organisation, APO Productivity database 2020.

Improving the business climate is crucial for the post-pandemic recovery

Malaysia has strived to improve its business climate for years

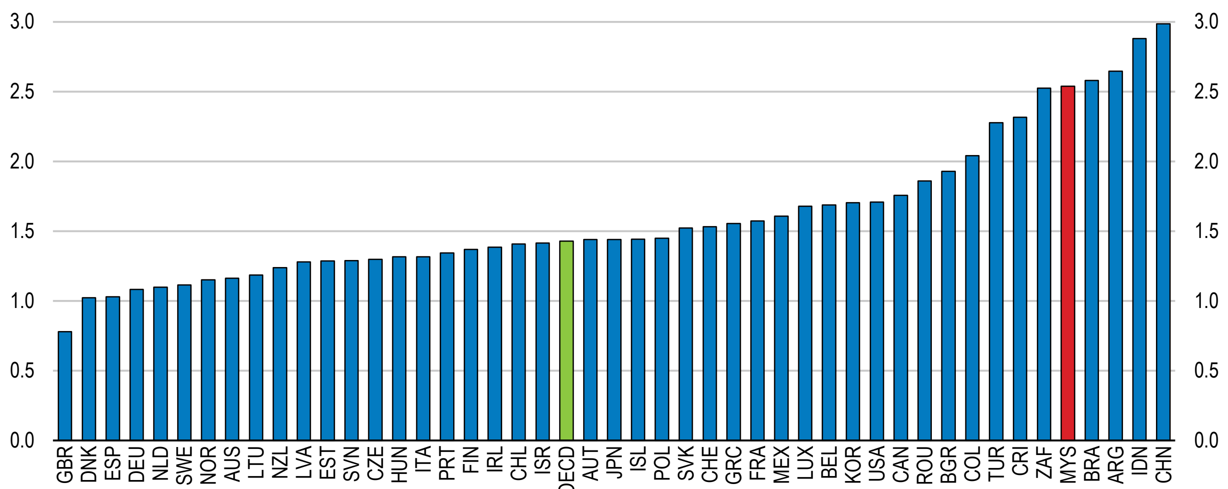
A regulatory environment that fosters competition and encourages business dynamism is an important component of a successful strategy to deliver long-term, sustainable economic growth. Malaysia has made a series of reforms to improve the competitiveness and dynamism of the business environment in recent years, and has a strong track record of adopting good regulatory practice (GRP) tools. Overall regulatory frameworks have been revamped under the National Policy on Development and Implementation of Regulations (NPDIR), which streamlined various procedures related to business activity, and is implemented across government, with the support of the Malaysia Productivity Corporation (MPC). As a result of these and other reforms, Malaysia shows a remarkable performance in a number of international benchmarks of competitiveness ranking, for instance, 12th in the World Bank's Doing Business Index in 2020. The government has also increased its focus on improving competition, with adoption of the Competition Act 2010, and a number of sectoral initiatives to increase competition, notably in

telecommunications and energy. As Malaysia transitions to high-income status, the future sources of growth will increasingly need to shift to innovation and productivity gains, which calls for further improvements in business dynamism. In this section, the recently compiled OECD Product Market Regulation (PMR) indicators for Malaysia are used to assess Malaysia's business environment and identify possible reforms, building on previous OECD assessments.

OECD PMR indicators assess the extent to which regulations support or restrict competition in key sectors of the economy, including the extent to which firms can enter the market and compete with incumbents. Vibrant competition is an essential component of business dynamism, as it fosters cost reductions, innovation and promotes productivity growth. Therefore, ensuring that the regulatory environment encourages effective competition is essential to Malaysia's long-term growth. According to the PMR indicators, Malaysia's regulatory policies impose significant restrictions on product market competition compared to OECD countries (Figure 2). However, the indicators also suggest that Malaysia's regulation is less restrictive than in large non-OECD countries covered by the indicators, including its important regional peers, Indonesia and China.

Figure 2. Barriers to competition are high in Malaysia

Overall Product Market Regulation indicator, index scale of 0-6 from least to most restrictive, 2018



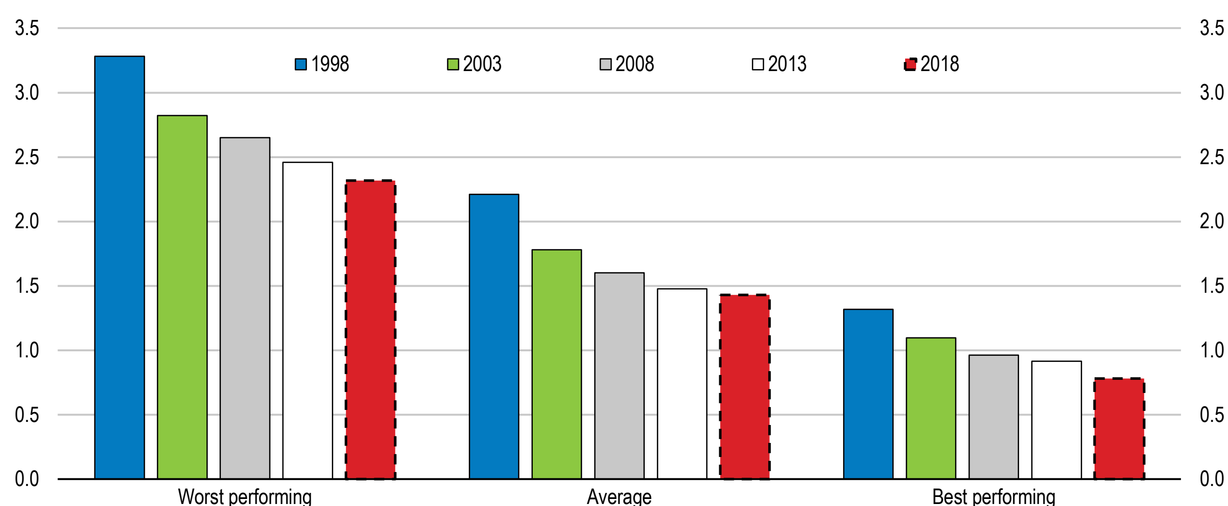
Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia).
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

https://stat.link/q65bdr

The PMR indicators were originally designed to support the pursuit of market liberalisation in OECD countries. The indicators have proved useful in policy making and a number of developing countries have started using them to implement similar major reforms along with their economic development. For any country, structural reforms are a difficult and often daunting task. Policy makers need to consult with or convince a range of stakeholders to design a reform plan. It also takes time to implement these policy measures, and OECD countries have pursued structural reforms for decades. For instance, many OECD countries liberalised their major markets, such as telecommunications, between the late 1990s and the early 2000s, as did Malaysia with the implementation of the Communications and Multimedia Act 1998. However, the speed of reforms varies across countries, as these reforms require considerable policy efforts. More importantly, even the least restrictive countries have continued their reform efforts. Malaysia's relatively more restrictive PMR score can be understood in this context, and the PMR indicators could provide a useful benchmark to Malaysia's ongoing regulatory reforms, which are expected to bear fruit in the coming years (Figure 3).

Figure 3. Structural reforms are an ongoing process

Overall PMR in OECD countries, index scale of 0-6 from least to most restrictive



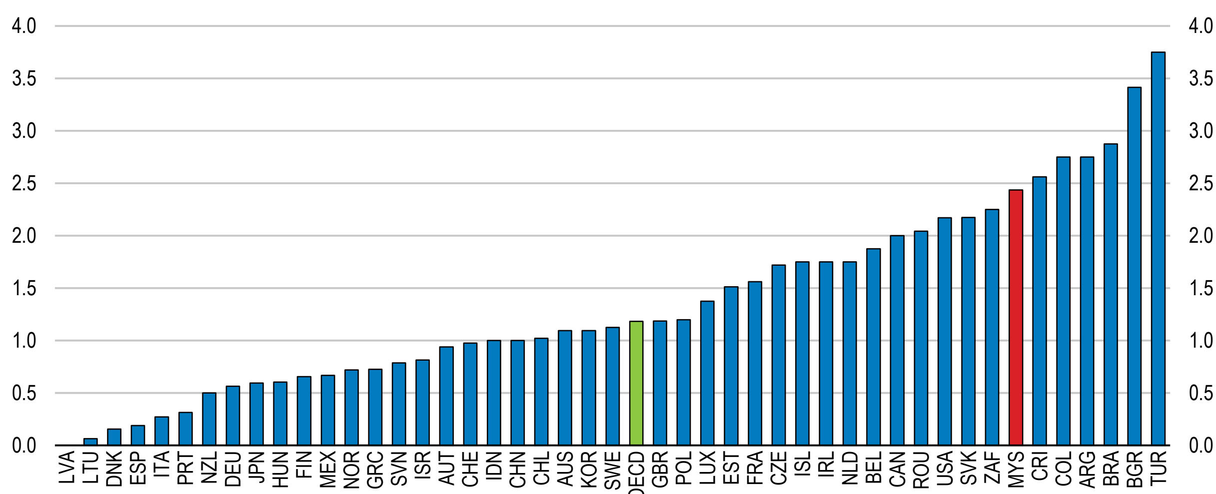
Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia). The 2018 PMR indicators are not strictly comparable to the previous ones. Worst performing refers to the OECD country with most restrictive PMR overall score and best performing refers to the OECD country with the least restrictive score.
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

The ease of starting a new business has improved, but is still burdensome

A key determinant of business dynamism is how easy it is for new firms to enter the market, or entrepreneurs to start up new businesses. This is particularly important in the wake of the pandemic, which has resulted in multiple business failures. Around 30 000 businesses shut down between March and November 2020 (the Companies Commission of Malaysia). Malaysia has made significant improvements to the process for starting a business, led by the Technical Working Group of the Special Task Force to Facilitate Business (PEMUDAH), and as a result, its score in the Doing Business Index (83.3 for starting a business in 2020) is not far from the global frontier. However, in relative terms, starting a business remains an area where Malaysia underperforms. Although Malaysia ranked 12th overall in the World Bank's Doing Business Index in 2020, it ranked 126th for its sub-indicator of starting a business, suggesting that the burden on new start-ups could be further reduced. These conclusions are supported by the findings of the PMR indicators, which highlight that Malaysia could further improve in the category of administrative burdens on start-ups, to close the gap with OECD countries (Figure 4).

Figure 4. Administrative burdens on start-ups are relatively high in Malaysia

Indicator of administrative burdens on start-ups, index scale of 0-6 from least to most restrictive, 2018



Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia).
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

StatLink https://stat.link/v9082s

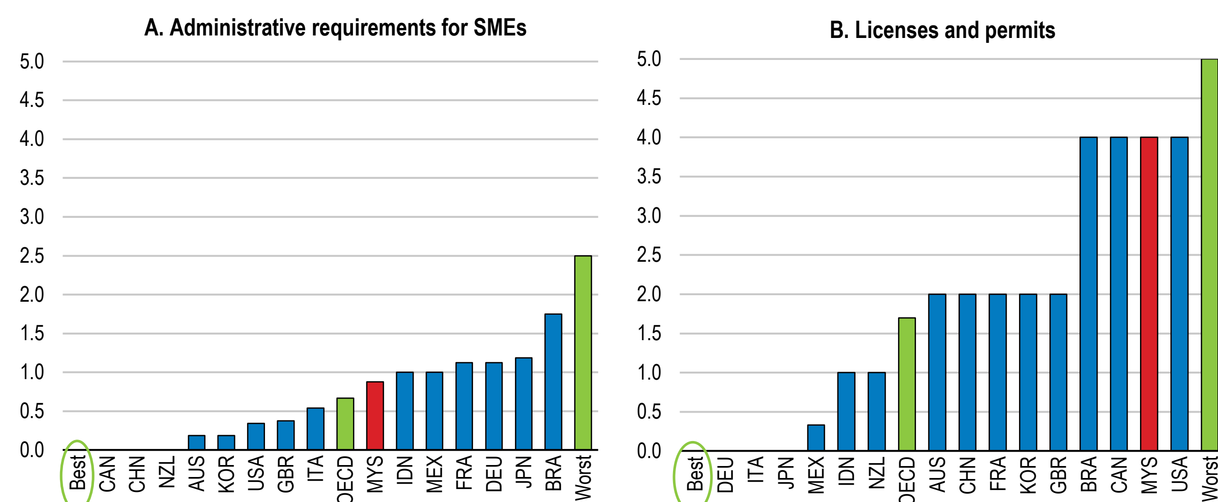
The PMR indicator is comprised of two sub-indicators: the administrative requirements for new start-ups, which relates solely to the core process of registering a new company or business with the authorities, and licenses and permits, which relates to various permissions and authorisations that may be required depending on the nature of the business. According to the PMR indicators, the process for registering a new business or company is relatively fast and inexpensive, but gaining the necessary licenses and permits is more burdensome (Figure 5).

Further streamlining registration procedures can enhance Malaysia's strong performance

Malaysia has succeeded in keeping the cost of registering a new business low, with limited fees and minimal capital requirements. The process has also been simplified as a result of the revamped Companies Act 2016, for example, by reducing the number of shareholders and directors required to incorporate a private company. However, streamlining the registration process could further strengthen Malaysia's performance in this area. Establishing a new business requires registration with five or more different entities, including tax authorities and social security institutions. Each registration must be undertaken separately, and can significantly add to the time taken to establish a new business. Previous attempts to streamline the registration process faced challenges. The different public bodies are incorporated as distinct statutory bodies, which becomes an obstacle in integrating registration processes because they cannot share financial resources and business registration data due to legislative and data protection constraints.

Figure 5. Licences and permits to start a business are still burdensome in Malaysia

Index scale of 0-6 from least to most restrictive, 2018



Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia). Best/worst represents the OECD best/worst performing country. In panel A, SMEs refer to limited liability companies and personally-owned enterprises.
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

https://stat.link/763yox

Some other countries have streamlined the requirement to register with multiple authorities. For example, Canada has managed to reduce the number of entities that must be interacted with to just one: once a corporation is created via the Electronic Filing Centre, the corporation's information is automatically transmitted to the Canada Revenue Agency, which then transmits back the Business Number with the corporate income tax account number. This number can be accessed within a day from the online database of federal corporations on Industry Canada's website. Introducing a similar system for registering new businesses in Malaysia would significantly reduce the burden on start-ups. The recently launched MalaysiaBiz portal provides a one-stop-shop for various business registration and licensing processes. Integrating all mandatory registrations, including for tax and social security, under this new portal would further streamline the process of starting a business.

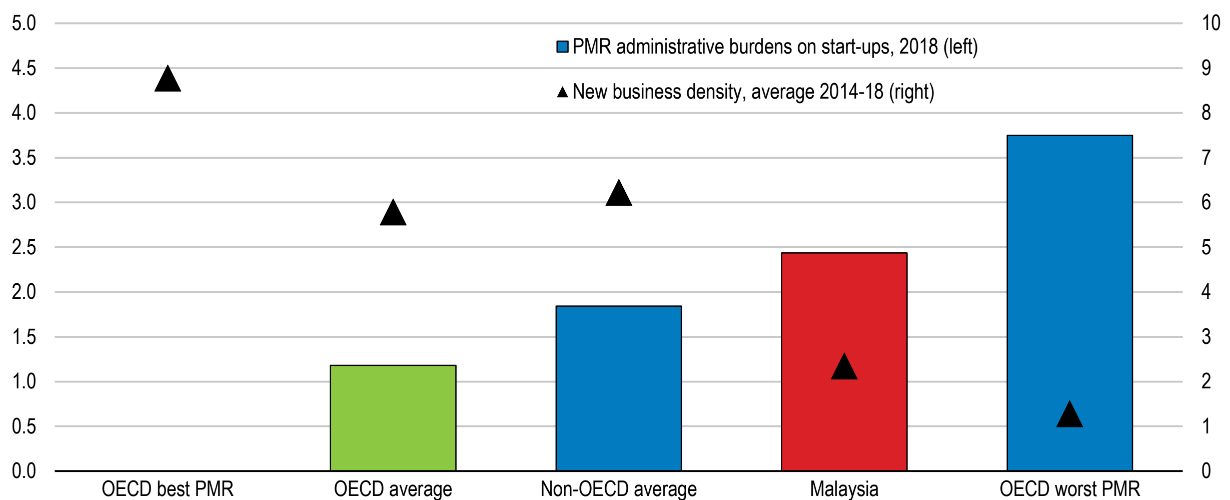
There is also scope for additional streamlining for the requirements in the Companies Act. For example, the amended Act states appointing a company secretary is optional during registration. However, companies still have to appoint a secretary within 30 days after the incorporation of the company. This requirement is applied to all companies regardless of size. The requirement to appoint a company secretary could be amended so that it does not necessarily apply to all companies. For example, the United Kingdome has waived the requirement to appoint a company secretary for private limited companies.

Simplifying licenses and permits could significantly reduce the burden on new start ups

In comparison to business registration, the process for obtaining all the necessary licenses and permits to operate in Malaysia is significantly more burdensome. According to the Global Business Complexity Index (GBCI) 2020 report (TMF Group), Malaysia is the ninth most complex country in the world to do business in and the third most complex in Asia. For example, the Malaysia Productivity Corporation (MPC) reports that a small retail store can require as many as ten different licenses, permits and approvals to operate (Malaysia Productivity Corporation, 2017[1]). This is reflected in the PMR indicators, which find that licenses and permits in Malaysia represent a significantly higher burden to new start-ups than in OECD countries (Figure 5).

In December 2020, the government launched the MalaysiaBiz portal as a one-stop centre to manage business registration and licensing in Malaysia. This Portal is now managed by the Ministry of Entrepreneur Development and Cooperatives (MEDAC). MalaysiaBiz has integrated 17 agencies that conduct business registration and issue licences. MalaysiaBiz is also integrated with several local authorities (PBT) that use their own systems (eLesen), such as Kuantan Municipal Council (MPK), Penang Island City Council (MBPP), Kuala Lumpur City Hall (DBKL), Subang Jaya City Council (MBSJ), Kajang Municipal Council (MPKj) and Petaling Jaya City Council (MBPJ). The portal is integrated with the Business License Electronic Support System (BLESS) that facilitates company representatives to select relevant licences, fill up the online application forms, submit online and track the progress of the application throughout the process until notification of approval or otherwise. However, the number and type of licenses integrated with MalaysiaBiz are limited, subject to the readiness and consent of each licensing authority. As a continuous improvement measure, MEDAC is working with agencies to encourage more business licenses to be integrated with the MalaysiaBiz portal. Further expanding the scope of licenses available through the portal will significantly streamline the process for establishing a new business. Previous OECD assessments of one-stop shops have demonstrated the importance of ensuring that improving user experience should be the central objective, not simply automating existing processes. Therefore, the development of MalaysiaBiz should also align with and support programmes for the simplification of registration and licensing processes for end users (OECD, 2020[2]). The absence of key simplifying tools in the system of licenses and permits contributes to the restrictiveness and complexity of regulatory procedures. For instance, the "silence is consent" rule, can accelerate approvals, but is not widely applied in Malaysia. The utility of this tool has been demonstrated recently in Malaysia on a pilot basis: as part of efforts to reduce administrative backlogs during the pandemic, the "silence is consent" rule was successfully applied to several thousand Certificates of Completion and Compliance (Malaysia Productivity Corporation, 2020[3]). Building on this pilot and extending the application of the silence is consent rule to other areas where it can be applied, without compromising health or other essential safety standards, would improve the flexibility of Malaysia's regulatory framework.

Figure 6. Lowering administrative burdens would stimulate new business creation



Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia). The OECD PMR indicator ranges from 0 (the least restrictive) to 6 (the most restrictive). New business density is defined by World Bank as new registrations per 1 000 people aged 15-64.
Source: OECD, Product Market Regulation database; OECD-WBG, Product Market Regulation database; and World Bank, World Development Indicators database.

StatLink https://stat.link/0x78h2

Reforms that address these issues may help stimulate firm creation. Although there is no straightforward relationship between regulation and business start-up rates, the latter of which are determined by many factors, including both regulatory and economic factors, it is notable that Malaysia has a higher burden for new start-ups and lower rate of new business creation than the average of both OECD and non-OECD countries (Figure 6, above).

Improving the insolvency framework can also help improve business dynamism

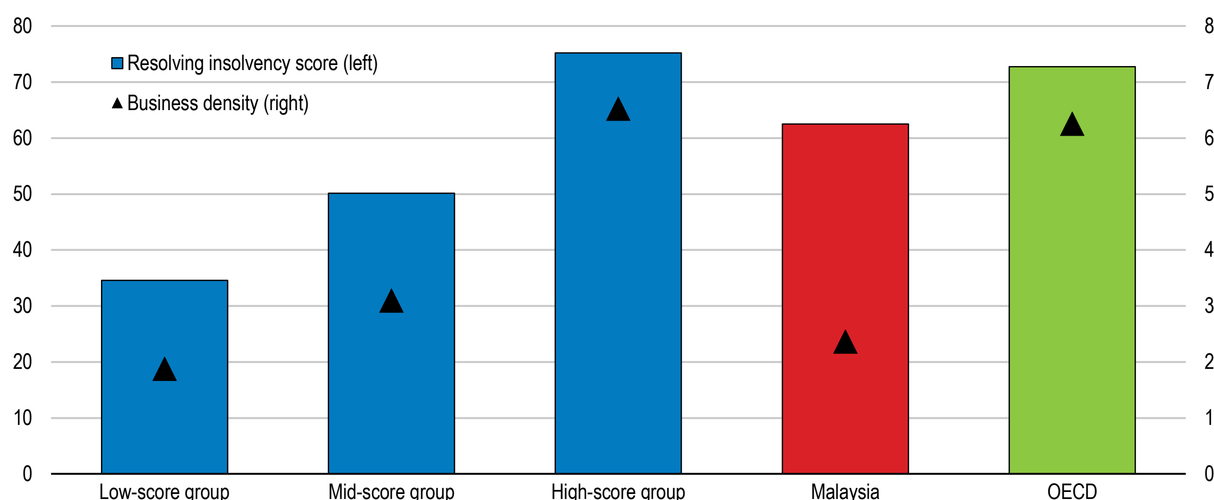
Ensuring businesses can be closed down quickly is an important component of ensuring business dynamism. Effective insolvency regimes encourage new firms to experiment with new business models and facilitates the reallocation of resources towards the most productive firms. Within the same country, industry and period, inefficient insolvency regimes have a much larger impact on the growth dynamics of entrants than of incumbents (Calvino, Criscuolo and Menon, 2016[4]). An effective insolvency regime should allow for efficient and swift exits of non-viable companies, but also successful restructurings of viable companies. Indeed, debt restructuring provides a less expensive alternative to bankruptcy when a debtor is in financial turmoil, and can work to the benefit of both debtor and creditor. Moreover, poorly performing insolvency regimes can be associated with labour productivity weakness through the survival of so-called “zombie” firms, capital misallocation and stalling technological diffusion (OECD, 2018[5]). Therefore, insolvency reform can be an important component of strengthening the business environment.

Malaysia has undertaken a series of reforms of its insolvency and bankruptcy regimes. Amendments to the Companies Act in 2016 introduced two new corporate rescue mechanisms alongside additional controls on court-sanctioned schemes of arrangement to make the process more effective as a means of effecting a corporate debt restructuring. These reforms facilitate more efficient corporate restructuring together with additional undertakings since the onset of the pandemic, which would help support the vigorous economic recovery from the pandemic (see Chapter 1 of (OECD, 2021[6])).

Building on this progress, additional reforms could further encourage the establishment of new firms. According to the 2019 GEM survey (Global Entrepreneurship Research Association), nearly 45% of adults who identify good business opportunities would not start a business for fear of failure. There are many factors that influence entrepreneurial rates, but an insolvency regime which imposes a disproportionately large burden on failed entrepreneurs, can be a disincentive. Insolvency regimes that do not excessively penalise failure – as measured by a lower cost to close a business – can promote the flow of capital to more innovative firms, by reducing the expectation of entrepreneurs that they will be heavily penalised in case of failure (Andrews, Criscuolo and Menon, 2014[7]). Comparing business density and the ease of resolving insolvencies, as measured by the World Bank’s Doing Business Index, suggests a positive relationship between more efficient insolvency regimes and new business creation (Figure 7).

Figure 7. Improving insolvency regimes further could help stimulate business dynamism

2018 or latest year available, average of each group



Note: The score for resolving insolvency is the simple average of the scores for each of the component indicators: the recovery rate of insolvency proceedings involving domestic entities, as well as the strength of the legal framework applicable to judicial liquidation and reorganisation proceedings. Business density is defined as new registrations per 1 000 people aged 15-64. 124 countries, where data is available, are grouped by the score of resolving insolvency (41 countries for the low-score group, 42 for the middle, and 41 for the high). Malaysia belongs to the high-score group.
Source: World Bank, World Development Indicators database and Doing Business 2020 database.

https://stat.link/ko6u31

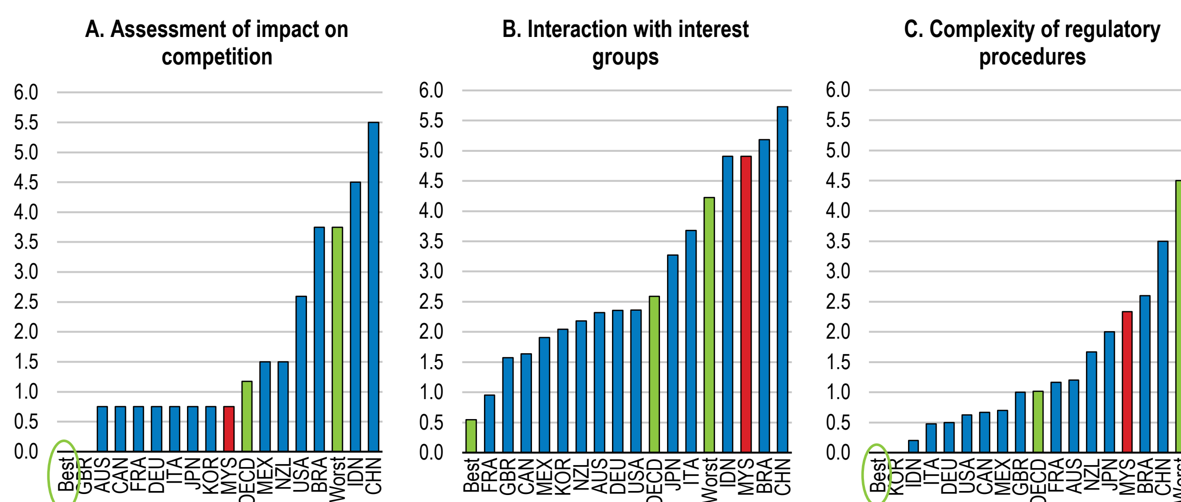
The Malaysian government should therefore consider how to continue with the direction of reform in the Companies Act 2016 to increase the incentives for prospective entrepreneurs. For example, unlike the insolvency regime in other common law jurisdictions, such as the United Kingdom, Malaysia's insolvency framework does not distinguish between blameless and blameworthy bankruptcies. Malaysia's regime could also support debtors back into business through broadening asset exemptions and providing for access to credit after the commencement of insolvency proceedings. According to the Doing Business Assessment by the World Bank, the time to resolve insolvencies in Malaysia (estimated at 1 year on average) is lower than the OECD average (estimated at 1.7 years) and the recovery rate for secured creditors is higher (an OECD average of 70.2 against 81 for Malaysia). Nonetheless, there may be other areas where the insolvency regime could be strengthened, including improving creditor participation. For example, the current system does not require approval by the creditors for sale of substantial assets of the debtor and does not provide a creditor the right to request information from the insolvency representative. The total cost of insolvency in Malaysia (estimated at 10% of the estate) is also relatively high compared to Japan (4.2%) and Korea (3.5%), suggesting that there is scope for further streamlining of the process.

Reducing regulatory complexity can support competition and boost business dynamism

Beyond the process of starting and closing down businesses, the nature of regulations that regulate the conduct of business are also a crucial feature of the overall business environment. As such, the PMR indicators also include an assessment of the process of introducing new regulations and simplifying existing regulations, to capture how existing businesses interact with the regulatory framework. The PMR indicators aim at capturing three dimensions of this regulatory process, namely; assessment of new regulations impact on competition; interaction with interest groups throughout the regulatory process; and the complexity of the regulatory procedure. Some sub-indicators suggest that there is further room for improvement in how Malaysia manages the regulatory process (Figure 8).

Figure 8. Malaysia performs well in regulatory assessment

Indicators of the simplification and evaluation of regulations, index scale of 0-6 from least to most restrictive, 2018



Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia). Best/worst represents the OECD best/worst performing country.
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

Regulatory management reforms have been well advanced for the past decade

Malaysia has been implementing a series of regulatory management reforms for over 15 years, and the OECD has been working with Malaysia on reviewing these reforms and providing recommendations. Regulatory reforms began in earnest in 2007 under the Modernising Business Regulation programme, aimed at reducing regulatory burdens and facilitating business processes. This also saw the establishment of PEMUDAH (OECD, 2018[8]). In 2013, the government established the National Policy on the Development and Implementation of Regulations (NPDIR) in line with good regulatory practice (GRP) principles. The NPDIR was followed in 2014 with the Guide to Reducing Unnecessary Regulatory Burdens (RURB): Core Concepts and the Guideline on Public Consultation Procedures. These policies establish important principles, including public consultation and Regulatory Impact Analysis (RIA) that include an assessment of the potential impact on competition (OECD, 2015[9]). Such requirements help ensure that new regulations in Malaysia do not inhibit the business climate, and as a result, Malaysia performs well in this sub-indicator of the PMR (Figure 8).

Having laid strong foundations for a system of regulatory reform since the implementation of the National Policy on the Development and Implementation of Regulations (NPDIR), the primary focus of Malaysia's regulatory reform journey between 2018 and 2020 has been to strengthen the implementation of regulatory reform through the introduction of new regulatory tools and mechanisms. Between 2018 and 2020, Malaysia has continued to fortify its evidence-based rule-making methodology in line with the good regulatory practice (GRP) principles through various initiatives, such as Modernising Business Licensing (MBL), Reducing Unnecessary Regulatory Burden (RURB), and Cutting Red-tape (MyCURE), among others. The GRP outreach has also been expanded to states and local authorities. For example, the state government of Sarawak had passed its own Circular on Sarawak Good Regulatory Practice in 2019.

Ensuring public consultation on new regulations can promote better regulatory outcomes

Transparency during the development of new regulations and consultation with all relevant stakeholders throughout the process is essential for ensuring that new regulations address the legitimate concerns of stakeholders. Malaysia has sought to improve the process for public consultation (OECD, 2018[8]). The National Policy on the Development and Implementation of Regulations (NPDIR), which aligns reforms to good regulatory practices in accordance with OECD recommendations, mandates consultation across all government agencies. The recently introduced Unified Public Consultation portal (UPC) provides a single platform for different regulating agencies to engage with and receive feedback from stakeholders. These policies establish many good practices for public consultation, but could benefit from more systematic adoption across government agencies, as identified by a recent peer review of public consultation within APEC. While several agencies have embraced the NPDIR principles, there is room for improvement across many agencies in the scope and quality of public consultation (APEC Economic Committee, 2019[10]). The Guideline on Public Consultation Procedure issued by the Chief Secretary to the government in 2014 to support the implementation of the NPDIR mandates online consultation of 12 weeks. However, the APEC peer review suggests that this requirement is not systematically followed (APEC Economic Committee, 2019[10]). As a result, there is a risk that business stakeholders are only involved relatively late in the regulatory process and with limited time to contribute. It is also important to ensure that consultation reaches beyond the business community to include other stakeholders and issues groups, including consumer interests, public health and the environment. According to APEC, while many ministries regularly consult with businesses, the other groups are generally not consulted.

There are also more procedural gaps in transparency identified by the PMR indicators, which could be addressed, including maintaining a complete online and free access to database of all regulations in force and providing a six-month forward look of legislation and regulation likely to be introduced or amended, such that stakeholders can plan their contributions. One potential barrier to improving transparency appears to be the overuse of the Official Secrets Act 1972, which states that any document that has been declared as an official secret by any government official may not be released to the public (APEC Economic Committee, 2019[10]).

Although the regulatory process should include interaction with legitimate interest groups. However, without effective regulation, interest groups can acquire undue influence over the regulatory process resulting in less pro-competition regulation, or regulation which protects incumbents or firms with stronger lobbying capacities. Therefore, the PMR indicators also assess whether countries have in place regulations for lobbying activities. Malaysia currently has no regulation in place to govern lobbying which creates the risk of undue influence over the regulation process. This issue has been highlighted as part of Malaysia's anti-corruption efforts, and measures to address it are included in Malaysia's National Anti-Corruption Plan (NACP). Timely implementation of the NACP can thus also contribute to promoting a more transparent and dynamic business environment.

Measures to reduce the burden of new and existing regulations could be strengthened

The National Policy on the Development and Implementation of Regulations (NPDIR) mandates Regulatory Impact Analysis (RIA) to mitigate the potential negative impact of new regulations. The framework is aligned with OECD guidance and recommendations, but there is scope for improvement in how it is implemented. A recent study by the World Bank identified a non-compliance rate of 40% in the period from January 2016 to May 2018 in RIA applications attributed to a general lack of awareness and capacity to undertake RIA (World Bank Group, 2019[11]). The Malaysia Productivity Corporation (MPC) has played an important role in advocating RIA and significant efforts have been made to embed RIA in regulators' rule-making processes. As a result, since 2019, there has been an increased take-up rate of RIA as compared to 2018. To further increase compliance with the RIA framework, the government can consider how to strengthen the oversight framework. In some countries, bodies for quality control may exercise a sanctioning or gatekeeping function, i.e. have the power to stop a regulation or evaluation from

proceeding to the next stage if the tool's quality (in this case, RIA) is considered inadequate (OECD, 2018[8]). Malaysia should review their system of oversight vis-à-vis emerging practices across OECD countries and develop the necessary institutional reforms to strengthen oversight.

Improving the capacity to undertake high quality regulatory assessments is a persistent challenge. Building on the OECD's previous recommendation to strengthen the use of Regulatory Impact Analysis by exploring other approaches to further improve the analysis of regulations (OECD, 2018[8]), the government can draw from the experience in OECD countries of integrating new technologies to improve regulatory functions. Across different countries and sectors, economic regulators have developed tools to adopt data-driven technologies to improve regulatory assessment and other areas of the regulatory landscape, including enforcement (Box 1).

Box 1. The role of technology in empowering economic regulators

New technologies offer opportunities to resource-constrained regulators to improve their regulatory and capacity. Technology can be used to dramatically increase the role of data in informing the development of new regulations and undertaking supervisory functions. An OECD study published in 2020 considered several case studies to identify emerging uses of technology among regulators, in order to support the dissemination of best practices. Across the case studies the report identified several new data driven processes being adopted by economic regulators, including:

- Use of "data-driven" regulation to enable **data-collection**, which in turn provides a more **comprehensive picture of the regulated environment** to inform regulatory decisions. For example, the French Transport Regulator (ART) is running regular data collection campaigns to monitor the quality of regulated services and undertaking benchmarking exercises in the transport sector to inform the development of regulation.
- Adoption of digital tools underpinning data-driven regulation can significantly improve **enforcement activities**, including supervision and inspections. For example, the National Land Transportation Regulatory Agency has implemented an intelligent national network for the monitoring and mapping of transport flows in logistics corridors called the "Green Channel Brazil" (Canal Verde Brasil). As a result of this initiative the number of freight transportation inspections went from 905 213 vehicles inspected between 2010 and 2016, to 116 million vehicles inspected between 2016 and January 2020.
- Use of information technology to **increase transparency** and to allow stakeholders (consumers, businesses, policy makers and local authorities) to make more informed choices. For example the French telecom regulator (ARCEP) has developed a reporting platform ("J'alerte l'Arcep") to allow any stakeholder (individual, businesses or local authorities) to report a malfunction which they experienced with a service provider – either telephone operator (fixed or mobile), internet service or postal operator.

The case studies examined in the report highlight the priority issues which economic regulators need to address in order to best capitalise on emerging technologies, including (but not limited to):

- **Generation and analysis of data**: i) adaptation of regulatory frameworks in order to make sure that market players produce the relevant data in an appropriate fashion; ii) development of new analytical skills within the regulator, alongside the necessary digital infrastructure to support data generation, collection, storage, management, sharing and dissemination.
- **Inclusion of stakeholders**: encouraging challenge to traditional models can be facilitated by including stakeholders – such as end-users – to participate in the regulatory process and end-users in the regulation equation and ensure that technology adoption becomes a collaborative process.

- **Co-operation between regulators**: establishing platforms for regulators to share expertise, building capacity and identifying good practices are key requirements for adopting new technology-drive approaches.

Source: (OECD, 2020[12])

The government has also initiated programmes to improve *ex post* evaluation of regulations to reduce the number and complexity of existing regulations. Starting with the Modernising Business Licensing (MBL) programme carried out between 2011 and 2014, under which 767 business licences were re-engineered, 454 converted into composite licences and 29 were abolished (Malaysia Productivity Corporation, 2016[13]). This was followed by the Reducing Unnecessary Regulatory Burdens (RURB) programme, which seeks to identify licenses, permits and other regulatory processes that can be removed or simplified focussing on particular priority sectors, such as construction, healthcare and logistics. These efforts have recently been redoubled in response to the pandemic, with the government establishing the #MyMudah programme to reduce regulatory burdens and stimulate the economic recovery (Malaysia Productivity Corporation, 2020[3]).

The Reducing Unnecessary Regulatory Burdens (RURB) programme, and its successor #MyMudah, provide important tools to reduce the burden of existing regulations, but could be strengthened. According to the OECD's assessment of different national practices, a "portfolio" of approaches to *ex post* review of regulation will generally be needed. In broad terms, such approaches range from programmed reviews to reviews initiated on an *ad hoc* basis or as part of ongoing "management" processes (OECD, 2020[14]). Both RURB and #MyMudah represent *ad hoc* review mechanisms. The RURB programme has focussed on priority sectors at the federal level, and #MyMudah is open to proposals from stakeholders of where the regulatory burden can be reduced. As of June 2021, 300 issues have already been submitted. These *ad hoc* reviews could be supported by enforcement of provisions to automatically review existing legislation on a programmed basis. The NPDIR mandates review of regulation after five years but this is not widely implemented across agencies (APEC Economic Committee, 2019[10]). The use of post-implementation reviews should therefore be strengthened. To encourage this, sunset clauses could be more widely implemented to act as a "trigger" for review. Finally, the government could also adopt stock-flow linkage rules whereby government departments and agencies are required to ensure that new regulations do not impose a net additional cost for business by finding a commensurate reduction in regulatory burdens elsewhere (OECD, 2020[14]) (Trnka and Thuerer, 2019[15]).

Foreign investment needs to be stimulated further to boost post-pandemic recovery

Reversing the weakening of private investment is key to sustaining the strong recovery and foreign investment needs to be re-boosted to this end. Although Malaysia is still an attractive destination of foreign direct investment (FDI), the share of FDI stock in ASEAN has become smaller in recent decades. Malaysia has thus progressively removed various restrictions on FDI over past years (OECD, 2019[16]). In March 2021, the government eased the regulations on foreign currency transactions of exporting companies, including the removal of the surrender requirement of export earnings to local currency (see below). This is expected to reduce the costs of foreign businesses, and attract more FDI to Malaysia. In addition, the Malaysian Investment Development Authority (MIDA) has implemented a series of initiatives to simplify the process for licensing and other applications for both domestic and foreign investors (Box 2).

Box 2. Initiatives to facilitate both domestic and foreign investments in Malaysia

The Malaysian Investment Development Authority (MIDA) is the government's principal investment promotion and development agency under the Ministry of International Trade and Industry (MITI) to oversee and drive investments into the manufacturing and services sectors in Malaysia. The wide range of services provided by MIDA includes providing information on the opportunities for investments, as well as facilitating companies which are looking for joint venture partners. Within MIDA, there is the Advisory Services Centre (ASC) which comprises representatives from across various agencies and departments to provide advisory services to investors. MIDA has also recently established the Project Acceleration and Coordination Unit (PACU) that provides end-to-end facilitation to all projects approved by the National Committee on Investment (NCI).

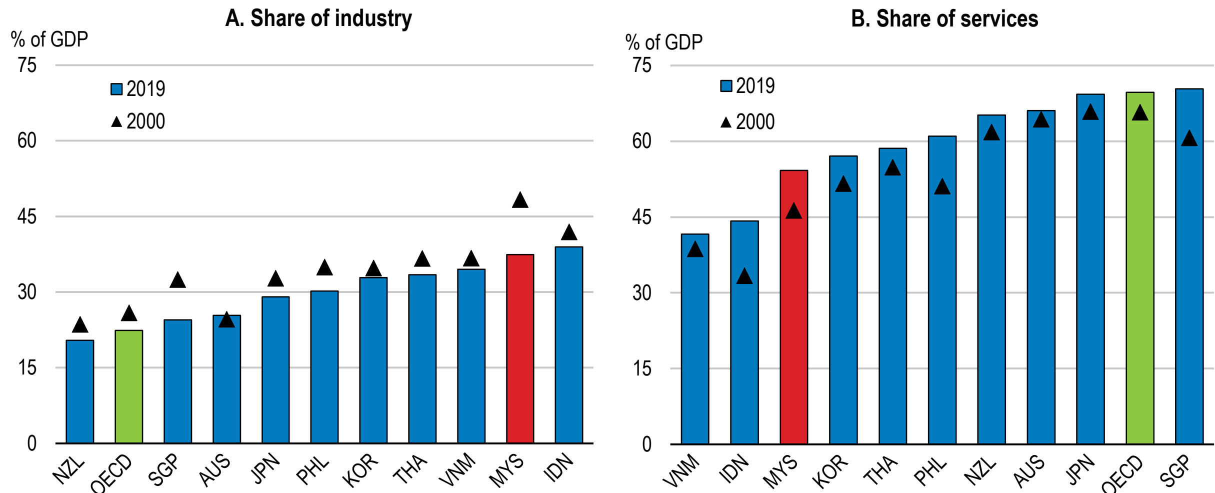
To ease the process of doing business, MIDA has sought to streamline a number of business processes, including through the following initiatives:

- The e-Manufacturing Licence 2.0 (e-ML 2.0), a new digital platform which enables companies to submit and obtain approvals for the application within two business days for non-sensitive industries.
- Tax incentives (e-Incentive 2.0 module) and import duty and sales tax exemption on raw materials or components as well as machinery or equipment (JPC Online Application Module) have been introduced as online applications.
- Further to the above initiatives, in March 2021, MIDA launched the InvestMalaysia portal, an online application submission module serves as a single-entry point of submission for various applications, including e-ML2.0.
- In April 2021, the government has announced certain relaxation of incentive conditions for manufacturing and services projects that have been approved with incentives under the purview of MIDA.

Source: Malaysian Investment Development Authority (MIDA).

Although Malaysia has rapidly transitioned to a service economy over the past two decades, the share of services in total value added is still smaller than in some other countries (Figure 9). The importance of the services sector will further increase in Malaysia, as services have become a centrepiece in global and regional value chains. Other sectors, such as manufacturing, now rely more on services inputs, such as digital services (OECD, 2020[17]). In this regard, Malaysia could further reduce the FDI restrictions on services (see below), as it undertook in 2009 and 2012. Moreover, other countries in the region have also introduced or are planning to implement further reforms. For instance, Indonesia adopted an ambitious set of reforms (the so-called Omnibus Law) to streamline business procedures, boost job creation and attract more investment. The Philippines has also pledged to amend its FDI-related laws, in addition to the reduction of the corporate tax rate from 30% to 20% and the expansion of tax incentives. Malaysia needs to continue implementing additional reforms to improve its overall business climate, which could stimulate both domestic business investment and FDI. The protracted pandemic means that some jobs and businesses will not return after the pandemic, and these policy efforts would help accelerate the reallocation of capital and labour resources to other sectors.

Figure 9. The share of services has increased rapidly



Source: World Bank, World Development Indicators database.

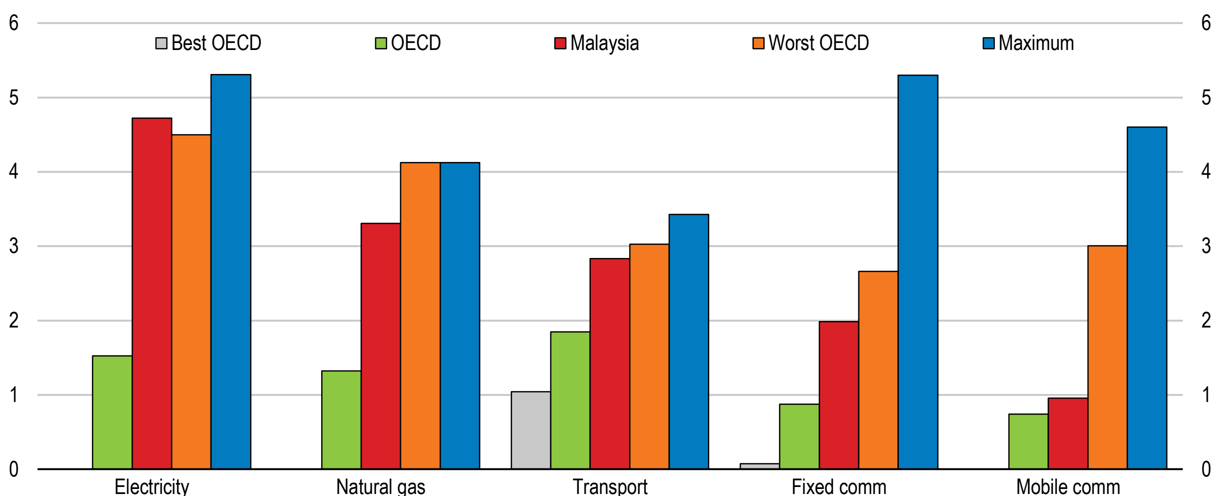
StatLink https://stat.link/51rnci

Regulatory barriers inhibit competition in some key sectors

In addition to cross cutting restrictions, the PMR indicators can also help to benchmark sectoral regulations and economic conditions. The PMR indicators focus on the telecoms, energy and transport sectors, professional services and retail. Generally, Malaysia's regulations are assessed as being more restrictive than the OECD average (Figure 10).

Figure 10. Several network sectors are strictly regulated in Malaysia

Index scale of 0-6 from least to most restrictive, 2018



Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia). Best OECD/worst OECD represents the OECD best/worst performing country, while maximum corresponds to the most restrictive country among those in the PMR database. For electricity, natural gas and mobile communications, the OECD best scores are zero.
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

StatLink https://stat.link/vcngld

Malaysia has embarked on successive privatisation efforts of key state-owned utilities and infrastructure providers. However, state-owned enterprises retain a significant market share across most network and infrastructure sectors. Fostering greater competition and ensuring neutrality between state- and privately owned firms would stimulate private sector development and support a more dynamic business environment. Malaysia's mobile telecoms market stands out as a significant achievement. The regulatory framework is considered on a par with OECD countries, and has helped nurture a contested market of multiple providers offering high speeds and low prices to consumers. Further entrenching competition in the provision of fixed-line telecommunications – where the state-owned Telekom Malaysia retains the majority market share – will encourage broadband adoption and support digitalisation among SMEs (Record et al., 2018[18]). The Malaysia Communications and Multimedia Commission (MCMC) has taken significant steps to achieve this, which have already delivered benefits (see below).

Although Malaysia's energy markets are significantly more restricted than the OECD average, they are undergoing substantial reform. Third Party Access for the transmission and distribution networks for natural gas has recently been introduced that will enable new providers of retail and wholesale gas to enter the market. In the electricity market, generation is already liberalised, and access to the distribution and retail supply markets is expected to be liberalised under the proposed Malaysia Electricity Supply initiative (MESI) 2.0, although MESI 2.0 is currently under review. These reforms will enable a more dynamic energy market that creates opportunities for new private players, and can also be aligned with efforts to reduce reliance on fossil fuels.

Reforming Malaysia's transport sectors may help improve logistics

Efficient transport services are an important component of a dynamic economy and can play an important role in Malaysia's ambition to integrate into global value chains (World Bank, 2021[19]). Reducing logistics costs is also essential for stimulating domestic supply chains, where transport costs continue to be a significant factor (Box 3). For example, the Market Review of Retail Services undertaken by the Malaysia Competition Commission (MyCC) identified that retail firms in Sabah, Sarawak and rural areas across Malaysia face prevalent high logistics cost to transport their products as the retailers are forced to increase their selling price and charge different pricing to these locations to make up for the high logistics cost.

Box 3. OECD Competition Assessment and Competitive Neutrality Assessment of the logistics sector in Malaysia

Logistics is a crucial sector for the development of Malaysia. Malaysia's infrastructure, international shipments, port sector and liner-shipping connections with other countries have significantly improved in the last decades. In 2019, the transport and storage sector accounted for 3.8% of the country's GDP.

Similar to other countries in the region, Malaysia is suffering from the socio-economic impact of the COVID-19 outbreak. The pandemic has resulted in the disruption of supply chains, and the logistics sector has been affected by operational constraints and lower demand in other industries. Ensuring competition as well as a level playing field between public and private market participants is important to resume sustainable growth and job creation, by enhancing competitiveness, encouraging investment and stimulating productivity in the logistics sector, with knock-on economy-wide effects and benefits for its consumers.

In January 2020, the OECD completed two studies on Malaysia – one on the assessment of rules and regulations in the logistics sector and another of the analysis of the role and impact of state-owned enterprises on competition in small-package delivery services, which remain crucial to support e-commerce growth.

Working in close co-operation with the Malaysia Competition Commission (MyCC) and other public and private stakeholders in Malaysia, the OECD scrutinised more than 50 pieces of legislation and made

more than 70 recommendations that aim at ensuring competition in the logistics sector and a level playing field in small-package delivery services. Key recommendations included:

- Remove the authorities' power to set freight rates, in line with current practice where rates are determined by the market, to ensure price competition.
- Remove unnecessary criteria considered by the authorities in renewing a commercial vehicle operation licence, such as business viability, to avoid discrimination.
- Introduce clear requirements for applicants requesting a licence for maritime transport to reduce costs and facilitate market entry.
- Remove the licence freeze for customs brokers to allow new entrants.
- Require revenue and costs related to the universal service obligations to be clearly separated in the state-owned enterprise's accounts. Accounting separation is required to ensure that compensation is adequate irrespective of the mechanism adopted.
- Refrain from providing state guarantees to state-owned enterprises' loans to prevent state-owned enterprise from accessing preferential interest rates.

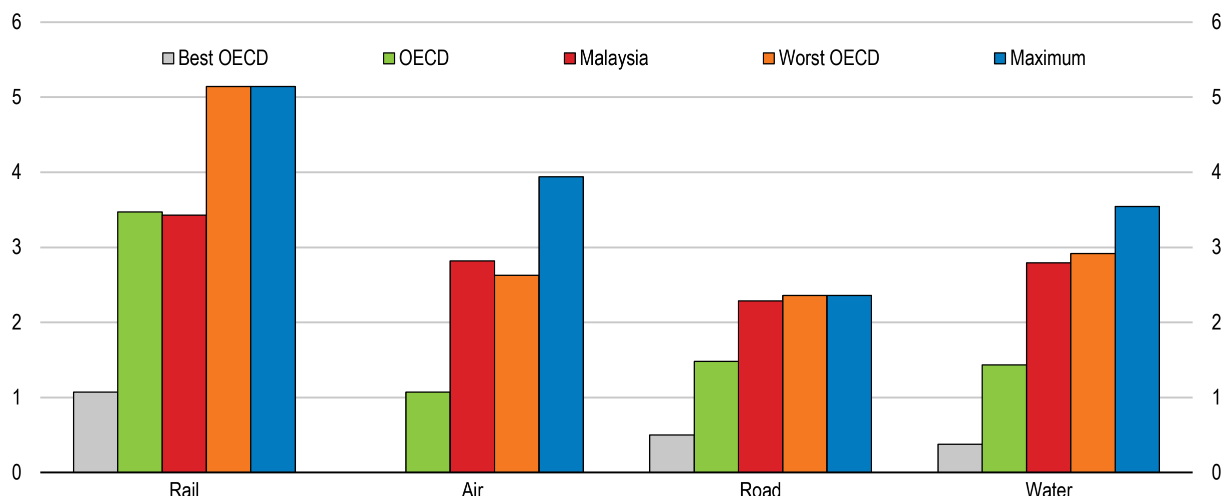
If fully implemented, the OECD recommendations can be expected to generate significant benefits to the Malaysian economy. The full implementation of the recommendations is expected to deliver positive long-term effects on employment, productivity, growth and the ability of businesses to compete.

Note: This work is still ongoing and will be published once completed.
Source: (OECD, 2021[20]), (OECD, 2021[21]).

According to the PMR indicators, regulation of transport in Malaysia is more restrictive than the OECD average, with the exception of rail (Figure 11). Transport services in Malaysia are generally open to market competition, although the government retains a significant presence that limits the scope for dynamic private competition. The government controls at least one firm in every transport sector assessed, including where private sector operators are present.

Figure 11. Malaysia's transport markets are more restrictive than those of OECD countries

Index scale of 0-6 from least to most restrictive, 2018



Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia). Best OECD/worst OECD represents the OECD best/worst performing country, while maximum corresponds to the most restrictive country among those in the PMR database. For air transport, the OECD best score is zero.
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

StatLink https://stat.link/xbwmrs

Unclassified

In a number of OECD countries, rail is often characterised by more restrictive market conditions compared with other transport services, as the costs of infrastructure provision are high and the existence of bottlenecks (e.g. peak times) makes it more complex to create a competitive market. In Malaysia, the legislation allows new rail operators to be licensed but use of the publicly owned rail infrastructure is exclusive to the state-owned enterprise, Keretapi Tanah Melayu Berhad (KTMB) and competitors do not have access to it. The government has proposed progressive liberalisation to create a multi-operator environment in the provision of rail services in the National Transport Policy 2019-30 as part of efforts to stimulate the development of the rail network, which is relatively under-used and under-developed as compared to the road network (Ministry of Transport, 2019[22]). As the government takes forward reforms to introduce new operators, it will need to ensure a transparent system is in place to govern universal service obligations and any associated subsidies.

Foreign transport services providers are restricted by cabotage policies across different transport sectors. In road freight services, foreign firms can only transport for their own account. In maritime transport, cabotage policy remains in place, although some block exemptions have been agreed, including between Peninsular Malaysia and the states of Sabah and Sarawak. Otherwise, foreign vessels may only serve domestic routes by obtaining a temporary license through the Domestic Shipping License Board. Further liberalisation could stimulate shipping activity and facilitate Malaysia's position as a logistics hub.

In air transport, Malaysia has been a leading advocate within ASEAN for deepening integration of the ASEAN Single Aviation Market. However, there are relatively few agreements with other partners, and the agreements in place are relatively narrow in scope. This compares unfavourably to OECD countries, which are also EU Member States and are therefore part of a fully liberalised internal market for aviation services. The National Transport Policy 2019-30 calls for the implementation of all ASEAN and Dialogue Partner air transport agreements. If Malaysia can continue to champion this agenda within ASEAN and on a bilateral basis, it can help increase the competitiveness of the air transport market in terms of price and consumer choice.

Other regulatory restrictions can undermine effective competition and inhibit business dynamism, including time limited licenses and restrictive approvals. For example, road freight licenses are time limited and all air transport routes are also subject to approval by the Malaysian Aviation Commission (MAVCOM). Liberalisation of these requirements could enable firms to respond more quickly to changing demands and foster a more dynamic business environment.

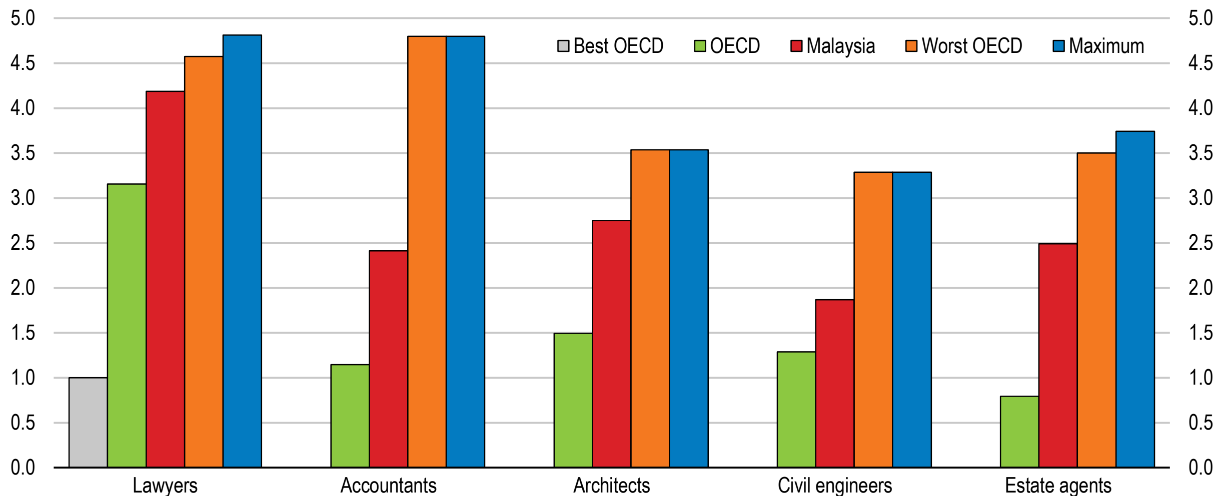
Lowering restrictions in professional services is crucial to transition to services-driven growth

As Malaysia transitions to high-income status, value-added services will become an increasingly important component of the economy. Business services, in particular professional services, have been shown to be effective in improving overall productivity and economic growth across economies (Gajic and Kordic, 2015[23]).

According to the PMR indicators, regulation of professional services is more restrictive than in OECD countries (Figure 12). This observation aligns with analysis by the World Bank and the Economist Intelligence Unit, which shows that, on average, the regulations governing professional services in Malaysia are more restrictive than in regional peers, such as Singapore and the Philippines and in countries of similar levels of economic development as Malaysia (World Bank, 2021[19]).

Figure 12. Less restriction in professional services would foster productivity

Index scale of 0-6 from least to most restrictive, 2018



Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia). Best OECD/worst OECD represents the OECD best/worst performing country, while maximum corresponds to the most restrictive country among those in the PMR database. Except for lawyers, the OECD best scores are zero. Notaries are not included as it is not recognised as a separate profession in Malaysia.
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

StatLink https://stat.link/cpb0na

The PMR indicators distinguish between entry regulations – which restrict which qualifications and other prerequisites are required to enter a given profession – and conduct regulations, which restrict how professionals conduct their business, including regulated minimum fees and requirements on the legal form of firms. Entry regulations for professionals in Malaysia are broadly on a par with OECD countries. Indeed, entry regulations for lawyers, accountants and civil engineers are considered less restrictive than the OECD average, but the entry regulations for architects and estate agents are slightly more restrictive. For example, there is only one pathway to becoming an architect since all Registered Architects must first be registered Graduate Architects. However, Malaysia is assessed to be more restrictive with respect to how the conduct of professional services is regulated.

All professional services assessed under the PMR indicators are subject to significant restrictions on the legal form of business. Lawyers are subject to the most restrictive regulations as the Legal Profession Act 1976 restricts a lawyer to only practice through a sole proprietor or a partnership or to be employed by a sole proprietor or a partnership. The Limited Liability Partnership Act 2008 provides an alternative option, but amendments to the Legal Professions Act 1976 are required before lawyers can take advantage of this option. The other professional services are subject to a range of different restrictions. Civil engineers, architects and estate agents are allowed to incorporate but with restrictions on equity structure and voting rights. These regulations may limit the capacity for professional services firms to identify additional sources of finance and reduce opportunities to develop management skills. Inter-professional collaboration is also restricted. Lawyers and accountants are prohibited from entering into collaborations with other professions, and civil engineers and architects are restricted to tightly defined "multi-disciplinary" practices with prescribed equity and voting structures. These restrictions may limit the ability of firms to exploit efficiencies and offer new and potentially valuable combinations of services to their clients.

The government is currently considering an amendment to the Registration of Engineers Act 1967 on shareholding by non-professionals. The Act includes provisions for the Minister of Works to proscribe limits on shareholding in engineering firms. It is currently limited to 30% shareholding by non-engineers, with a

proposal to amend this to 100%. As such, the restriction on the ownership of engineering firms of 70% for professional engineers with a practicing certificate (PEPC) shall be removed, in line with the practice in other countries, such as Singapore and Australia. The proposed amendment is intended to make Malaysia engineering firms more competitive and increase their capital base.

The fees for professional services in Malaysia are also regulated, which can undermine competition. Fees for certain services provided by lawyers, accountants, civil engineers, architects and estate agents are prescribed by their respective governing bodies (Malaysia Competition Commission, 2013[24]). The rational for such regulations is usually due to the fact that professional services are "experience goods" (i.e. a product or a service whose quality, and hence price, is difficult to evaluate in advance), and in some cases even credence goods (difficult to assess quality even after the service has been purchased). Therefore, consumers of these types of goods need to be protected from the risk of encountering low quality providers through price regulation. However, the fact that there are countries where such price regulation has been removed without damaging consumers suggests that this argument may not be valid and there is scope for removing such regulatory constraints to competition. Hence, the extent to which there is a requirement for professional services fees to be regulated in Malaysia should be subject to review, as part of efforts to stimulate competition and dynamism across the sector.

Reform of professional services has delivered economic benefits in several European countries. For example, Greece undertook significant reform in 2011 to reduce restrictions on entry and conduct for professional services, including the removal of defined mandatory fixed and percentage prices or fees for certain service providers, such as lawyers and auditors. As part of these reforms, geographical restrictions and economic needs tests for law firms were abolished. The entry requirements for accountants were also relaxed from licensing to simply announcing the commencement of activities. Research has found that these reforms resulted in lower prices for consumers, and the number of start-ups for several professional services more than doubled in 2014 compared with the yearly average before the liberalisation (Athanassiou et al., 2015[25]).

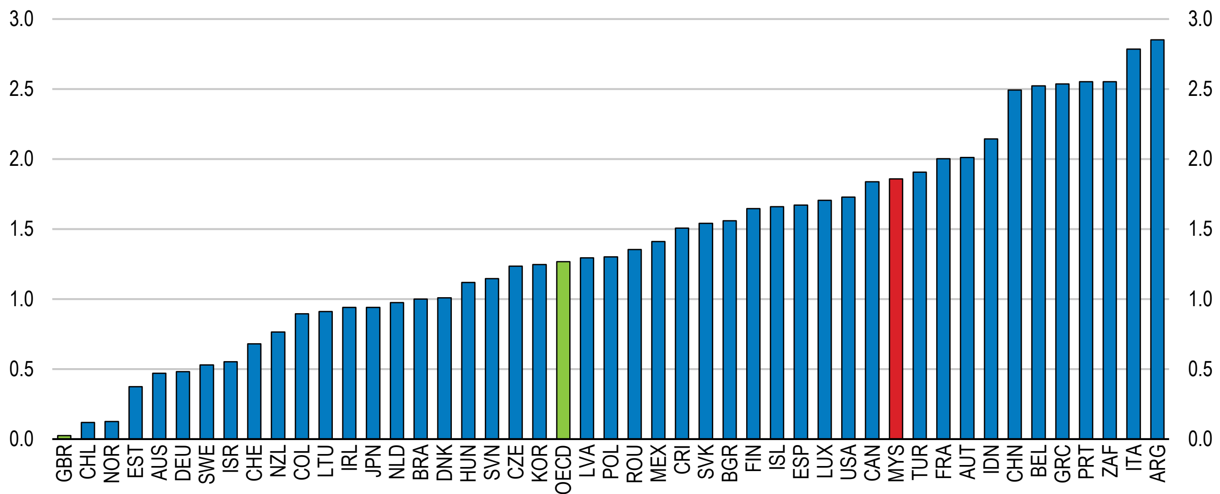
Reducing restrictions in the retail can support the growth of Malaysia's SMEs

The retail sector is an important driver of the SME economy in Malaysia: with 89% of SMEs in the services sector, of which 51% are in retail (Economic Census 2016, DOSM). As an industry, retail has been one of the hardest hit by the pandemic, with reports that more than 51 000 retail stores (about 15% of the total industry supply, Retail Group Malaysia) in the country are expected to close down. Developing a more competitive and dynamic business environment within the retail sector can therefore be an important part of Malaysia's pandemic recovery.

According to the PMR indicators, Malaysia's retail sector is more restrictive than in many OECD countries, suggesting that there is potential to enhance the business climate (Figure 13). One issue highlighted by the PMR indicators is the ongoing use of price controls. The Price Control and Anti-Profiteering Act 2011 enables the government to specify prices on any products it deems necessary to regulate, and the government is currently regulating the maximum price of a number of goods, including sugar, petrol and diesel. The government also routinely sets the maximum price of a range of goods on a temporary basis during festive seasons, including chicken, pork and certain vegetables. These measures were implemented to prevent profiteering and to reflect the fact that several of the products subject to controls are subsidised by the government.

Figure 13. Malaysia's retail services market is more restrictive than OECD countries

Index scale of 0-6 from least to most restrictive, 2018



Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia).
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

StatLink https://stat.link/v62cwp

In addition to price controls on specific products, the government has also implemented a broad anti-profiteering framework. Based on a defined formula the government determines "reasonable" profits and can take action against retailers making profits beyond this level. The anti-profiteering regulation may limit business strategies and therefore inhibit business dynamism. For example, according to a Market Review of selected Retail and Wholesale Products undertaken by the Malaysia Competition Commission (MyCC), firms have reported deliberately avoiding lowering prices to avoid being accused of profiteering in subsequent years. This reduces the capacity for retailers – and consumers – to respond to changes in underlying market conditions. In addition, the Review highlights that reporting requirements under the Act also create an administrative burden for firms, which may disproportionately affect SMEs (Malaysia Competition Commission, 2020[26]).

In other countries, anti-profiteering regulations have been introduced on a time-limited basis to manage the introduction of new taxes on consumption. In Malaysia, the anti-profiteering regulations were originally intended to protect consumers from excessive price rises following introduction of the Goods and Services Tax (GST) in 2015. However, despite the subsequent abolishment of the GST in 2018, the regulations have not been phased out. Moving forward, the government could consider regular reviews to assess the impact and necessity of the anti-profiteering regulations.

The Market Review undertaken by MyCC also highlights a number of competition issues within the retail sector that could particularly affect SMEs. Distributors have reported that large retailers can impose anti-competitive conditions on their suppliers, including "back-margins" (such as listing fees for selling certain products) the cost of which can range from 5% to 30% of product value in some circumstances (Malaysia Competition Commission, 2020[26]). Stronger enforcement and increased awareness of the Competition Act 2010 could help reduce the proliferation of such unfair trade practices.

In Malaysia, foreign-owned retailers are subject to a separate regulatory regime through the Guidelines on Foreign Participation in Distributive Trade Services in Malaysia, which imposes restrictions on floor size and opening hours, which do not apply to domestically owned firms. Foreign-owned firms are also subject to separate reporting requirements, which impose an additional bureaucratic burden. This is reflected in

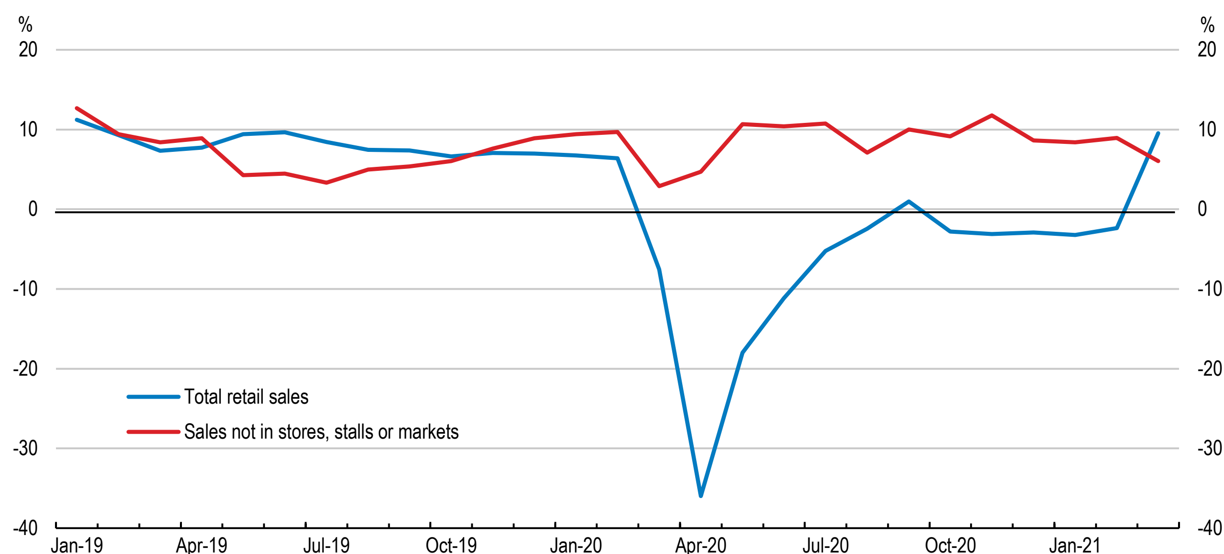
Malaysia's relatively high score in the OECD Services Trade Restrictiveness Index (STRI) for the distribution services, which was at 0.342 in 2020 notably higher than the OECD average of 0.178. In 2020, the government relaxed certain restrictions, including abolishing the requirements for a local partner for superstores and a local population of at least 200 000. Foreign hypermarkets can now also open stores measuring as small as 1 000 m^2 in urban areas. However, several other restrictions remain, including size limits for rural and suburban areas. These reforms should help modernise the retail sector and encourage foreign investment.

The pandemic calls for accelerating digitalisation

The pandemic has increased the importance of digitalisation for business activities across the globe. Like in many other countries, in Malaysia, retail online sales have continued growing during the crisis, although their share is still small (Figure 14). Malaysia has a traditional strong focus on digitalisation. A case in point is the establishment in 1996 of a special economic zone to nurture ICT and ICT-related industries through attracting foreign and domestic investment, also known as the Multimedia Super Corridor. Thanks to its wide range of incentives and privileges, the Multimedia Super Corridor has generated approximately an MYR 470 billion (Malaysian ringgit) of turnover and 180 000 jobs until the end of 2018, with almost 3 000 participating companies. After the pandemic, digitalisation will become an even more essential determinant of business competitiveness and the government has therefore decided to provide an enabling environment. In particular, the government adopted in February 2021 a comprehensive national strategy for digital economy, the Malaysia Digital Economy Blueprint (Box 4).

Figure 14. Online sales keep expanding during the pandemic

Year-on-year growth rate of the volume index of retail trade



Note: The sub-category of "not in stores, stalls or markets" includes sales of any kind of product over the Internet.
Source: DOSM (2021), Performance of Wholesale and Retail Trade, March, Table 7.

https://stat.link/qxkpn4

Box 4. Malaysia Digital Economy Blueprint – a national strategy for digitalisation

In February 2021, in the middle of the pandemic, the government announced MyDIGITAL, an initiative to drive the digitalisation of the economy with an ambitious goal of implementing a range of whole-of-nation programmes by 2030 through the Malaysia Digital Economy Blueprint (Blueprint). The adoption was deemed timely as the pandemic had made many people aware of the importance of digitalisation. The Blueprint consists of six pillars:

- Driving digital transformation in the public sector;
- Boosting economic competitiveness through digitalisation;
- Building enabling digital infrastructure;
- Building agile and competent digital talent;
- Creating an inclusive digital society;
- Building trusted, secure and ethical digital environment.

These pillars broadly cover most acute policy issues, ranging from skills development to the renewal of policy frameworks for data protection and intellectual property rights. The Blueprint also sets out concrete objectives and timelines for each pillar, with a particular focus on inclusiveness and SMEs. It aims at ensuring by 2025 Internet access for all households and for 875 000 micro-, small- and medium-sized enterprises (MSMEs) participating e-commerce transactions. The Blueprint also highlights the importance of both foreign and domestic investments, including those in infrastructure.

As an outcome, the government expects that the digital economy will contribute to 22.6% of GDP and create 500 000 jobs by 2025, also uplifting the level of productivity in all sectors by 30% towards 2030.

Source: (Economic Planning Unit, Prime Minister's Department, 2021[27]).

Few SMEs are digitalised, but they are more productive

The digital uptake of businesses in Malaysia was growing before the pandemic, but use of the technology remained limited (Figure 15). While the share of e-commerce income in total business sale of 16% was comparable to that of OECD countries in 2015, the participation in e-commerce was much lower than in some OECD countries (Figure 15). Moreover, large differences in digital uptake prevailed among the large number of SMEs. Based on the national definition, SMEs represented 99% of all establishments in 2015, of which 86% were with less than ten workers and 64% were with less than five workers (Economic Census 2016, DOSM). In most countries, the digital uptake of SMEs is much lower than that of large firms (OECD, 2021[28]). The same situation of low SME digital uptake prevails in Malaysia (Figure 15). Although digital uptake has accelerated during the pandemic among Malaysia’s SMEs (SME Association of Malaysia, 2020[29]), it is crucial to achieve higher levels of digitalisation in the next few years.

Figure 15. Digital uptake in Malaysia's businesses was evolving before the pandemic

A. Development in Malaysia
Share in total establishments or sales

B. E-commerce participation rate
2018 or 2015

C. E-commerce participation rate by firm size
2015

Note: E-commerce participation is either receiving orders or making purchases over computer networks.
Panel A: share of total sales for the indicator e-commerce sales, and share of total establishments for the others.
Panel B: data refer to businesses with more than 10 workers; 2018 data for wholesale and retail trade excluding motor vehicles and motorcycles; 2015 data for all other sectors.
Panel C: data refer to all-sized business establishments, including those with less than 10 workers. SME classification is based on the national definition: for the manufacturing sector, SMEs are firms with sales turnover below MYR 50 million or whose full-time employees are below 200; for the services sector, SMEs are those firms with sales turnover below MYR 20 million or with less than 75 full-time employees.
Source: DOSM, Economic Census 2016, Annual Economic Statistics 2018, Usage of ICT and E-commerce by Establishment 2018, Wholesale and Retail Trade Census 2019; and OECD, Information and Communication Technology - ICT Access and Usage by Businesses database and OECD calculations.

https://stat.link/gdy1ph

Although Malaysia's business sector is still at an early stage of digitalisation, new analysis performed for this report, using Malaysia's firm-level data, suggests that the uptake of digital technologies, particularly e-commerce participation, is associated with higher growth and levels of productivity of firms in the services sector (Box 5). Because of the different nature of activity, the need for digital technologies is not the same among sectors. Nevertheless, overall, in the services sectors, the gap in the level of productivity between firms using digital tools and firms not using these tools is more pronounced among smaller firms than large firms (Figure 16). This implies that digital tools, including e-commerce, would help overcome resource

constraints, in particular the shortage of labour, contribute to the expansion of their customer base, and push up the profits of participating smaller firms. Moreover, newly created firms are more likely to use digital tools, being more agile in adopting new technologies, so they would benefits more from these technologies than old firms (Figure 16).

Figure 16. In the services sector, SMEs adopting digital tools show higher labour productivity

A. Labour productivity

Log of MYR per worker, 2015

All | Micro | SMEs | Large

Total firms | Computer using firms | Internet using firms | E-commerce partcipating firms

B. Digital uptake rates of old and new firms

Firms born in or before 2010 | Firms born after 2010

Micro | SMEs | Large — Use of computer | Use of internet | E-commerce participation

Note: Micro firms are defined as having less than 5 workers, SMEs as having between 5 and 75 workers. The reference years for the wholesale and retail trade sectors are 2013 and 2018, and 2010 and 2015 for all other services sectors. E-commerce participation is either purchase or sell online. Three groups of digital uptake are not mutually exclusive. For example, computer using firms could include Internet using firms or e-commerce participating firms.

Source: DOSM, Economic Census 2011 and 2016; and OECD calculations.

https://stat.link/l3zi0r

Box 5. Digital uptake and productivity – firm-level evidence in Malaysia

In the quinquennial survey for business establishments conducted in 2016 (Economic Census 2016), the Department of Statistics Malaysia (DOSM) introduced a standardised questionnaire on digital uptake proposed by the OECD. By using the firm-level data for services sectors of the Census, the relationship between digital uptake and productivity has been analysed for this report. Regression results suggest that, similar to previous study in other countries, digital uptake, namely the use of computers, the use of the Internet and the participation in e-commerce are likely to correlate with growth and the level of productivity at the firm level in Malaysia (Table 1).

Table 1. Digital uptake boosts firm-level productivity of services sectors

Regression of growth or log level of productivity on digital uptake (computer, Internet and e-commerce)

	Dependent variable is Productivity growth between 2010 and 2015	Dependent variable is log productivity level in 2015
	(1)	(2)
Initial productivity gap with top 5% firms	0.658	x
	(0.002)	x
Assets per workers	0.018	0.078
	(0.001)	(0.0004)
Firm size (with 5-75 employees)	0.035	0.206
	(0.004)	(0.002)
Firm size (with above 75 employees)	0.230	0.524
	(0.020)	(0.012)
Use of computers	0.172	0.260
	(0.005)	(0.004)
Use of the Internet	0.132	0.090
	(0.006)	(0.004)
Participation in e-commerce	0.236	0.091
	(0.019)	(0.008)
Sub-sector dummy	Yes	Yes
Observations	114 531	472 815
Adjusted R^2	0.426	0.276

Note: The variable for assets per workers is growth for growth regression and a log value for level regression. Digital uptake variables are all binary. Initial gap in productivity level is calculated at the sub-sector level. Firms with top 5% in productivity level are excluded from the regressions. ( ) represents p-value.
Source: DOSM, Economic Census 2011 and 2016, and OECD calculations.

Because of the pandemic, many SMEs have become aware on the importance of digital adoption. Nevertheless, a number of SMEs are less digital-savvy, so that it is crucial to ensure that the digital divide among firms does not increase further. Moreover, the e-commerce participation rates of smaller firms were lower than of large firms, and the current situation is likely to remain the same despite the pandemic. Although overall profit margins would diminish because more e-commerce enhances competition between firms, it is still important to help the adoption of digital tools by SMEs. In this regard, many countries provide policy support to help SMEs accelerate their technology extension through financial or non-financial measures. For example, Colombia, where SMEs, including family-owned micro businesses, account for large part of employment, has developed digital strategies targeting SMEs, providing training and technical assistance and conducting information campaigns. The MiPyme Vive Digital plan succeeded in connecting 75% of SMEs to the Internet by 2018, achieving its target of 70% (OECD, 2019[30]).

Developing the digital skills of workers is particularly crucial. The government has provided for years a range of training and up-skilling programmes for basic digital skills, with strong emphasis on entrepreneurs (Record et al., 2018[18]). In 2015, a major programme, eUsahawan was launched together with eRezeki, to provide people in the bottom 40% income group with opportunities to develop basic digital skills for jobs, such as programming and translation. The eUsahawan programme is a training programme for entrepreneurs provided by public education institutions, targeting micro-entrepreneurs who lack digital knowledge. The number of trained people has steadily increased: in 2020, 73 017 people were trained, up from 3 108 in 2015. In addition, in 2020, the government launched the #MyDigitalWorkForce Movement that provides a training and hiring incentive to businesses in order to enhance digital skills of workers and the unemployed. Rapidly changing business digital technologies, even for basic ones, makes it difficult for individuals to learn by themselves. Therefore, these programmes are useful to shore up overall levels of digital knowledge among smaller firms, especially micro-sized firms.

Nevertheless, the government could further enhance the provision of digital skills training programmes for SME workers in addition to entrepreneurs, as SMEs often do not have sufficient resources to this end. Although the Human Resource Development Corporation (HRD Corp) provides programmes to train workers (see below), SMEs with less than ten workers are exempted from the HRD Corp levy, so that they are not eligible for these programmes unless they voluntarily contribute to the HRD Corp. Moreover, SMEs with less than five employees are not covered by the HRD Corp. Equipping SME employers more with digital skills could also facilitate the digitisation of SMEs and their workers. In this regard, the government has promoted awareness among SMEs to facilitate their digital adoption. For example, the Digital Productivity Nexus (DPN) was established in 2017 under the Malaysia Productivity Blueprint (MPB) to coordinate various programmes, including training, provided for SMEs in a range of sectors. Under the initiative, the Industry4WRD Readiness Assessment and the Productivity 1010 have been carried out, which provide consulting services for SMEs in the manufacturing and services sectors to improve their digital readiness. In addition, older firms are less inclined to invest in digital technologies, resulting in lower productivity and its growth. More analysis is needed, but this would be related to the age of employers who are less willing to catch up with new digital tools, although some new applications are easier to handle. Therefore, it would also be useful that some programmes could target older SMEs. In addition to basic digital skills, acquiring soft skills, such as communication skills, would become more important for workers to conduct businesses using digital tools (see below).

The participation of SMEs in e-commerce transactions should be promoted further in Malaysia. In many countries, business to consumer (B2C) sales have been increasing rapidly. In Malaysia, although the share of B2C sales in total e-commerce income has remained low, at 18% in 2017 for all firms, B2C sales have expanded faster (9% per year) than that of total e-commerce sales (6% per year) between 2015 and 2017 (Use of ICT and E-commerce by Establishment 2018, DOSM). Although not directly comparable, web-based B2C sales in EU countries account for 41% of total web sales in 2020, a large increase from 30% in 2015. B2C activities have thus a lot of room to expand further in Malaysia. Compared with other countries, Malaysia shows a significant gap between the shares of firms using computers or the Internet and the share of firms participating in e-commerce (Figure 16, Panel A). The participation of SMEs in e-commerce transaction could therefore expand rapidly with the right framework conditions.

The government has emphasised the participation of businesses in e-commerce. Under the National eCommerce Strategic Roadmap (NeSR) announced in 2016, capacity and capability development programmes have been provided with the collaboration of private e-commerce platforms to help SMEs participate in e-commerce businesses. Moreover, during the pandemic, SMEs have been encouraged to use e-commerce to sell their products online. The cumulative number of SMEs adopting e-commerce through this initiative has exceeded 490 000 (Malaysia Digital Economy Corporation), which is significant. Nevertheless, there would be still a large number of SMEs not adopting e-commerce, considering the recent increase of firms (from 648 000 in 2010 to 920 000 in 2015, Economic Census, DOSM). In addition, since 2020, the National Entrepreneurial Institute (INSKEN) has provided the Online Onboarding Coaching

(e-Board), a training programme for SMEs to help them use online platforms for marketing and other business activities. Together with the digitalisation of public services, encouraging e-commerce participation of SMEs would also be useful to facilitate the formalisation of these firms.

In addition, as businesses have accelerated their digital uptake, other necessary conditions to e-commerce would become more important, such as provision of high quality logistics services (see above), consumers' digital adaptation and SMEs' digital security profile. Particularly, the digital uptake of consumers and enabling financial infrastructure could play an important role. As few people are inclined to pay online, the government has stepped in (Record et al., 2018[18]). Before the pandemic, the government collaborated with private e-commerce companies to facilitate the use of e-payment among lower-income households (e-Tunai Rakyat initiative). Moreover, the government launched in August 2020, the Shop Malaysia Online initiative, which featured discount vouchers co-funded by both the government and e-commerce platforms for online purchases. About 8.2 million of consumers, 210 000 local suppliers and 22 e-commerce platforms participated in the programme, resulting in sales amounting to MYR 2 billion. Accordingly, the use of internet banking increased (62% of households in 2020 compared with 51% in 2019, ICT Use and Access by Individuals and households Survey Report 2020, DOSM), and online purchases of goods and services surged (54% in 2020 compared to 23% in 2019). While the number of people holding credit cards is still low (about 35% of population aged over 15 in 2020), almost similar to the level in 2016, users of network-based payment grew at annual 67% between 2016 and 2020 (Payment Statistics, Bank Negara Malaysia).

Due to rapid technological progress, use of digital technologies in businesses is expanding from basic communication tools, such as email and online transactions, to more advanced business tools, such as administration (e.g. enterprise resource planning (EPR)) and marketing (e.g. big data analyses) with also greater adoption of cloud computing services (see Annex). SMEs tend to be slow in adopting these new digital tools in Malaysia, like in many OECD countries (OECD, 2021[28]). Although not all SMEs need highly advanced digital technologies and there is a large difference between sectors, it is crucial for growing SMEs to absorb and adopt the latest technologies according to their readiness and business strategy so as to remain competitive. In Malaysia, the government has prepared matching grant schemes to provide incentive and financial support to SMEs and start-ups, which cover some advanced digital tools, such as EPR and digital marketing. During the pandemic, the government launched an additional outcome-based grant scheme for SME's digitalisation, #SMART Automation Grant (SAG). In addition, the i4.0 Accelerator Programme (ACE) and the Adoption of Digital Solutions (ADS) Programme offer customised digital solutions, training and handholding for SMEs and micro-enterprises respectively to help them adopt advanced digital technologies, such as automation. In this regard, a number of countries have similar schemes. For example, Germany's Go-Digital is a co-funding programme, through which SMEs can receive expert advice on IT security, online marketing and digital business processes (Federal Ministry for Economic Affairs and Energy, 2021[31]). Government funding covers 50% of consulting fees or a maximum EUR 1 100 per day up to 30 days in total.

Looking ahead, Malaysia's SME digitalisation policy needs to broaden its scope. A number of countries have expanded their support to SME digitalisation and now include important aspects, such as the protection of digital data and of intellectual property rights where SMEs often lack the necessary capabilities, in addition to the traditional schemes of financial and knowledge supports (OECD, 2021[28]). For example, in Spain, as part of a broader intellectual property strategy, the Spanish Patent and Trademark Office has carried out for years numerous initiatives of intellectual property promotion targeting SMEs and entrepreneurs, through organising seminars, workshops and courses (Spanish Patent and Trademark Office, 2020[32]). In this regard, the Malaysia Digital Economy Blueprint includes an awareness programme on intellectual property rights to facilitate businesses intellectual property registration. Enhancing data protection regulations would safeguard SMEs from abusive power of large online platforms (see below), but could also put disproportional burdens to SMEs as they have less internal capacity. This would call for support measures to strengthen SME capacity of data handling.

Greater openness of digital trade would benefit SMEs

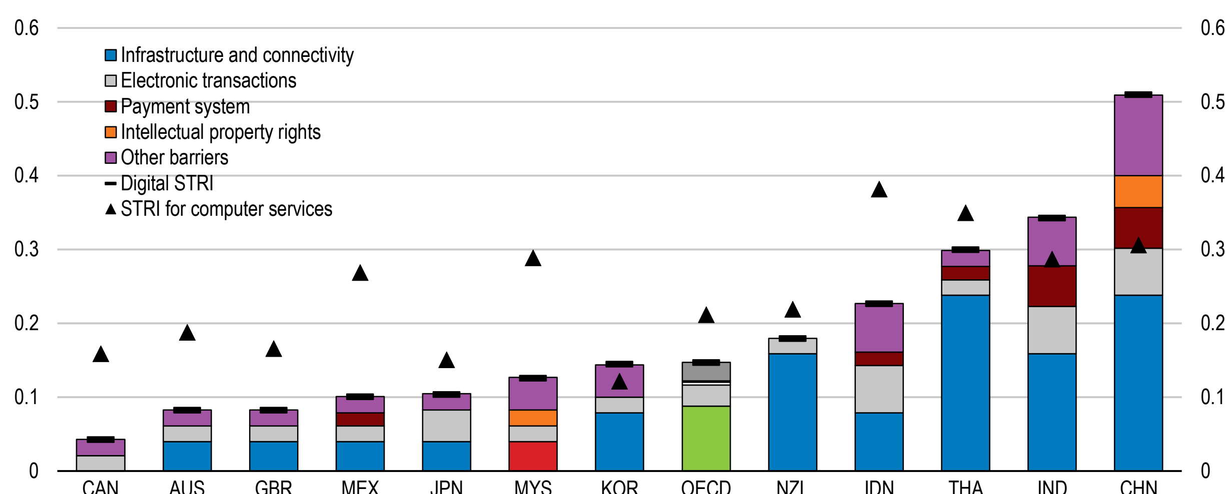
Digital technologies could allow SMEs easily to expand their business opportunities beyond national borders. Smaller firms in ASEAN countries, including those in Malaysia, are likely to engage in export businesses if they have web presence (López González, 2019[33]). Nevertheless, like in other countries, Malaysia's SMEs lag behind in exploring overseas markets through digital means. Although it grew in some sectors, such as agriculture, only 11 % of e-commerce income was from international transactions in 2017 slightly up from 10 % n 2015 (Economic Census 2016, Use of ICT and E-commerce by Establishment 2018, DOSM), and its share was smaller for SMEs (6% in 2015). In this regard, the government has supported SMEs aiming to go global. The National eCommerce Strategic Roadmap provides training programmes of cross-border e-commerce participation for SMEs.

In the digital era, trade involves complex regulatory frameworks related to electronic transactions (e.g. e-signature), secured payment systems, intellectual property rights and cross-border digital services (e.g. video streaming). The OECD Digital Services Trade Restrictiveness Index, which aims at capturing the soundness of these regulatory environments (Ferencz, 2019[34]), suggests that Malaysia has a more enabling environment than many other countries in the region for digital trade (Figure 17). Nevertheless, Malaysia could further improve its regulatory environment, in particular regulations affecting infrastructure and connectivity, data flows and electronic transactions. Domestic reforms and ambitious commitments in trade agreements to lower barriers and open markets could improve these regulatory frameworks further. Malaysia has been very active in contributing to regional and international regulatory harmonisation, such as APEC and ASEAN. It is essential to keep improving these regulatory environments, including for digital trade. Trade costs resulting from high trade barriers fall disproportionately on SMEs as complying with regulatory hurdles and diverging regulations across countries are more costly for smaller firms with limited resources. Indeed, on average, services trade barriers may represent as high as 14% additional tariff equivalent on small firms' cross-border exports compared to large firms (OECD, 2017[35]). Thus as barriers to services trade are eased, SMEs are first to gain.

Despite recent improvements, trade restrictions imposed on computer services essential to digital economy are still relatively high in Malaysia (Figure 17). Foreign firms are required to incorporate or register a branch in Malaysia to provide services, including computer and other digitally enabled services. The labour market test for the temporary entry of foreign intra-corporate transferees and the relatively short permitted period of stay for foreign specialists (12 months) constitute restrictive conditions to the movement of skilled labour. As the lack of skilled workers is one of the obstacles faced by Malaysian SMEs, reducing these barriers would foster their digitalisation. Malaysia introduced a law to protect personal data in 2010 (Personal Data Protection Act 2010). Nevertheless, data users cannot transfer personal data abroad except for specified jurisdictions, although there are some exemptions, such as the existence of users' consent. While no whitelist has yet been issued, the government has started the review of the Act, including the removal of this condition in view of facilitating e-commerce trade (Department of Personal Data Protection, 2020[36]). If implemented, the revision would help facilitate cross-border data flows, an essential element of the digital economy.

Figure 17. Malaysia is open to digital trade, but could be more open to computer services

Services Trade Restrictiveness Index ranging from 0 (open) to 1 (closed), 2020



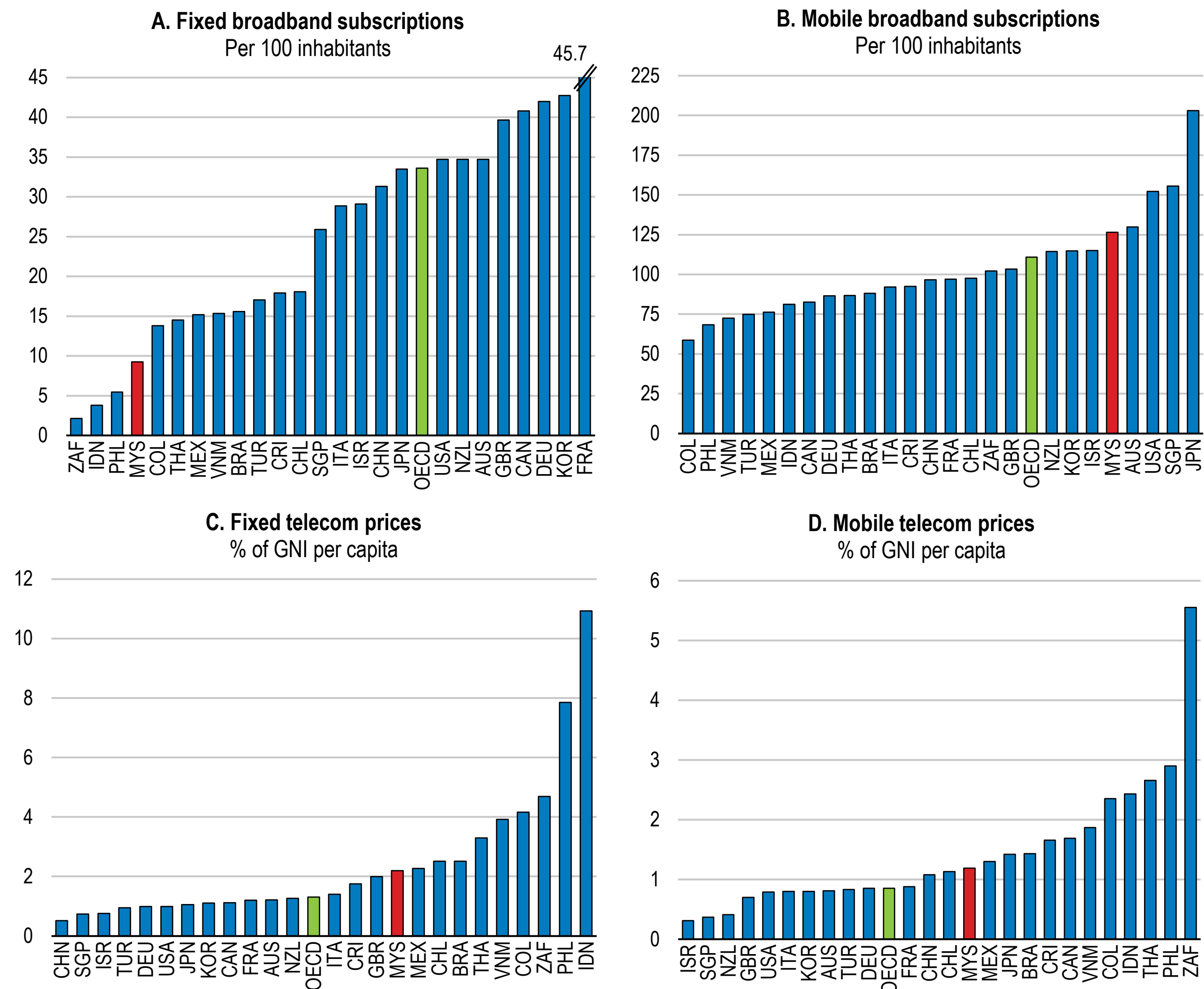
Source: OECD, Services Trade Restrictiveness Index database.

Stimulating private sector dynamism is crucial for better network services

Provision of high quality and affordable digital communication services, such as broadband, supported by better infrastructure is a prerequisite to business digitalisation, including teleworking. Malaysia made considerable progress in providing digital communication services. For example, to boost investment in broadband networks necessary to provide these services, a public-private partnership initiative with a state-owned enterprise, Telekom Malaysia, was set up in 2008. Nevertheless, while Malaysia is well advanced in the penetration of mobile broadband services and the prices of digital communication services have declined recently, it somewhat lags behind in fixed broadband (Figure 18). In this regard, amid the COVID-19 pandemic, the government has stepped up its efforts to enhance the infrastructure of digital networks. In August 2020, the government announced the Pelan Jalinan Digital Negara (JENDELA), aiming at an 83% coverage of fixed broadband with gigabit speed by 2022.

Figure 18. Malaysia is advanced in mobile broadband subscriptions, but less in fixed broadband

2020 or latest year available



Note: The fixed telecom price refers to a fixed-BB basket with 5 GB and the mobile telecom price refers to a high usage voice and data allowing up to 140 minutes of phone calls, 70 SMS and 1.5 GB data. 2019 data for the fixed and mobile broadband subscriptions and 2020 data for both fixed and mobile telecom prices.
Source: International Telecommunication Union.

StatLink https://stat.link/m1k72p

The rapid changes caused by emerging digital communication technologies have allowed competition to develop in telecommunication services markets (ITU, 2013[37]). In this light, for the past decades, although approaches differ, many countries have liberalised these markets (Figure 19). Competition has stimulated investment in new or upgraded infrastructure, resulting in the provision of quality services with lower prices (Record et al., 2018[18]). In Malaysia, a regulatory authority, the Malaysian Communications and Multimedia Commission (MCMC) was established in 1998 to regulate the communications and multimedia sectors and encourage competition. While reform of the mobile network market has brought substantial benefits (see above), the liberalisation of the fixed telecommunications market has relatively lagged behind, like in some other emerging market economies (Figure 19).

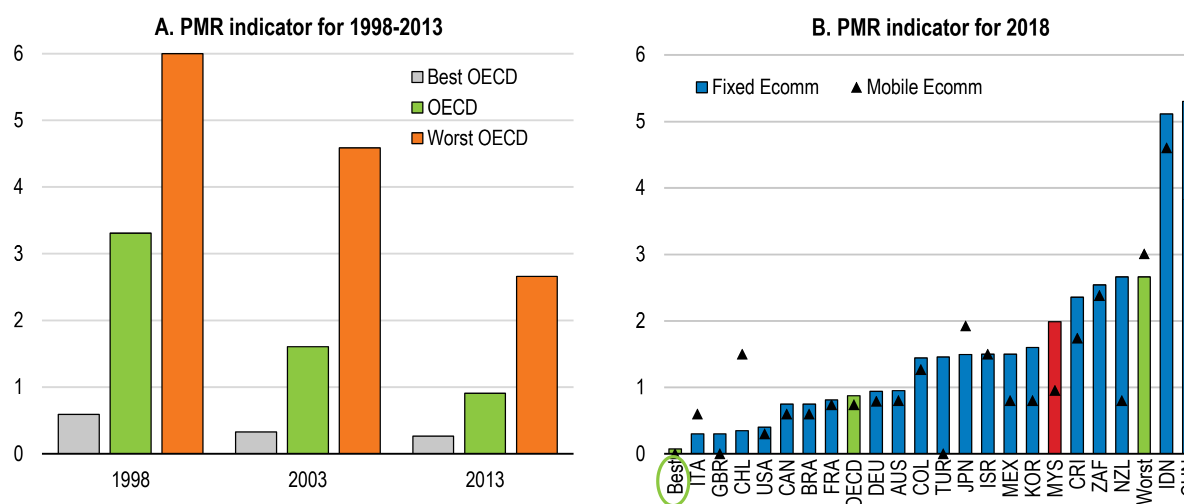
Nevertheless, reform has been implemented in phases. Although Telekom Malaysia is still vertically integrated, the Communication and Multimedia Act 1998 ensures that the provision of wholesale services is regulated to ensure access at non-discriminatory conditions to all competing operators (the retail market

has been liberalised). Vertically integrated operators, including Telekom Malaysia, have been required to maintain accounting separation between their wholesale and retail activities to ensure that no cross-subsidies are possible, as the latter could distort competition and favour the incumbent. The list of services and the terms and conditions, including prices, at which these services have to be offered, have been periodically reviewed by the MCMC.

In 2018, the government included for the first time regulated wholesale prices of high-speed fixed broadband services in the list of services to which maximum price caps apply (Mandatory Standard of Access Pricing: MSAP) for the period between 2018 and 2020. *Ex ante* price regulation is applicable to the wholesale services when the market is not sufficiently competitive (ITU, 2012[38]). In Malaysia, as the market for the provision of these services was dominated by Telekom Malaysia (around 90% in 2017, (World Bank, 2019[39])), this policy change had a significant impact. The share of Telekom Malaysia in the retail market declined due to the increased competition from other operators, such as Maxis, TIME and Celcom, and the entry of Digi into the market. The average retail price of high-speed plans (above 1Gbps) fell by more than 40% in 2018, and the average speed increased threefold by early 2019 (World Bank, 2019[40]). Moreover, new wholesale service providers participated in the market. Accordingly, the market share of Telekom Malaysia appears to be declining further, although precise information is not available.

Figure 19. Malaysia's telecom market liberalisation has been progressing

Indicator of regulations in the telecommunications sector, index scale of 0-6 from least to most restrictive



Note: Information used to calculate the 2018 PMR indicators is based on laws and regulation in place on 1 January 2018 or a later year (1 January 2020 for Malaysia). The 2018 PMR indicators are not strictly comparable to the previous ones. Best/worst represents the OECD best/worst performing country.
Source: OECD, Product Market Regulation database and OECD-WBG, Product Market Regulation database.

StatLink https://stat.link/9mrfk3

As the timely adoption of the Malaysia Digital Economy Blueprint is expected to have a strong effect on private investment, it is crucial for Malaysia to keep expanding its digital infrastructure. Looking forward, reliance on more competition would be more conducive to stimulating investment in Malaysia (OECD, 2008[41]) (ITU, 2012[38]). As the case of the price cap measure shows, there could be further room for improvement. In the European Union, regularly reviewing wholesale markets to determine if competition is effective and ensuring that access to wholesale services is provided on a non-discriminatory basis at prices that reflect the cost of an efficient operator when competition is not yet so, are the focal points of its policy approach to ensure the development of competitive markets for telecommunication services (European Union, 2002[42]) (European Union, 2002[43]). In the United States, amid the emergence of potentially

competitive similar services, such as cable TV networks, the abolition of the obligatory access to wholesale fibre networks (unbundling regulations) in the early 2000s boosted investment both by the incumbents and by new entrants (OECD, 2011[44]). In this regard, the Malaysia Digital Economy Blueprint states that the government aims to review, improve and streamline all relevant and state legislations and regulations related to digital infrastructure development (Economic Planning Unit, Prime Minister's Department, 2021[27]), which should be pursued as intended.

Online platforms continue to be an important avenue to SMEs' digitalisation

Online platforms are becoming important incentives of business digitalisation, and are growing exponentially. For example, the online retail marketplace transaction (gross merchandise value: GMV) of Sea, the largest e-commerce and digital payment platform in the region, grew at annual 87% between 2018 and 2020 from USD 3.4 to 11.9 billion (Annual Report, Sea Limited). The GMV for the delivery services of Grab, a ride-hailing and delivery services platform initially founded in Malaysia, surged by 203% annually from USD 0.6 to 5.5 billion during the same period (Investor Presentation 2021, Grab). Particularly, compared with other forms, such as firms' own websites or email, online platforms provide a powerful tool for SMEs, which have fewer resources compared with larger firms, allowing them to connect with a large customer base at low cost. SMEs selling online tend to rely on online platforms more than large firms (OECD, 2019[45]). Moreover, the importance of some online platforms, such as platforms for deliveries, has increased further during the pandemic due to the physical restrictions.

While online platforms benefit the economy, they also pose some new challenges to the current policy frameworks, particularly concerning competition policy (Box 6), and a number of countries are considering the revamping of their competition policy. These challenges are even more complicated in emerging market economies, including Malaysia. The abusive behaviour of online platforms could harm not only consumers but also SMEs and self-employed workers, who have fewer choices to access final consumers and less control over the collection and use of their sensitive data. This concern would be exacerbated in a country where SMEs, particularly micro-sized firms, and self-employed are prevalent, like in Malaysia. SMEs using a dominant online platform would be faced with high costs when switching between online platforms, or even could not have alternative options. This also means that they would also find it difficult to use multiple online platforms at the same time (multi-homing) due to lock-ins. Moreover, in addition to the lack of digital skills and adaptability to new business models, SMEs would have difficulties in dealing with the fee structure of online platforms and in sharing of sensitive business data. Other underdeveloped regulations, such as data and consumer protection, would add more challenges.

The online platform business is still nascent in Southeast Asia, despite its rapid expansion. For example, Amazon's market share in the US online retail market is deemed to be over 50% (Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary, 2020[46]). Alibaba Group, a Chinese e-commerce giant, had 726 million retail customers in China for 2020, 52% of its population (Annual Report, Alibaba Group Holding Limited). On the other hand, in the case of Lazada, an e-commerce platform popular in Malaysia and an international online marketplace run by Alibaba Group, the number of retail customers was over 80 million in 2020 (2020 Investor Day, Lazada Group), 14% of the population for the ASEAN6 countries. Therefore, it is crucial to strike the right balance between nurturing the online platform business and helping consumers and businesses, notably SMEs. Giving SMEs and consumers freedom to choose or to switch between different services is crucial, which calls for securing competitive markets for online platform businesses. Moreover, since Malaysia's digital policy aims at promoting more e-commerce participation of SMEs, securing competitive online platform markets would benefit both online platform business and SMEs.

Box 6. New policy challenges posed by online platforms

Digital technologies bring about a number of emerging issues for competition policy, such as collusive behaviour by artificial intelligence. *Inter alia*, some major issues are pertaining to online platforms.

An online platform can be defined as a digital service that facilitates interactions between two or more different sets of users (firms or individuals) via the Internet. Online platforms cover a range of services from an online marketplace to an open innovation lab, and are becoming a linchpin of the digital economy. Online platforms provide multiple benefits through economies of scale and scope, notably a large customer base and synergy effects connecting different markets, the latter of which would call for cross-cutting liberalisation or deregulation in broader sectors to stimulate innovation, such as Fintech.

Nevertheless, online platforms pose some new challenges for competition policy. Some recently highlighted issues are:

- **Criteria for defining relevant markets and assessing market power**: As online platforms have multi-sided markets, i.e. sell-side and buy-side markets, some traditional gauges for competition, such as consumer surplus and market shares, could not be applicable straightforwardly. In order to expand its customer base in one market, a platform could maximise the user benefits of one market (e.g. providing consumers with free delivery services) to the detriment of the users in another market (e.g. firms participating in the online marketplace).
- **Competition for online platform markets**: Because of the winner-take-all or -almost nature of the online platform business, costs to switch to other online platforms become higher and a few online platforms would be likely to become dominant in the markets. Moreover, a dominant online platform may carry out acquisition of growing start-ups (not necessarily in the same market), which it considers potential threats. This would enhance the dominant position of the online platform.
- **Competition on online platforms**: On a marketplace provided by an online platform, the online platform could act both as player and as rule maker. This would give the online platform a position of great bargaining power towards its business users, which the online platform could easily abuse.
- **Access to personal data**: The larger the amount of personal data are, the more useful the data become. While collecting a large set of data is difficult for new entrants, this would give the incumbent great advantage, enhancing its dominant position further. Moreover, the superior position of the online platforms would allow them to collect the personal data of their users (consumers or firms) more easily, or in an exploitive manner in some cases, further enhancing their data power.

While competition policy would play an important role and need to be enhanced, other regulatory schemes, such as the measures to promote the transparency of dominant online platforms' business practices and the regulations on data protection and consumer protection, could also need to complement competition policy. Competition policy is more case-specific and focuses on *ex post* intervention. On the other hand, the other regulatory schemes are designed to pre-determine the behaviour of market participants.

Source: (OECD, 2019[47]), (Crémer, De Montjoye and Schweitzer, 2018[48]), (Krämer and Schnurr, 2018[49]).

In Malaysia, despite its recent establishment in 2011, the Malaysia Competition Commission (MyCC) has actively overseen online platforms. MyCC has taken several provisional or final actions against large online platforms, such as Grab in 2019 (an online ride-hailing platform) for the alleged abuse of its dominant position and Dagang Net (a monopolistic firm for online trade facilitation services), the latter of which was

considered to have abused its dominant positions in the relevant markets. Nevertheless, Malaysia's competition policy framework needs to be further enhanced. The Competition Act 2010 prohibits abuse of dominance and cartels, and MyCC covers all sector except the aviation, telecommunications and energy sectors under the jurisdiction of specific laws. Nevertheless, the Competition Act has no provision on the *ex ante* scrutiny of mergers and acquisitions. Providing the competition authorities with the power to assess the impact on competition of mergers above some minimum thresholds before these mergers are authorised would ensure that Malaysia benefits from a policy tool essential to ensure that markets remain contestable and competitive. This is particularly crucial in the current economic environment, where a few online platforms have shown exponential growth across numerous markets and economic sectors.

In addition, it is also essential to strengthen other regulations complementary to each other with competition policy framework. Particularly, measures to ensure the transparency of the business practices of powerful online platforms could also be introduced. The European Union (in 2020) and Japan (in 2021) introduced regulations that require large online platforms to disclose terms and conditions of the services they offer to users and to provide prior notice of amendments to these terms and conditions. These online platforms must also provide transparency on the scope, nature and conditions of their access and use of data, including the data generated by business users through their use of the platform services, and disclose information on how they determine rankings (where relevant). In terms of data protection, in Malaysia, the government has started reviewing the Personal Data Protection Act 2010 concerning data portability and users' consent, which the European Union's General Data Protection Regulation has addressed (Department of Personal Data Protection, 2020[36]). Strengthening consumer protection related to digital transactions would benefit not only individuals but also SMEs, including self-employed workers. In Malaysia, the Consumer Protection Act 1999 was amended in 2007 to include e-commerce transactions, followed by the enforcement of the Consumer Protection Regulations for Electronic Trade Transactions in 2012. These two regulations aim to prevent deceptive and misleading or fraudulent commercial practices, while also covering online disclosures (i.e. online information provision to consumers), data protection and dispute resolution. Nevertheless, there is still room for improvement. For example, currently no scheme exists for creditors' liability claims for breaches by sellers, which is essential for e-commerce transactions. In this regard, OECD recommendations on consumer protection in e-commerce can provide useful guidance to improve overall policy frameworks (OECD, 2016[50]).

Moreover, as some large online platforms have expand their business in other Southeast Asian countries, international, particularly regional, policy cooperation and coordination, not only on competition enforcement, but also in other related policy areas, is going to become more important. Coherent frameworks at the regional level could also facilitate regional trade and help ensure larger markets for local companies, including SMEs. Some development has been seen. For example, recently, ASEAN issued policy guidelines for consumer protection in online businesses (ASEAN, 2020[51]), which is a policy area that is rather underdeveloped in ASEAN countries. Nevertheless, regional arrangements could be further enhanced, as policy ambiguity and incoherence among countries would also be an obstacle to the further evolution of online platform businesses in the region. In the case of Grab's acquisition of the Southeast Asia operations of Uber (a ride-hailing online platform) in 2018, the reactions of the competition authorities varied from country to country, resulting in the imposition of interim measures or remedies in some countries (not in Malaysia) (UNCTAD, 2019[52]). In this regard, in addition to policy dialogues, participating in trade agreements that pursue regulatory harmonisation would also be useful.

Preventing the widening gaps is utmost important

Emerging new technologies further change the form of labour. Because of new technologies, while flexible work arrangement becomes possible for those who can telework (see below), precarious jobs – the so-called platform workers or gig workers – have also increased, which calls for policy interventions to prevent the widening economic gaps. Platform workers have received increasing policy attention in many countries. Platform workers can be classified as self-employed, but have limited control over their work, like

employees (Lane, 2020[53]). Although the share is still relatively small, the number of these workers was on a rising trajectory even before the pandemic (OECD, 2018[54]), and has continued increasing during the pandemic. Malaysia is not an exception. Previous survey by the Department of Statistics Malaysia suggests that, in 2018, 0.6 million (3.8% of the total employed, of which 54% are male) could be considered platform workers ("gig workers") (Nurfarahin, Noraliza and Nur Layali, 2020[55]). Although a direct comparison is difficult due to the lack of a standardised definition, the share of platform workers is likely to be higher in Malaysia than a 0.5-3.0% share of similar types of workers in some OECD countries (OECD, 2018[54]).

Some aspects of these new jobs are attractive. For example, flexible work arrangement could encourage more people to find jobs, who would otherwise stay away from the labour market. In Southeast Asian countries, online platforms have catalysed the transferring of a considerable number of drivers to deliverers during the pandemic, alleviating a job losing risk of these workers (Grab Taxi Holdings Pte. Ltd, 2020[56]). Nevertheless, platform workers are usually paid less, and are often out of formal social protection system. There is also a power imbalance between online platforms and platform workers. Digitalisation would further increase these types of workers, which could widen gaps in income and wealth among people, affecting their well-being. Therefore, strengthening policy supports, including social protection, is utmost important.

Although approaches vary between countries due to the difference in existing policies for the self-employed, some policy orientation has been evolving (Lane, 2020[53]). One way is to improve working conditions of platform workers. This includes establishing a new category of employment status for dependent self-employed workers, including platform workers, or providing platform workers with an employment status similar to that of employees. Normally, collective bargaining rights are not granted to the self-employed, as in the case of Malaysia. Nevertheless, in some European countries, independent unions already act as a *de facto* body for collective bargaining, and case-by-case considerations have been given. New York City has applied a minimum wage to platform workers. In the case of the United Kingdom, the Supreme Court gave a ruling in 2021, under which drivers working for Uber qualify for workers' rights, including the national minimum wage and paid annual leave, which are more relevant to employees (The Supreme Court, 2021[57]). As platform workers are typically considered as self-employed, enhancing policies to improve the social protection of the self-employed would be useful, and some of these measures could target platform workers. Strengthening the enforcement of existing regulations (tax payment, social security contribution and labour regulations) is also be crucial.

In Malaysia, the social security protection of the self-employed has evolved in past years (see Chapter 1 of (OECD, 2021[6])). Since its introduction in 2017, the Self-Employment Social Security Scheme (SPS-SOCSO) has been compulsory for the self-employed in the passenger transportation sector, which covers e-hailing drivers, in addition to taxi and bus drivers. The occupational coverage has been expanded progressively. Another scheme (i-Saraan) was also introduced in 2018 to encourage self-employed workers to participate in the pension fund, the Employees Provident Fund. On top of this, during the pandemic, the government has reacted fast, focusing on platform workers (gig workers). Amid the increasing accident risk of deliverers, in the Short-Term Economic Recovery Plan (PENJANA) announced in June 2020, the government prepared matching grants to encourage these platform workers to participate in the SPS-SOCSO (Penjana Gig). In this scheme, the government subsidised 70% of contribution, while platform workers or online platforms contributed the rest 30%. In the 2021 Budget, the Penjana Gig programme has been replaced with a new programme, an SPS Lindung targeting delivery riders, in which the government contributes 100% (until December 2021). Nevertheless, these measures introduced during the pandemic are temporary.

Looking ahead, while these efforts have been useful, a more comprehensive approach would be needed in Malaysia, as is stated in the Malaysia Digital Economy Blueprint. For Southeast Asian countries, at online platform businesses are still developing and will help their economic advancement, pursuing better collaboration with online platforms would also be important. In this regard, the first priority for Malaysia

would be to strengthen the social protection schemes, including pension, to expand its coverage of the self-employed (see Chapter 1 of (OECD, 2021[6])). Encouraging the registration of more self-employed workers into social protection system with the help of online platforms could also help reduce economic informality. In Estonia, the tax authorities pre-fill tax forms of drivers by obtaining financial transaction information from passenger transport platforms, which also reduces the administrative burden for drivers.

As platform workers are more likely to be out of the labour force easily or become informal sector workers, in addition to providing training opportunities, introducing universal social protection covering non-workers could be considered in the medium term. For up- and re-skilling programmes, the Global Online Workforce (GLOW), was introduced in 2018 to train people, particularly the unemployed and graduates who cannot find their jobs, for digital skills necessary to become skilled freelancers. Nearly 55 000 people have been trained. In addition, a range of digital skills programmes, which also cover or target unemployed people or job seekers, have been provided through the MyFutureJob portal launched in 2020, such as Digital Skills for Tomorrow Jobs and MySTEP Program 2021. Nevertheless, while Malaysia has a universal healthcare system, currently the pension schemes do not cover all private sector workers as well as non-workers. A voluntary defined contribution scheme, the Private Retirement Schemes, was launched in 2012 with tax relief to contributors, but despite the recent rapid increase, the number of contributor was 416 913, 4% of working-age population in 2018 (301 279 in 2017) (Press release, Private Pension Administrator Malaysia, 15 January 2019). In this regard, it would be useful to consider a matching grant scheme, adopted in some other emerging market economies, to expand the coverage of pension.

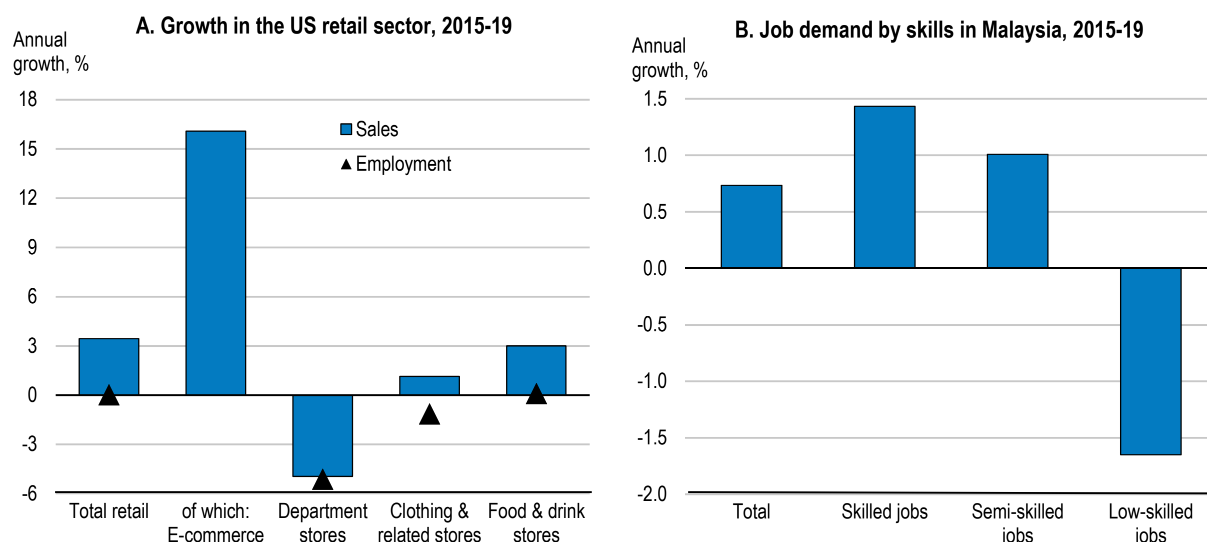
The pandemic has accelerated the transition to new forms of working

The COVID-19 crisis is accelerating the transition to new working arrangements in Malaysia and other countries. Despite the stagnant labour market, demand for skills specialised in new technologies is buoyant. The crisis has also brought about a huge disruption in the way of working – teleworking has been prevalent at unprecedented levels during the lockdown periods, as Malaysia has imposed severe stay-at-home restrictions. Once the pandemic is contained, the use of teleworking will decline, but more businesses and workers are getting used to it. Therefore, it is essential for Malaysia to harness the potential of teleworking in order to improve the well-being of workers and unleash their innovative capacity.

Demand for higher skills will further intensify after the pandemic

Emerging new technologies already changed working arrangements before the pandemic. In the US retail sector, the shift from bricks-and-mortar to online sale has reduced labour demand in some sub-sectors mostly relying on physical facilities (Figure 20), but it increased demand for skills, such as data analysts or supporting services jobs for e-commerce. Automation also reduces the demand for low-skill workers. In emerging market economies in Asia, including Malaysia, together with rising costs of labour, the availability of new technologies has reduced the demand for routine manual jobs among factory workers, while creating new demand for highly skilled jobs in the same manufacturing sector (Asian Development Bank, 2018[58]). Amid these new emerging technologies, Malaysia has undergone the transformation of its industrial structure from manufacturing to services. Accordingly, demand for skilled workers grew faster than for semi- or low-skilled workers in the past years (Figure 20), although faster growth in the supply of tertiary graduates than demand has caused some mismatch in the labour market.

Figure 20. Technology advance has changed the landscape of jobs

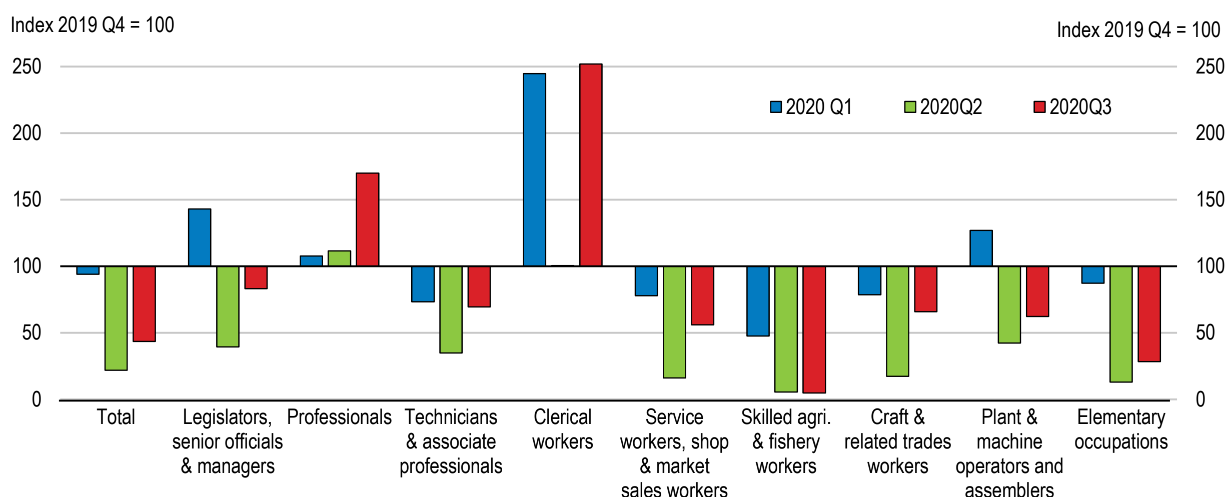


Note: DOSM classifies jobs offered according to their occupational categories. Skilled jobs are composed of managers, professionals, and technicians and associate professionals. Semi-skilled jobs cover clerical support workers, service and sales workers, skilled agricultural, forestry, livestock and fishery workers, craft and related trades workers, and plant and machine operators and assemblers. Low-skilled jobs correspond to elementary occupations.
Source: US Census Bureau, Annual Retail Trade Survey; US Bureau of Labour Statistics, Current Employment Statistics; DOSM, Quarterly Employment Statistics.

StatLink https://stat.link/f6z2ak

Figure 21. Demand for skilled jobs was robust during the pandemic

Job vacancies by occupations



Source: Bank Negara Malaysia, Monthly Highlights and Statistics in January 2021, Table 3.5.12.

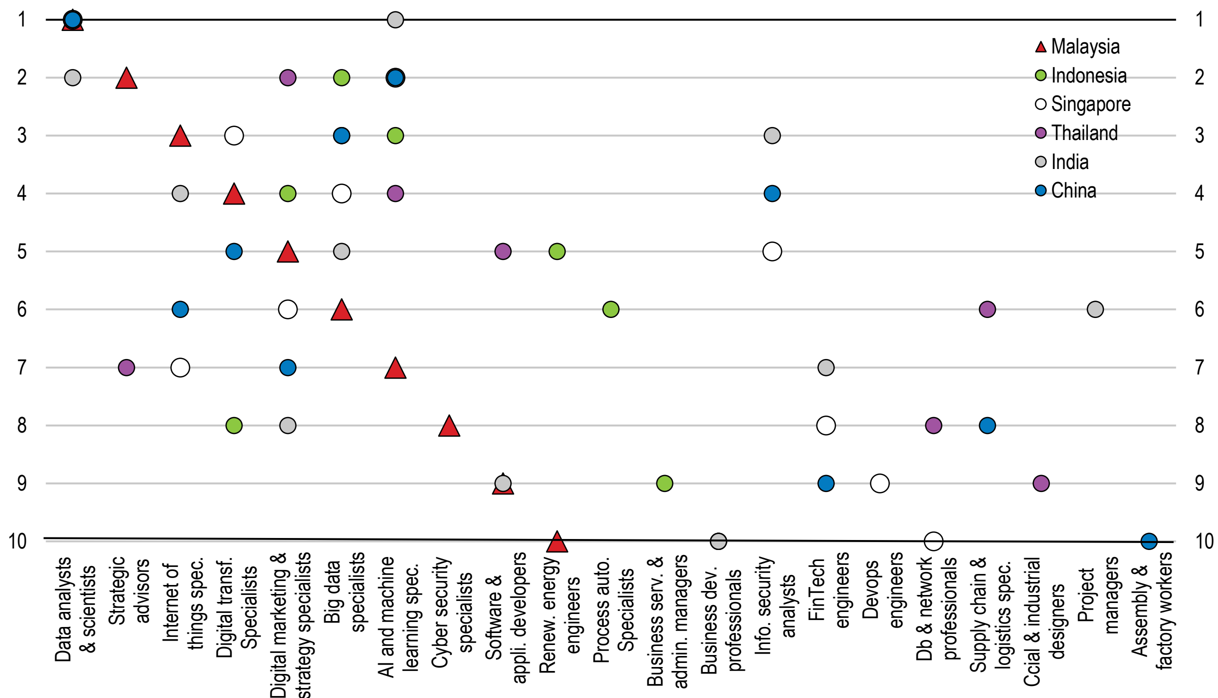
StatLink https://stat.link/3ob75p

Strong demand for skilled jobs has not receded during the pandemic, and it is likely to increase further once the sanitary situation normalises. In Malaysia, even in Q2 and Q3 2020, when the COVID-19 pandemic was most severe, the demand for skilled workers was less affected than for other occupations, except for clerical workers, who are semi-skilled and saw strongest demand partly due to temporary

reasons related to the pandemic, such as demand for the medical and logistics services (Figure 21, above). Looking ahead, some employers in Southeast Asian countries foresee a more drastic shift in job demand (Figure 22). While some jobs requiring more advanced knowledge and skills in information technologies, such as data analysts, are expected to increase in the coming years, factory engineers and logistics specialists would see less demand.

Figure 22. Demand for high digital skills would continue to increase

Jobs expected to be in increasing demand by 2025, score by decreasing order of importance



Note: Survey respondents are senior executives in charge of human resources, strategy and innovation departments of large companies with more than 100 employees.
Source: World Economic Forum (2020), The Future of Jobs Report 2020, October, http://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf.

StatLink https://stat.link/muc7gx

The faster shift in job demand calls for policy intervention to equip workers with digital skills. In Malaysia, the government introduced a range of policy measures to upgrade workers' skills even before the pandemic. Its notable scheme, the Human Resource Development Corporation (HRD Corp), to which employers contribute, provides training opportunities for their workers through private contractors, including those to improve digital skills. A grant is provided for employers to organise in-house or external training courses (Skim Bantuan Latihan (SBL)). Employers undertaking digital transformation can apply for the Purchase of Training Equipment and Setting up of Training Room scheme (ALAT), which subsidises them for training facilities and equipment. In addition to the HRD Corp programmes, eRezeki provides people from the bottom 40% income group with opportunities to develop basic digital skills, and eUsahawan provides training courses for entrepreneurs through community centres, public education institutions and an online learning platform (Go-eCommerce) (see above). In June 2020, the government adopted the National Economic Recovery Plan (PENJANA) to revitalise economic growth. Under PENJANA, a number of up- and re-skilling programmes have been introduced by the HRD Corp. Among them, the Industrial Revolution 4.0 (IReV 4.0) specifically aims to support employers in training their workers for digital skills, although the uptake is still relatively small (3 259 as of March 2021).

In addition to acquiring or updating digital knowledge, improving cognitive and non-cognitive skills would become more important in the age of the rapidly changing digital technologies. These skills include a range of soft skills, from critical thinking to social and emotional skills (OECD, 2019[59]). In Malaysia, a significant share of employers expressed the difficulties in finding skilled workers amid the emerging importance of these cognitive skills, such as problem-solving, analytical and critical thinking skills and creativity (OECD, 2019[60]). While soft skills can be enhanced through curricular and extra-curricular activities in the education system, these skills can also be developed further during working life. Therefore, lifelong learning policies need to include the development programmes for these skills, such as oral communication, leadership and mentoring programmes for young workers. In Malaysia, the HRD Corp has also developed the assessment of necessary skills and competencies for detailed occupation categories, the Industrial Skills Framework (IndSF), with the aim of helping employers, employee and training providers understand the latest development in skills in need. The skill sets described in the IndSF cover a range of soft skills, such as "social intelligence and ethics" and "learning to learn", expected to become important for each occupation. This provides good guidance to all stakeholders, including training providers, and could be updated regularly.

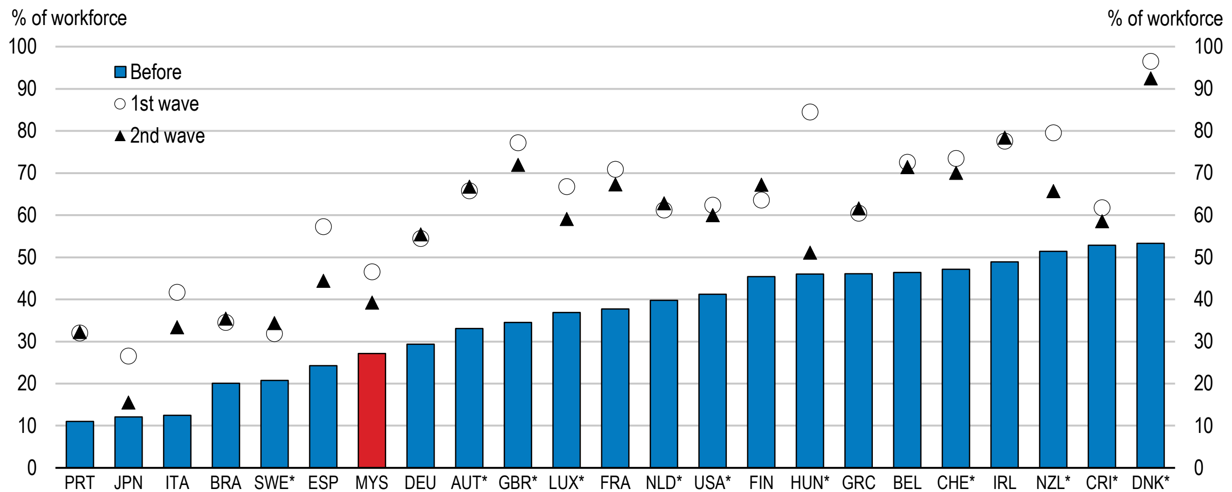
Preparing a better working environment is crucial – lessons from forced teleworking

Teleworking can be defined as working remotely by using ICT tools, but not in office premises, irrespective of its regularity. Teleworking is one form of technology influence on job, i.e. the future of work. Although the exact benefits of teleworking during and post pandemic have not been qualified yet, previous work showed that productivity can increase under certain conditions and for certain activities (Bloom et al., 2015[61]). In the United Kingdom, workers found that their productivity improved with teleworking during the pandemic (Taneja, Mizen and Bloom, 2021[62]), while in Japan employers reported the decline of productivity (Morikawa, 2021[63]). Such differences across countries suggest the importance of conditional factors to maximise the benefits from teleworking, such as ICT infrastructure, managerial styles and working culture. Indeed, teleworking could boost and worker welfare if well organised (OECD, 2020[64]). On one hand, teleworking could improve worker satisfaction and efficiency, raising firm performance. Teleworking can also contribute to overall cost reductions. On the other hand, teleworking could decrease worker efficiency through reduced opportunities of knowledge exchange and experience sharing at in-person meetings, which are more effective than remote or online communication. Teleworking could also reduce the efficacy of managerial oversight. The pandemic was an exceptional occasion on which regular teleworking was adopted across the economy – a kind of large-scale social experiment. The experience of teleworking during the pandemic, although one-off, shows some weaknesses in the current working and digital environments in Malaysia, but also reveals high potential of its technology adaptability. Therefore, it would be useful to derive policy lessons from the experience during the pandemic.

Similar to some other countries, before the pandemic, teleworking was less prevalent in Malaysia. According to a Telework Survey (the Survey) conducted for this report, in cooperation with the OECD Global Forum on Productivity and the Malaysia Productivity Corporation, around 30% of workers teleworked regularly before the pandemic among surveyed firms (Box 7) (Figure 23). Responding to the first large outbreak of COVID-19, the government imposed in March 2020 the Movement Control Order (MCO), which restricted overall mobility of people with a strict stay-at-home restriction. Nearly additional 20% of workers in Malaysia were forced to work from home during the initial wave of the pandemic, according to firms that responded to the Survey (Figure 23), which is similar to European countries, where larger sample surveys also shows the increased in the share of teleworking workers by 10% to 30% during the pandemic (Ker, Montagnier and Spiezia, 2021[65]). After flattening the first wave of infections, the restrictions were relaxed in mid-2020. Since late 2020, because of the resurgence of the outbreak, the restrictions have been gradually tightened in a wider area of the country, although more targeted in areas and in sectors than in early 2020. Accordingly, a still large but less significant share of workers (additional 10% of workforce compared with the pre-pandemic level) were forced to work from home once again in early 2021. The similar trend was observed from other data sources (Figure 24).

Figure 23. The pandemic has forced many workers to telework

Share of regular teleworkers

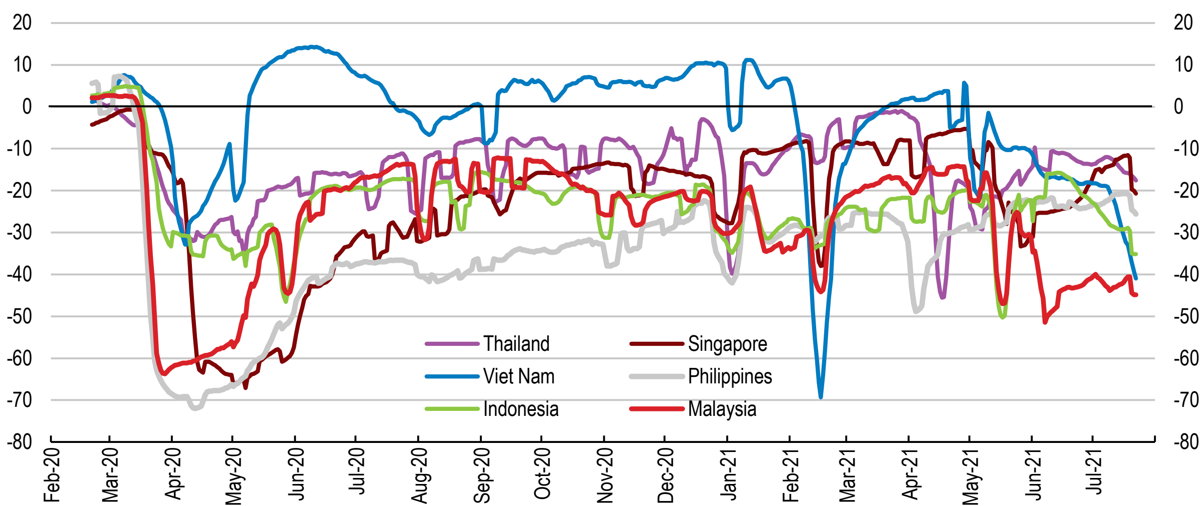


Note: Data show the percentage of respondents answering that they regularly telework (at least once a week). * denotes countries with less than 50 respondents. The results for other countries than Malaysia are preliminary.
Source: Telework Survey of the OECD Global Forum on Productivity. For more details of the survey, see (Criscuolo et al., 2021[66]).

StatLink https://stat.link/k680ge

Figure 24. Southeast Asian countries have experienced work from home during the pandemic

Percentage change of movements to workplaces from baseline, average of past 7 days



Note: The baseline is the median value, for the corresponding day of the week, during the five-week period January 3-February 6, 2020.
Source: Google LLC, "Google COVID-19 Community Mobility Reports", google.com/covid19/mobility.

StatLink https://stat.link/dqb91k

Taking into account the strict restrictions adopted in Malaysia (see Chapter 1 of (OECD, 2021[6])), the share of teleworking workers appears relatively small. Even during the first wave in early 2020, some essential businesses, such as financial institutions were allowed to open. The gap between the stringency of the restrictions and the prevalence of teleworking also suggests that some workers could not work from home

because of constraints, such as the lack of necessary digital facilities, skills of either employers or employees, or any other conditions, such as the lack of space and being merely less prepared for teleworking. Moreover, given the small representation of SMEs in the Survey respondents, the actual share of teleworkers would be smaller than these numbers. Nevertheless, the protracted public health crisis would change people's behaviour and preference more rapidly than anticipated from the past trends or shown by the Survey results. From mid-May 2021, because of the intensified infections, the government re-imposed stricter restrictions on the mobility of people (the Movement Control Order 3.0), under which 40% of private sector employees and 80% of government employees must work from home (the Survey does not cover this period). In addition, the stay-at-home measure resumed from the beginning of June 2021. While restrictions for compulsory teleworking would inevitably facilitate the adjustment and adaptation in the business sector, the findings from the Survey would provide useful information for policy making.

Box 7. Telework Survey of the OECD Global Forum on Productivity for Malaysia

The OECD Global Forum on Productivity carried out a teleworking survey in Malaysia from March to May 2021, with the help of the Malaysia Productivity Corporation, a statutory body under the Ministry of International Trade and Industry. As the same surveys were conducted in other countries, thanks to the support of the Business and Industry Advisory Committee (BIAC) and the Trade Union Advisory Committee (TUAC) to the OECD, OECD networks of employer and employee associations, its result provides useful information for cross-country comparison. The Survey asked the use of regular teleworking before, during and after the pandemic, its perception, and obstacles to teleworking. Self-employed workers are not included.

The survey questionnaire was sent out to managers and workers of firms through business associations and labour unions in Malaysia, and received high participation rates (128 respondents for employers and 151 for employees) (Table 2). Although detailed profiles of most firms that respondents belong to are not obtained, the share of SMEs, which account for a large part of businesses in Malaysia, would be relatively small in the Survey.

The Survey was carried out to collect illustrative evidence and was not meant to cover a large representative sample of the whole population of firms. Its primary usefulness lies in uncovering patterns related to the opinions and experiences of telework during the pandemic and the expectations for the future and how these vary for different groups involved (managers and workers). Alternative sources ((Criscuolo et al., 2021[66]), (Ker, Montagnier and Spiezia, 2021[65]) and (OECD, 2021[67])) cover more firms, but they mostly focus on OECD countries and hence do not include Malaysia.

Table 2. Composition of respondents

	Manager survey	Worker survey
Total respondents	128	151
Firm size (employees), share		
- 75	27%	12%
76 – 200	10%	3%
201 -	13%	35%
Unknown	51%	50%

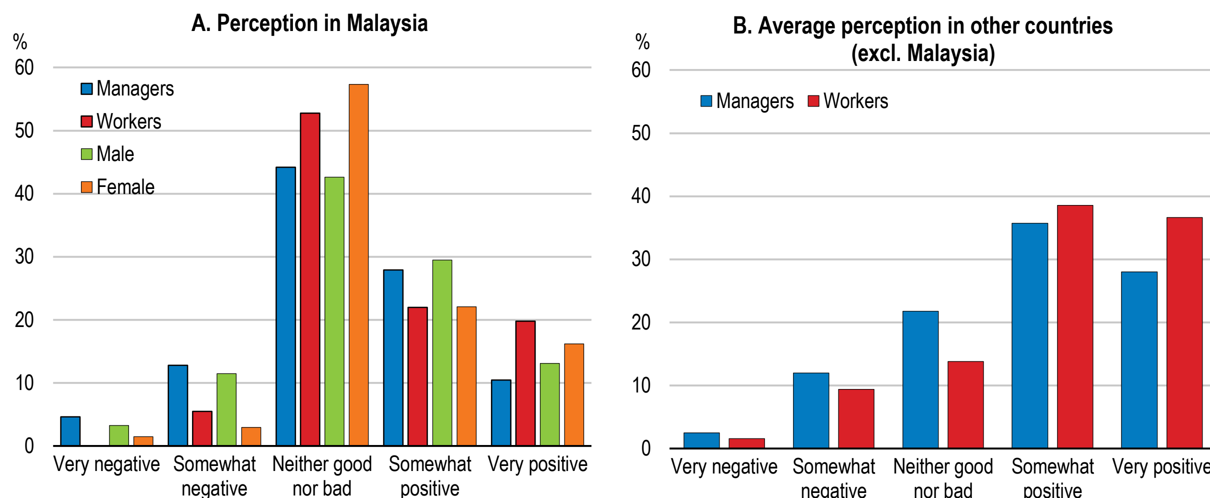
Source: Telework Survey of the OECD Global Forum on Productivity. For more details of the survey, see (Criscuolo et al., 2021[66]).

Preparing enabling conditions for teleworking is important after the pandemic

According to the Survey, while around 20% of employees have a very positive view on teleworking, higher than that of employers, a large share of the Malaysian employees and employers consider the teleworking experience during the pandemic as neither positive nor negative (Figure 25). This contrasts with the perception in other countries, where on average 60-75% of employers and employees conceive teleworking somewhat or very positive. While it is difficult to detect the cause of this difference, as teleworking was less prevalent in Malaysia before the pandemic, to some extent, people were likely to be less used to teleworking than in other countries. In addition, some other conditions specific to the pandemic but not related to teleworking itself, such as, the severe restrictions on daily living (e.g. people were not allowed to go out freely to purchase staples), would affect people’s general perception. Nevertheless, only a small share of employers deem teleworking negative or very negative, and that of employees is much smaller, which implies that there are some trade-offs and un-met conditions for teleworking. This suggests that if these obstacles to teleworking were removed, people’s perception could improve.

While a certain share of male employers and employees found that teleworking was a negative experience, more females considered it neutral, and less female employers and employees found it negative or very negative (Figure 25). Nevertheless, the perception difference is rather small between males and females. This implies that there would be more universal reasons behind these perceptions, such as the lack of digital skills and broader work conditions, including labour regulations, working culture or housing environments (e.g. less working space at home). In European countries, these conditions would have some influence on the difference in the prevalence of teleworking even before the pandemic (Milasi, González-Vázquez and Fernández-Macías, 2021[68]).

Figure 25. A number of managers and workers have positive views on teleworking



Note: Percentage of respondents replying to a question on telework experience during the pandemic from the perspective of "overall performance of the company" for managers and "work-life balance and wellbeing" for workers.
Source: Telework Survey of the OECD Global Forum on Productivity. For more details of the survey, see (Criscuolo et al., 2021[66]).

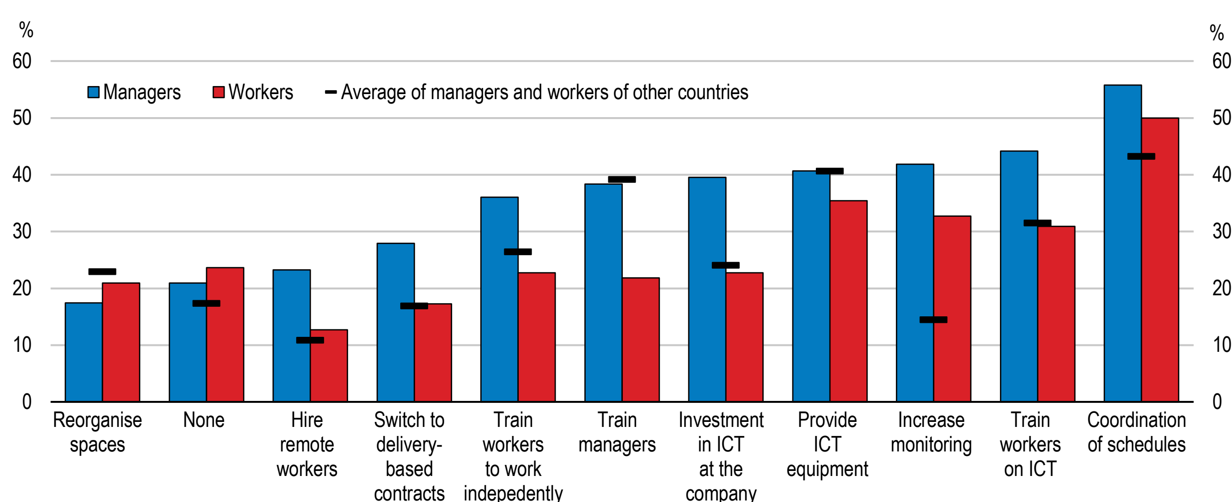
https://stat.link/ys41tz

As a number of employers considered teleworking during the pandemic as a negative experience for their businesses, it would be useful to look into more details. The Survey respondents expressed that, like other countries, in Malaysia, schedule coordination is considered as one of the major difficulties in organising teleworking, followed by the lack of digital equipment and skills among employees (Figure 26). Particularly, although the shares of employees encountered these difficulties are broadly smaller than those of

employers, the gap is smaller for the provision of digital equipment, which implies that this could be one of the most important bottlenecks for teleworking in Malaysia. Moreover, compared with other countries and also employees in Malaysia, a larger share of employers think it important to improve employees' digital skills, managerial oversight (to reduce the increasing monitoring costs) and digital investment at their companies. The lack of these conditions could also explain the lower prevalence of pre-pandemic teleworking compared with other countries. SMEs account for a large share in employment (65% in 2015, Economic Census 2016, DOSM) in Malaysia, and both employers and employees of SMEs are likely to have less resources to adopt the sudden forced teleworking. For SMEs, allocating resources to manage their employees working remotely would entail significant costs, especially if employers also need to work remotely. Therefore, these results imply that the actual situation would be more cumbersome for most of businesses.

Figure 26. Managers find many obstacles to teleworking

Necessary organisational changes for teleworking, % of respondents



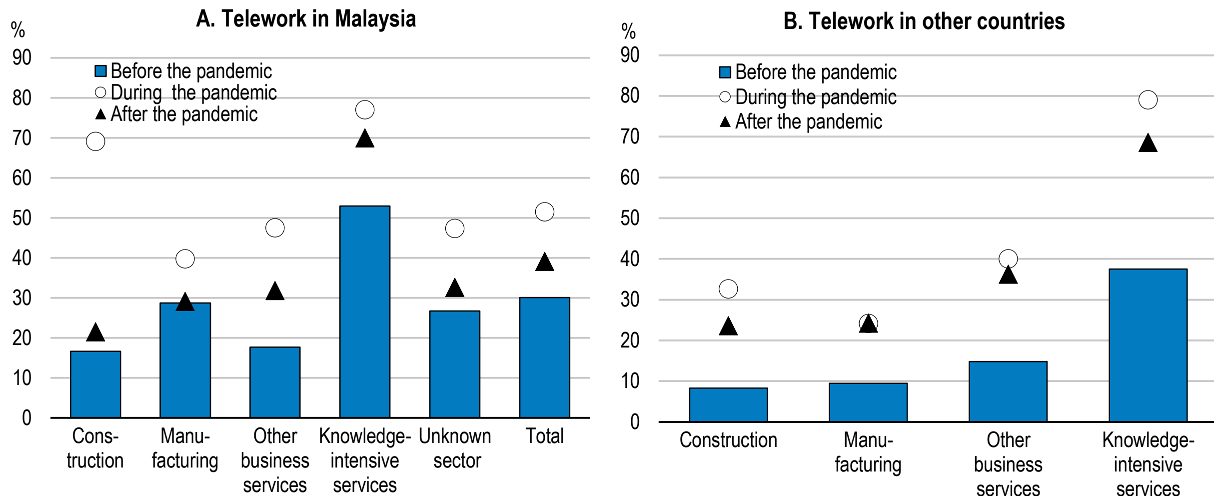
Note: Percentage of respondents replying to the question "what types of organisational changes and HR management practices would you find useful to introduce to better accommodate teleworking?" (Multiple options possible).
Source: Telework Survey of the OECD Global Forum on Productivity. For more details of the survey, see (Criscuolo et al., 2021[66]).

Looking ahead, promoting teleworking itself is not a priority, but it is essential that teleworking remains an available option to both employers and employees in Malaysia. In this regard, during the pandemic, while some sectors found a certain degree of difficulties in practicing their management and jobs remotely in an efficient way, others did well. According to the Survey, in Malaysia, for the knowledge intensive services sector, a higher share of responding firms practiced teleworking regularly (at least once a week) during the pandemic, and they look for continued teleworking after the pandemic, which shows a similar tendency to other countries (Figure 27). The respondents from the other business services sector expect a slight decrease in the use of teleworking compared with the during-pandemic level, and employers from manufacturing are likely to be reluctant to continue regular teleworking. While these gaps are to some extent caused by inherent difference of business operations in each sector, the weak expectation for teleworking among these sectors compared with the actual adoption during the pandemic shows a stark contrast with the prospect in other countries, where many surveyed firms expect the continuation of teleworking almost at the same as the during-pandemic levels. This implies that the conditions preventing the practice of teleworking before the pandemic would persist after the pandemic in Malaysia. This is also consistent with the positive perception revealed by both employers and employees about the forced

teleworking during the pandemic in other countries. In addition, there may be other obstacles to teleworking for less digitally equipped sectors, such as the accommodation and food services, which would be exacerbated by the prevalence of SME in these sectors.

Figure 27. Pandemic-induced teleworking will not continue in Malaysia while other countries will

Share of workforce teleworking



Note: The number of observations for Malaysia's construction sector is less than 10. Knowledge-intensive services include IT, finance and professional services. Other business services include wholesale and retail trade, hotels, restaurants, transport and other services.
Source: Telework Survey of the OECD Global Forum on Productivity. For more details of the survey, see (Criscuolo et al., 2021[66]).

https://stat.link/pwmht5

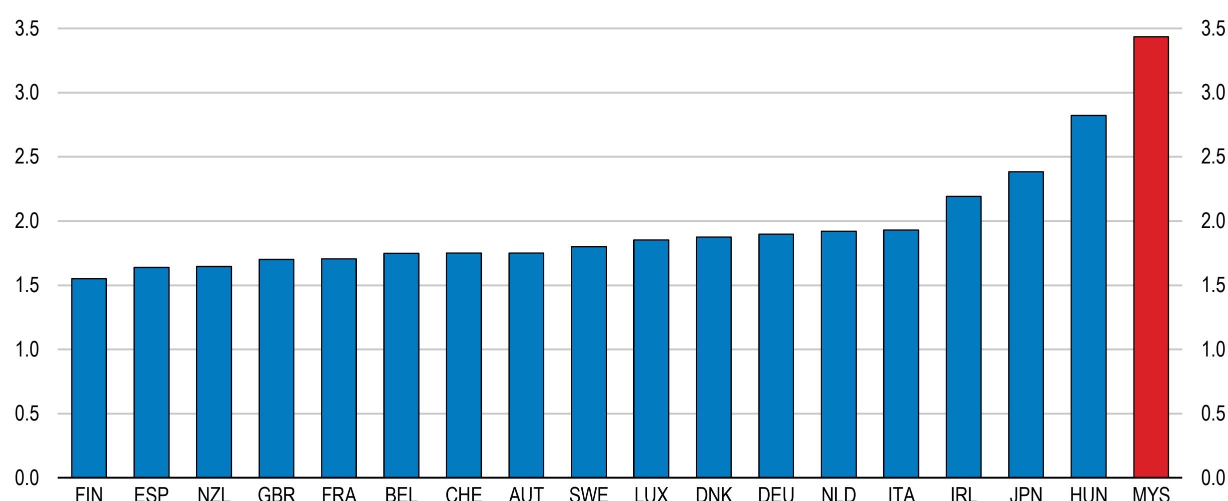
The existing gap between those who can make the most of teleworking and those who cannot would persist or even widen if no policy intervention were undertaken. Therefore, for Malaysia, it would be crucial to remove hindrances to teleworking so that the negative perception during the pandemic does not prevent further adoption of remote work practices. In this regard, in a relief package announced in June 2020 (Short-Term Economic Recovery Plan (PENJANA)), the government included measures to support the adoption of teleworking, such as tax incentives, for both employers and employees, to help the purchase of digital equipment. In addition, the Social Security Organisation (SOCSO) has expanded the social security coverage to teleworking (injuries occurred during teleworking will be covered). These measures are appropriate and timely. Nevertheless, these measures could be enhanced and more targeted toward SMEs and the self-employed in less adopting sectors. Moreover, improving infrastructure is more acute for Malaysia, as a significant share of respondent employers consider it not sufficient (Figure 28). The government needs to facilitate investment in digital infrastructure according to the Malaysia Digital Economy Blueprint, with the view of stimulating private investment (see above).

Some countries aim at using teleworking as a tool to facilitate reforms. For example, Ireland adopted in March 2021 an “Our Rural Future” blueprint to promote rural development after the pandemic, so that more people could relocate to rural areas and work remotely (Department of Rural and Community Development, 2021[69]). The government plans to establish a network of more than 400 remote working hubs, provide tax incentives for remote working both of individuals and of businesses, and roll out high-speed broadband. Other countries, such as Italy, have adopted specific laws for teleworking to secure similar work conditions for teleworkers to office premises, which cover flexible work arrangement and employers’ responsibility of providing necessary ICT tools (ILO, 2020[70]). In the case of Malaysia, teleworking could be useful to improve work conditions, particularly for female workers, which would

increase their labour force participation (see below). Teleworking would also be conducive to facilitating the transformation of the Malaysian economy to a service-oriented one, as knowledge intensive services are more adaptable to the new form of work practice.

Figure 28. Digital infrastructure is a major obstacle to teleworking in Malaysia

ICT infrastructure as preventing factor, score from 1 to 5



Note: Average score of respondents replying to the question on whether or not "no access to appropriate ICT infrastructure" will prevent wider use of telework after the crisis at respondents' company. Respondents choose the appropriate number from 1 (not important at all) to 5 (very important).

Source: Telework Survey of the OECD Global Forum on Productivity. For more details of the survey, see (Criscuolo et al., 2021[66]).

https://stat.link/j3kpl9

Female workers could benefit more from teleworking

Teleworking would also be supportive of female workers to improve their work-life-balance. The Survey shows that fewer female employers and employees found teleworking negative than male did, although slightly (Figure 25, Panel A). Moreover, similar to some other Asian countries, in Malaysia, a family member, often woman, tends to look after regularly a child or a sick, elderly or disabled person, which is one of the obstacles to continued job careers for females. In this regard, teleworking would allow women to stay in the labour force, improving their economic and social opportunities, as teleworking could provide more flexible work conditions, in addition to its direct impact of reducing commuting time. According to a UNDP survey on teleworking in Malaysia (the survey cover the self-employed), during the first wave of infections in early 2020, working parents with childcare responsibilities found their quality of life better off while teleworking, although less so for female parents (61% improved and 27% worsened for male; 54% and 33% for female,) (UNDP, 2020[71]). Moreover, more female workers felt that domestic duties became easier (50%) than more difficult (34%) due to teleworking, although less salient for aged 35-44 (45% and 40%).

Teleworking could expand the possibility of flexible work arrangements, which could improve the work conditions for females. For example, remote work could make it easier to organise staggering working time. In Malaysia, the government has long promoted flexible work arrangements. Accordingly, a number of firms (48% of the responding firms in a TalentCorp survey) already offered their workers flexible working time arrangements to improve their work-life-balance, particularly for female workers, but only 22% adopted the staggering time regime (TalentCorp, 2018[72]). Moreover, broader flexible work arrangements have not yet been prevalent, such as compress or reduced work period arrangements. Continued adoption

of regular teleworking after the pandemic could help a more use of flexible work arrangements. In this regard, during the pandemic, the government further encouraged businesses to utilise the pandemic as an opportunity to facilitate the changes in their work arrangements (TalentCorp, 2020[73]).

In addition to these encouragements, the government could strengthen the measures targeting workers. Nevertheless, these policy measures should not fixate the domestic role (or burden) of female workers (Ng and Jin, 2000[74]). Skills training on broader digital skills, including those for teleworking, would be more preferable than tax incentives to teleworking targeting female workers. More provision of childcare facilities and services is also crucial (see below). Since the establishment of the Ministry of Entrepreneur and Cooperative Development (MECD) in 1995 and the Ministry of Women, Family and Community Development (MWFCD) in 2001, Malaysia has promoted female entrepreneurship, providing a range of financial support and training schemes, such as MySMELady (financing), TemanNita (financing) and the Successful Women Entrepreneurship Engagement Talent (SWEET) programme (training, financing and business matching). The measures to support the teleworking of female workers, such as skills training and childcare facilities, would also be conducive to stimulating female entrepreneurship.

Particularly, the availability of childcare services is still limited in Malaysia. Between 2014 and 2019, the number of childcare centres increased from 3 760 to 4 933, but only 1% of children aged 0-4 were registered at these facilities in 2019 (Children Statistics 2020, DOSM). As the government considers that high costs and scarcity of childcare services are important obstacles to a further increase of female labour force participation irrespective of the adoption of teleworking (Economic Planning Unit, 2018[75]), it has stepped up the policy efforts. The government has offered financial incentives to encourage both public and private employers to provide on-site childcare facilities for children of their employees. For example, the 2021 Budget includes a matching grant of MYR 20 million for private companies. The subsidy and incentive schemes could be further enhanced to help more employers set up childcare facilities.

Moreover, in Malaysia, teleworking is often considered as a synonym of work from home. Nevertheless, in some other countries, amid the COVID-19 pandemic, more attention has been given to different types of remote work. For example, satellite offices (teleworking from an office nearby home) could help mitigate some constraints, such as limited working space at home, in Malaysia.

While teleworking could raise worker satisfaction, work efficiency would also decrease because of less frequent in-person interactions, which weaken knowledge exchange. Worker satisfaction would also decrease due to solitude and hidden overtime. While teleworking in early 2020, an almost equal share of female non-childcare givers felt that their productivity increased or decreased (36% and 34%), although more felt decreased for childcare givers (35% and 41%) (UNDP, 2020[71]). If teleworking becomes regular practice, particularly for female workers who would be likely to prefer it, it would help develop digital skills necessary for teleworking. Nevertheless, teleworking could hamper the development of their soft skills, which can be trained through daily in-person interactions. As developing soft skills takes time, female workers, who stay in the labour force by practicing telework to reconcile their dual or triple duties, should be given more opportunities to train these skills (see above).

Table 3. Table of Recommendations

MAIN FINDINGS	RECOMMENDATIONS (Key in bold)
Fostering a better business environment	
Despite several important reforms, registering a new business is still burdensome and fragmented.	**Enhance the coordination among ministries and agencies by integrating and streamlining the business registration system.** Further streamline registration requirements, including removing the mandatory requirement to appoint a Companies Secretary.
The process for obtaining the necessary permits and authorisations for a new business is burdensome.	**Improve the usability of the existing one-stop-shop mechanisms for business authorisations, by widening the number of participating agencies.** Consider introducing a "silence is consent" rule to foster administrative efficiency.
The insolvency regime may be acting as a disincentive for entrepreneurs.	**Strengthen the insolvency scheme further, by improving debtors' access to credit and widening creditors' participation in the restructuring process.**
The recently introduced measures to simplify the regulatory environment are not universally and systematically implemented across all ministries and agencies.	**Ensure adequate and inclusive consultation which fully involves non-business stakeholders, with more systematic adoption of public consultation guidelines.** Review oversight arrangements to promote more systematic adoption of regulatory management policies. Ensure easier access to online legislation and regulations, including at the state and local levels. Strengthen *ex post* review of legislation in line with OECD best practice, including the use of sunset clauses and the introduction of a one-in-one-out rule to drive efforts to reduce the volume of regulations.
Private investment was weak even before the pandemic.	Reduce unilaterally restrictions on FDI, particularly in the services sectors.
Several restrictions persist in Malaysia's transport services, which may inhibit competition and the development of new firms.	Develop a clear timeline for implementation of the reforms identified in the National Transport Master Plan.
Professional services are subject to relatively strict restrictions on their conduct, including regulated fees and limited options for legal form.	Consider measures to provide additional operational freedom to professional services firms, including more flexibility in legal form and inter-professional collaborations. Review the use of regulated fees across professional services.
The retail sector is subject to a number of burdensome regulations, including broad ranging anti-profiteering regulation and differential treatment of foreign suppliers.	Review the impact of the Price Control and Anti-Profiteering Act. Promote wider awareness and stricter enforcement of the Competition Act to limit anti-competitive practices in the retail sector. Level the playing field between domestic and foreign retailers by amending the Guidelines on Foreign Participation in Distributive Trade Services.
Accelerating business digitalisation	
Digital uptake is picking up, but remains low among SMEs, particularly e-commerce participation, while the productivity gap between firms that use digital tools and firms that do not use them is large.	**Provide support programmes to promote the uptake of digital tools, including basic ones, such as computer and the Internet, particularly targeting older SMEs.** Promote further SMEs' participation in all ranges of e-commerce (B2B, B2C and B2G).
Skills development opportunities are scarce for SME workers.	**Strengthen training programmes of basic digital skills for employers and employees of firms, in particular micro- and small-sized enterprises with less than ten workers.**
Despite the long-standing progress in trade liberalisation, some services sectors, such as computer services, are still relatively restricted.	Pursue further opening up of services markets, through participating in ambitious trade agreements or unilaterally, with more emphases on the mobility of skilled foreign workers and digital data.
Subscription of fixed broadband is increasing, but still relatively low.	**Implement the Malaysia Digital Economy Blueprint as planned, by reviewing, improving and streamlining all relevant and state legislations and regulations related to digital infrastructure development.**
Amid the flourishing business of online platforms, new policy challenges have been evolving, such as their abuse of dominant market power. Nevertheless, policy frameworks are underdeveloped.	**Revise the Competition Act and the Competition Commission Act to provide the competition authorities with oversight of mergers and acquisitions.**

MAIN FINDINGS	RECOMMENDATIONS (Key in bold)
There are more platform workers, but most of them are not covered by the current social protection scheme.	Expand the coverage of Malaysia's employment safety net provided by the Social Security Organisation (SOCSO) to more self-employed workers. Enhance training programmes for the unemployed. Consider establishing a universal pension scheme in the medium term.
Preparing for the coming future of work	
Digitalisation has accelerated the change in demand for jobs from routine to non-routine jobs, which requires more soft skills, rather than mere knowledge.	Enhance the provision of up-skilling programmes of soft skills to adults.
Both employers and employees consider the lack of skills and equipment, including digital investment, as obstacles to teleworking, and firms in most sectors do not anticipate regular teleworking after the pandemic is over.	**Enhance the financial support to firms and workers to help them acquire necessary equipment and investment in case they wish to telework but do not have adequate resources to conduct it.** **Provide more ICT training opportunities to workers to help them acquire necessary skills to practice teleworking.**
Female workers feel better off by practicing teleworking.	Promote further the flexible work arrangement, which will be conducive to regular teleworking and *vice versa*. Enhance training programmes of ICT skills necessary for teleworking, targeting female workers.
The lack of adequate digital infrastructure is considered a major obstacle to teleworking in Malaysia.	**Accelerate investment to upgrade digital infrastructure, such as in 5G and fixed broadband.**
High costs and the limited availability of childcare services are important obstacles to a further increase of female labour force participation.	Enhance the subsidy and incentive schemes to encourage more employers to provide childcare facilities.

References

Andrews, D., C. Criscuolo and C. Menon (2014), “Do Resources Flow to Patenting Firms?: Cross-Country Evidence from Firm Level Data”, *OECD Economics Department Working Papers*, No. 1127, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jz2lpmk0gs6-en. [7]

APEC Economic Committee (2019), *Peer Review Assessment of Public Consultation as Used by Malaysia to Improve Regulation: APEC Peer Review on Public Consultation Initiatives*, https://www.apec.org/Publications/2019/06/Peer-Review-Assessment-of-Public-Consultation-as-Used-by-Malaysia-to-Improve-Regulation. [10]

ASEAN (2020), *ASEAN Online Business Code of Conduct*, https://aseanconsumer.org/file/post_image/2020-02-26%20ASEAN%20COC%20(fin).pdf. [51]

Asian Development Bank (2018), *Asian Development Outlook 2018: How Technology Affects Jobs*, https://www.adb.org/sites/default/files/publication/411666/ado2018.pdf. [58]

Athanassiou, E. et al. (2015), *The Effects of Liberalization of Professional Requirements in Greece*, https://www.kepe.gr/index.php/en/research/studies-and-reports-for-ministries-and-other-bodies/externally-funded-projects/item/2892-no-76-the-effects-of-liberalization-of-professional-requirements-in-greece.html. [25]

Bloom, N. et al. (2015), “Does Working from Home Work? Evidence from a Chinese Experiment”, *Quarterly Journal of Economics*, Vol. 130/1, pp. 165-218, http://dx.doi.org/10.1093/qje/qju032. [61]

Butters, R. (2020), “Demand Volatility, Adjustment Costs, and Productivity: An Examination of Capacity Utilization in Hotels and Airlines”, *American Economic Journal: Microeconomics*, Vol. 2020/4, pp. 1-44, http://dx.doi.org/10.1257/mic.20170056. [77]

Calvino, F., C. Criscuolo and C. Menon (2016), “No Country for Young Firms?: Start-up Dynamics and National Policies”, *OECD Science, Technology and Industry Policy Papers*, No. 29, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jm22p40c8mw-en. [4]

Crémer, J., Y. De Montjoye and H. Schweitzer (2018), *Competition Policy for Digital Era*, European Commissioin, https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf. [48]

Criscuolo, C. et al. (2021), “The role of telework for productivity during and post-COVID-19: Results from an OECD survey among managers and workers”, *OECD Productivity Working Papers*, No. 31, OECD Publishing, Paris, https://dx.doi.org/10.1787/7fe47de2-en. [66]

Department of Personal Data Protection (2020), *Public Consultation Paper No. 01/2020 - Review of Personal Data Protection Act 2010 (Act 709)*, https://www.pdp.gov.my/jpdpv2/assets/2020/02/Public-Consultation-Paper-on-Review-of-Act-709_V4.pdf. [36]

Department of Rural and Community Development (2021), *Our Rural Future - Rural Development Policy 2021-2025*, https://www.gov.ie/en/publication/4c236-our-rural-future-vision-and-policy-context/. [69]

Economic Planning Unit (2018), *Mid-Term Review of the Eleventh Malaysia Plan 2016-2020: new priorities and emphases*, https://www.epu.gov.my/en/economic-developments/development-plans/rmk/mid-term-review-eleventh-malaysia-plan-2016-2020. [75]

Economic Planning Unit, Prime Minister's Department (2021), *Malaysia Digital Economy Blueprint*, https://www.epu.gov.my/sites/default/files/2021-02/malaysia-digital-economy-blueprint.pdf. [27]

European Union (2002), *Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive) - EU monitor*, https://www.eumonitor.eu/9353000/1/j9vvik7m1c3gyxp/vhckn6qttwzn. [42]

European Union (2002), *Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services (Authorisation Directive) - EU monitor*, https://www.eumonitor.eu/9353000/1/j9vvik7m1c3gyxp/vhckn6qtuwzo. [43]

Federal Ministry for Economic Affairs and Energy (2021), *Go-digital: Accompanying Medium-Sized Companies on Their Way into the Digital Future (in German)*, https://www.innovation-beratung-foerderung.de/INNO/Navigation/DE/go-digital/go-digital.html. [31]

Ferencz, J. (2019), "The OECD Digital Services Trade Restrictiveness Index", *OECD Trade Policy Papers*, No. 221, OECD, https://www.oecd-ilibrary.org/trade/the-oecd-digital-services-trade-restrictiveness-index_16ed2d78-en. [34]

Gajic, J. and N. Kordic (2015), "The Importance of Professional Services Branding In International Transactions", *The Review of International Affairs*, Vol. LXVI, pp. 146-163, https://www.diplomacy.bg.ac.rs/pdf/ria/2015/RIA-1158-1159_2015.pdf. [23]

Grab Taxi Holdings Pte. Ltd (2020), *Building Resilience in the Face of Crisis: Grab Social Impact Report 2019/2020*, https://assets.grab.com/wp-content/uploads/media/Grab-Social-Impact-Report-2020.pdf. [56]

ILO (2020), *Teleworking during the COVID-19 Pandemic and Beyond: A Practical Guide*, https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/instructionalmaterial/wcms_751232.pdf. [70]

ITU (2013), *Competition and Regulation in a Converged Broadband World - Broadband Series: Regulatory & Market Environment*, ITU, http://www.itu.int/broadband. [37]

ITU (2012), *Regulating Broadband Prices - broadband series: Regulatory & Market environment*, http://www.itu.int. [38]

Ker, D., P. Montagnier and V. Spiezia (2021), "Measuring telework in the COVID-19 pandemic", *OECD Digital Economy Papers*, No. 314, OECD Publishing, Paris, https://dx.doi.org/10.1787/0a76109f-en. [65]

Krämer, J. and D. Schnurr (2018), *Competition Policy in Platform and Data-driven Markets: Long-term Efficiency & Exploitative Conducts*, https://ec.europa.eu/competition/information/digitisation_2018/contributions/daniel_schnurr_jan_kraemer.pdf. [49]

Lane, M. (2020), "Regulating Platform Work in the Digital Age", *Going Digital Toolkit Policy Note*, No. 1, OECD, https://goingdigital.oecd.org/toolkitnotes/regulating-platform-work-in-the-digital-age.pdf. [53]

López González, J. (2019), "Fostering participation in digital trade for ASEAN MSMEs", *OECD Trade Policy Papers*, No. 230, OECD Publishing, Paris, https://dx.doi.org/10.1787/63561b11-en. [33]

Malaysia Competition Commission (2020), *Final Report: Market Review under the Competition Act 2010 for Service Sector in Malaysia (Wholesale and Retail for Selected Products)*, https://www.mycc.gov.my/market-review. [26]

Malaysia Competition Commission (2013), *Fixing of prices/fees by professional bodies: Under the competition act 2010*, https://www.mycc.gov.my/sites/default/files/pdf/newsroom/market_review_Executive_Summary_on_Professional_Bodies_Study.pdf. [24]

Malaysia Productivity Corporation (2020), *Malaysia's Response to the COVID-19 Pandemic: #MyMUDAH Programme*, https://www.oecd.org/gov/regulatory-policy/mymudah-programme%20and-covid-19%20.pdf. [3]

Malaysia Productivity Corporation (2017), *Reducing Unnecessary Regulatory Burdens on Business (RURB): Distributive Trade - Draft Final Report*, http://www.mpc.gov.my/wp-content/uploads/2019/10/DistributiveTradeDraftFinalReport_220917.pdf. [1]

Malaysia Productivity Corporation (2016), *Annual Report on Modernisation of Regulations 2016*, http://www.mpc.gov.my/wp-content/uploads/2016/12/ARMR-2016.pdf. [13]

Milasi, S., I. González-Vázquez and E. Fernández-Macías (2021), "Telework before the COVID-19 pandemic: Trends and drivers of differences across the EU", *OECD Productivity Working Papers*, No. 21, OECD Publishing, Paris, https://dx.doi.org/10.1787/d5e42dd1-en. [68]

Ministry of Transport (2019), *National Transport Policy 2019-30*, http://dpn.mot.gov.my/NTPbookEn.pdf. [22]

Morikawa, M. (2021), *The Productivity of Working from Home: Evidence from Japan*, https://voxeu.org/article/productivity-working-home-evidence-japan. [63]

Morikawa, M. (2017), "Impact of Foreign Tourists on Productivity in the Accommodation Industry: A panel Data Analysis", *RIETI Discussion Paper Series*, No. 17-E-106, Research Institute of Economy, Trade and Industry, https://www.rieti.go.jp/jp/publications/dp/17e106.pdf. [79]

Morikawa, M. (2016), "Foreign Tourists and Capacity Utilization in the Accommodation Industry", *RIETI Discussion Paper Series*, No. 16-E-064, Research Institute of Economy, Trade and Industry, https://www.rieti.go.jp/jp/publications/dp/16e064.pdf. [78]

Morikawa, M. (2012), "Demand Fluctuations and Productivity of Service Industries", *Economics Letters*, Vol. 117/1, pp. 256-258, http://dx.doi.org/10.1016/j.econlet.2012.05.019. [76]

Ng, C. and K. Jin (2000), "Teleworking in Malaysia: Issues and Prospects", *Economic & Political Weekly*, Vol. 35/26, pp. 2308-2313, https://www.jstor.org/stable/4409452?seq=1#metadata_info_tab_contents. [74]

Nurfarahin, H., M. Noraliza and M. Nur Layali (2020), *An Experimental Measure of Malaysia's Gig Workers Using Labour Force Survey*, https://www.unescap.org/sites/default/files/APS2020/64_An_Experimental_Measure_of_Malaysia_Gig_Workers_Using_Labour_Force_Survey.pdf. [55]

OECD (2021), *OECD Competition Assessment Reviews: Malaysia - Logistics Sector*, OECD, https://www.oecd.org/daf/competition/oecd-competition-assessment-reviews-logistics-sector-in-malaysia.pdf. [20]

OECD (2021), *OECD Competitive Neutrality Reviews: Malaysia - Small-Package Delivery Services*, OECD, https://www.oecd.org/daf/competition/oecd-competitive-neutrality-reviews-small-package-delivery-services-in-malaysia.pdf. [21]

OECD (2021), *OECD Economic Surveys: Malaysia 2021*, OECD Publishing, Paris, https://dx.doi.org/10.1787/cc9499dd-en. [6]

OECD (2021), *OECD Employment Outlook*, OECD Publishing, Paris, https://dx.doi.org/10.1787/19991266. [67]

OECD (2021), *The Digital Transformation of SMEs*, OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, https://dx.doi.org/10.1787/bdb9256a-en. [28]

OECD (2020), *OECD Economic Surveys: Thailand 2020: Economic Assessment*, OECD, https://www.oecd.org/fr/pays/thailande/oecd-economic-surveys-thailand-2020-ad2e50fa-en.htm. [17]

OECD (2020), *One-Stop Shops for Citizens and Business*, OECD, https://www.oecd-ilibrary.org/governance/one-stop-shops-for-citizens-and-business_b0b0924e-en. [2]

OECD (2020), *Productivity gains from teleworking in the post COVID-19 era: How can public policies make it happen?*, OECD, https://read.oecd-ilibrary.org/view/?ref=135_135250-u15liwp4jd&title=Productivity-gains-from-teleworking-in-the-post-COVID-19-era. [64]

OECD (2020), *Reviewing the Stock of Regulation*, OECD, https://www.oecd-ilibrary.org/governance/reviewing-the-stock-of-regulation_1a8f33bc-en. [14]

OECD (2020), *Shaping the Future of Regulators: The Impact of Emerging Technologies on Economic Regulators*, OECD, https://www.oecd-ilibrary.org/governance/shaping-the-future-of-regulators_db481aa3-en. [12]

OECD (2019), *An Introduction to Online Platforms and their Role in the Digital Transformation*, https://www.oecd.org/innovation/an-introduction-to-online-platforms-and-their-role-in-the-digital-transformation-53e5f593-en.htm. [47]

OECD (2019), *OECD Economic Surveys: Malaysia 2019*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eaaa4190-en. [60]

OECD (2019), *OECD Future of Education and Skills 2030: Conceptual learning framework - SKILLS FOR 2030*, OECD, http://www.oecd.org/education/2030-project. [59]

OECD (2019), *OECD Investment Policy Review of Southeast Asia*, https://www.oecd.org/investment/oecd-investment-policy-review-southeast-asia.htm. [16]

OECD (2019), *OECD Reviews of Digital Transformation: Going Digital in Colombia*, OECD, https://www.oecd-ilibrary.org/science-and-technology/oecd-reviews-of-digital-transformation-going-digital-in-colombia_781185b1-en. [30]

OECD (2019), *Unpacking E-commerce: Business Models, Trends and Policies*, OECD Publishing, Paris, https://dx.doi.org/10.1787/23561431-en. [45]

OECD (2018), *Economic Policy Reforms 2018: Going for Growth Interim Report*, https://www.oecd.org/economy/growth/going-for-growth-2018.htm. [5]

OECD (2018), *Good Jobs for All in a Changing World of Work: The OECD Jobs Strategy*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264308817-en. [54]

OECD (2018), *Good Regulatory Practices to Support Small and Medium Enterprises in Southeast Asia*, OECD, https://www.oecd.org/regreform/good-regulatory-practices-to-support-small-and-medium-enterprises-in-southeast-asia-9789264305434-en.htm. [8]

OECD (2017), *Services Trade Policies and the Global Economy*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264275232-en. [35]

OECD (2016), *Consumer Protection in E-commerce: OECD Recommendation*, OECD, http://dx.doi.org/10.1787/9789264255258-en. [50]

OECD (2015), *Implementing Good Regulatory Practice in Malaysia*, OECD, https://www.oecd-ilibrary.org/governance/implementing-good-regulatory-practice-in-malaysia_9789264230620-en. [9]

OECD (2011), "Fibre Access - Network Development in the OECD Area", *OECD Digital Economy Papers*, No. 182, OECD, http://dx.doi.org/10.1787/5kg9sqzz9mlx-en. [44]

OECD (2008), *Broadband Growth and Policies in OECD Countries*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264046764-en. [41]

Record, R. et al. (2018), *Malaysia's Digital Economy: A New Driver of Development*, https://documents.worldbank.org/en/publication/documents-reports/documentdetail/435571536244480293/malaysias-digital-economy-a-new-driver-of-development. [18]

SME Association of Malaysia (2020), *Survey Report: Post RMCO SME Status*, https://smemalaysia.org/media/SME-Malaysia-Post-RMCO-Survey-Report-August2020-min.pdf. [29]

Spanish Patent and Trademark Office (2020), *Strategic Plan 2021-2024 Spanish Patent and Trademark Office*, https://www.oepm.es/export/sites/oepm/comun/documentos_relacionados/sobre_oepm/Plan_Estrategico/Strategic_Plan_2021_2024_OEPM.pdf. [32]

Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary (2020), *Investigation of Competition in Digital Markets: Majority Staff Report and Recommendations*, U.S. House of Representatives, https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf?utm_campaign=4493-519. [46]

TalentCorp (2020), *My Work, My Future: Embracing the Winning Formula for Flexible Work Arrangements*, https://www.talentcorp.com.my/clients/TalentCorp_2016_7A6571AE-D9D0-4175-B35D-99EC514F2D24/contentms/img/publication/FWA-FINAL-Nov2016-compressed.pdf. [73]

TalentCorp (2018), *Life At Work: Report on the Implementation and Outcomes of Work-Life Practices in Corporate Malaysia In*, https://www.mdbc.com.my/wp-content/uploads/2018/05/Life-At-Work-Report-on-WLP-Implementation-and-Outcomes-in-Corporate-Malaysia.pdf. [72]

Taneja, S., P. Mizen and N. Bloom (2021), *Working from Home is Revolutionising the UK Labour Market | VOX, CEPR Policy Portal*, https://voxeu.org/article/working-home-revolutionising-uk-labour-market. [62]

The Supreme Court (2021), *Judgement: Uber BV and others (Appellants) v Aslam and others (Respondents)*, https://www.supremecourt.uk/cases/docs/uksc-2019-0029-judgment.pdf. [57]

Trnka, D. and Y. Thuerer (2019), “One-In, X-Out: Regulatory offsetting in selected OECD countries”*, OECD Regulatory Policy Working Papers*, No. 11, OECD Publishing, Paris, https://dx.doi.org/10.1787/67d71764-en. [15]

UNCTAD (2019), *Competition Issues in the Digital Economy: Note by the UNCTAD Secretariat*, https://unctad.org/system/files/official-document/ciclpd54_en.pdf. [52]

UNDP (2020), *How We Worked From Home: Findings from the WFH experience in response to the COVID-19 global health crisis in Malaysia*, UNDP, https://www.undp.org/content/dam/undp/library/km-qap/UNDP-MYS-How-We-Worked-from-Home-full-report-2020.pdf. [71]

World Bank (2021), *Aiming High: Navigating the Next Stage of Malaysia’s Development*, https://www.worldbank.org/en/country/malaysia/publication/aiminghighmalaysia. [19]

World Bank (2019), *Malaysia Economic Monitor June 2019: Re-energizing the Public Service*, https://openknowledge.worldbank.org/handle/10986/31968. [40]

World Bank (2019), *The Digital Economy in Southeast Asia: Strengthening the Foundations for Future Growth*, World Bank, Washington, DC, https://openknowledge.worldbank.org/handle/10986/31803. [39]

World Bank Group (2019), *Regulatory Governance for Development and Growth: Malaysia’s Experience with Good Regulatory Practices*, World Bank, Malaysia, https://openknowledge.worldbank.org/handle/10986/32440. [11]

Annex A. Demand fluctuation and productivity

Demand fluctuation is often discussed in the context of business cycle with the frequency of years. Nevertheless, some previous study suggests that more high-frequent volatility in demand has some impacts on business productivity (Morikawa, 2012[76]) (Butters, 2020[77]). This is particularly relevant for the services sector, as most services cannot adjust their production through the changes in inventory. High short-term volatility in demand would reduce overall operating rates, which could result in lower profits and investment. A case in point is the accommodation services. In this regards, digital technologies would help manage demand fluctuation through matchmaking wider potential consumer base or dynamic pricing, among others. In Malaysia, the level of productivity of e-commerce participating SMEs (below 75 employees) in the accommodation sector is higher than the level of productivity of SMEs not participating in e-commerce (Figure A.1), which is also comparable to the level of productivity of overall large firms (Economic Census 2016, DOSM). Nevertheless, the share of firms participating in e-commerce accounts for 8% for SMEs and just 1% for firms with less than 5 employees, while 67% for large firms.

To estimate how short-term demand fluctuation affects operating rates of the accommodation services in Malaysia, a simple calculation was conducted concerning hotel occupancy rates. By using data of the Hotel Survey (Tourism Malaysia), in which quarterly data of 13 states and 3 federal districts are available, OLS regression was estimated. Quarterly volatility of hotel occupancy rates are correlated with the annual level of occupancy rates (Figure A.1). However, this may be caused by the seasonality of tourism activity in each region. If a region's tourism activity is limited to a very short period of each year due to its weather condition, the quarterly volatility becomes higher and the occupancy rates are lower. To remove this effect, fixed effect model is used. At the firm level, when demand is weak, a firm could adjust its services supply to reduce the short-term fluctuation of operation, so that endogeneity needs to be taken into account. As the regional level of occupancy rates would not be likely to affect that of quarterly volatility at the regional level, endogeneity is not considered in this estimation. Although a careful consideration is needed due to the small sample size, similar to previous study, the coefficient of quarterly volatility is statistically meaningful (Figure A.1).

Recent study in other countries suggests that the different seasonality of inbound tourists would reduce the overall seasonal volatility of hotel occupancy rates, thus raising productivity (Morikawa, 2016[78]) (Morikawa, 2017[79]). In Malaysia, the share of foreign hotel guests significantly varies between regions, and has strong correlation with the annual average of hotel occupancy rates. Nevertheless, the share of foreign hotel guests does not have influence on the quarterly volatility of hotel occupancy rates. This is because while foreign hotel guests offset the seasonality of domestic hotel guests in some regions, they rather amplify the seasonality in other regions (Figure A.1). Taking into account the share of foreign hotel guests, the coefficient of quarterly volatility of hotel occupancy rates is still statistically meaningful.

Figure A.1. Productivity of the accommodation sector could be further improved

A. Labour productivity in the services sector

Log of MYR per worker, 2015

Log

All sizes | Micro | SMEs | Large

Total firms | Computer using firms | Internet using firms | E-commerce partcipating firms

B. Hotel occupancy rates and quaterly volatility by region, average 2016-19

Occupancy rate, %

Quarterly volatility

C. Share of foreign guests and quartely volatility of hotel guests by region, average 2016-19

Quarterly volatility difference

Share of foreign guests, %

Note: Panel A: Micro firms are defined as having less than 5 workers, and SMEs as having between 5 and 75 workers. E-commerce participation is either purchase or sell online.

Panels B and C: All data shown are averages of 2016-19. The quarterly volatility for each year is calculated as the coefficient of variance (C.V.) of quarterly occupancy rates (respectively of quarterly hotel guests) of that year. The quarterly volatility difference of each year is calculated as the difference between the quarterly volatility of total hotel guests and the quarterly volatility of domestic hotel guests of that year. A negative number means that foreign hotel guests reduce the volatility of total hotel guests.

Source: DOSM, Economic Census 2016; Tourism Malaysia, Hotel Surveys; and OECD calculations.

https://stat.link/uo0nk7

Table A.1. Demand fluctuation affects the level of hotel occupancy rates

Regression of annual hotel occupancy rate on its quarterly volatility

	Dependent variable is annual hotel occupancy rates		Dependent variable is log quarterly volatility of total hotel guests
	(1)	(2)	(3)
Constant	50.81656	33.61466	-1.645089
	(23.89411)	(5.200741)	(-14.80693)
Log quarterly volatility	-1.835520	-2.085500	x
	(-2.362131)	(-2.850519)	x
Foreign guest share	x	0.631493	-0.001674
	x	(2.796916)	(-0.459954)
Fixed effects	Yes	Yes	No
Observation	64	64	64
Adjusted R^2	0.931976	0.940599	0.003401

Note: The quarterly volatility of for each year is calculated as the coefficient of variance (C.V.) of quarterly variables. The estimation period is for 2016-2019. ( ) represents t-value.
Source: Tourism Malaysia, Hotel Surveys and OECD calculations.