Inclusive Growth Review of Korea

CREATING OPPORTUNITIES FOR ALL



OECD

Inclusive Growth Review of Korea

CREATING OPPORTUNITIES FOR ALL



This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

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.

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.

Please cite this publication as:
OECD (2021), *Inclusive Growth Review of Korea: Creating Opportunities for All*, OECD Publishing, Paris, *https://doi.org/10.1787/4f713390-en*.

ISBN 978-92-64-95091-7 (print)
ISBN 978-92-64-49003-1 (pdf)

Photo credits: Cover © Sean Pavone/Shutterstock.com.

Corrigenda to publications may be found on line at: *www.oecd.org/about/publishing/corrigenda.htm*.

© OECD 2021

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at *http://www.oecd.org/termsandconditions*.

Foreword

The *Inclusive Growth Review of Korea* applies the OECD *Framework for Policy Action on Inclusive Growth* at the national level to examine Korea's opportunities and challenges of delivering a "people-centred growth model". The central proposition of this framework is that anyone can contribute to growth and should benefit from it. Promoting growth and efficiency of markets is important to increasing living standards, although by itself may not address the inequality challenges and the lack of equal opportunities for all. A "whole of the government" approach is advocated to ensure that policies are designed to leverage the equality-growth nexus. At times when countries worldwide are confronting the severe health crisis of the Covid-19 pandemic, Korea stands out as a success in limiting its damage on the economy and people. However, keeping inclusiveness in check is now critical more than ever before.

The Review is underpinned by rigorous statistical analysis, which makes use of the most relevant, comparable and novel OECD and national statistics and policy-relevant information. The Review includes guidance to complement Korea's policies for inclusive growth and deep-dives into 1) growth dynamics and income distribution; 2) distribution of labour markets outcomes across workers and productivity trickling down across firms, 3) equality of opportunities and foundations for future prosperity; and 4) inclusive forms of governance. Moving beyond GDP metrics and statistical averages, the Review puts *people* at its centre, focuses on a range *outcomes* that matters to people's well-being, including their distribution across different groups of Korean population.

Creating opportunities for all requires a balanced approach of taking both efficiency and equity concerns into account. While Korea has demonstrated an outstanding capacity to catch up with the most-advanced economies, several dualisms have driven discrepancies in the economy. The Review discusses how Korea could further improve inclusive growth through three main levers for policy action: 1) Investing in people and places left behind; 2) supporting business dynamism and inclusive labour markets; and 3) building an efficient and responsive government.

The Review has three chapters. Chapter 1 uses the OECD *Inclusive Growth Dashboard* to assess the overall progress towards inclusive growth in Korea and outlines the main issues for policy consideration consistently with the Framework. Chapter 2 examines the inclusiveness of Korean labour market in view of past and most recent policy developments in the context of a changing nature of work driven by technological progress, globalisation and demographic change. Chapter 3 combines for the first time new OECD data on productivity, business dynamism and global value chains (GVCs) to understand better the main issues for policy consideration to support the future of doing business. A range of product-market, industry, innovation, trade and investment policies are being discussed in the context of labour market reforms (discussed by Chapter 2) to help Korea assess potential synergies and trade-offs to support the inclusive growth agenda. To realise its vision of becoming a "people-centred, sustainable growth economy", it is key for Korea to continue and step up, where necessary, monitoring and aligning policies across the government, while running the inclusive growth agenda through a broad coalition of actors.

Acknowledgements

This review was prepared under supervision of Ziga Zarnic, Head of OECD WISE Centre's Unit on Country Reviews, SDGs and Impact Measurement; and guidance of Gabriela Ramos, former OECD Chief of Staff and Sherpa to the G20, and Romina Boarini, Director of OECD WISE Centre. Liva Stokenberga, Policy Analyst at the OECD WISE Centre, managed coordination of work across the OECD and with Korean authorities.

The principal authors of Chapter 1 are Romina Boarini, Liva Stokenberga and Ziga Zarnic with contributions from authors of Chapters 2 and 3 and data assistance by Michaela Gamba, Statistician at National Accounts Division of the Statistics and Data Directorate. Chapter 1 benefitted from the exchanges with the Sheffield Political Economy Research Institute (SPERI). Chapter 2 was prepared by the Directorate for Employment, Labour and Social Affairs (ELS) under supervision of Mark Pearson, Deputy Director of ELS and the principal authors are Alessandro Goglio, Senior Policy Analyst, and Jongmi Lee, Statistician. Chapter 3 was prepared by the Directorate for Science, Technology and Innovation (STI) under supervision of Chiara Criscuolo, Head of Division on Productivity, Innovation and Entrpreneurship; and the principal authors are Giuseppe Berlingieri, Economist, Nicolas Gonne, Junior Economist, Sébastien Miroudot, Senior Trade Policy Analyst, Ryu Hee Sang, Consultant, and Mariagrazia Squicciarini, Senior Economist. Anne-Lise Faron, WISE Publications and Event Coordinator, prepared the manuscript for publication; Sonia Primot designed the cover and Martine Zaida, WISE Communications, Partnership and Forum Manager, provided advice on communication aspects.

The report has benefitted from consultations with the Committee on Innovation and Entrepreneurship (CIIE) and the Employment, Labour and Social Affairs Committee (ELSAC).

The authors of the report are grateful for constructive collaboration, valuable advice and substantive inputs of the Korean authorities, in particular the Korean Development Institute, as well as the Presidential Committee on Income-led Growth, the Ministry of Economy and Finance, and the Permanent Delegation of Korea to the OECD.

The OECD *Inclusive Growth Review of Korea* builds on a wide-ranging set of past and most recent OECD collaborations with Korea on various aspects of inclusive growth; in particular, the biennial OECD *Economic Surveys: Korea* (2020[1]), *Towards Better Social and Employment Security in Korea, Connecting People with Jobs* (2018[2]), *Working Better with Age: Korea* (2018[3]), *Investing in Youth: Korea* (2019[4]), *Recruiting Immigrant Workers: Korea* (2019[5]), and *Rejuvenating Korea: Policies for a Changing Society* (2019[6]). The OECD *Inclusive Growth Review of Korea* goes a step forward with a comprehensive analysis of Korea's performance in terms of distributing the benefits from growth across the society and providing equal opportunities for all Koreans and firms to maximise their contribution to the economy and society.

Table of contents

Foreword 3

Acknowledgements 4

Executive summary 8

1 Progress towards inclusive growth in Korea 17
- Introduction 18
- Inclusive growth trends in Korea 20
- A vision for an innovative and inclusive nation 30
- Key dynamics to steer policy action on inclusive growth 36
- Monitoring progress with a dashboard of inclusive growth indicators and tracking the impacts of policies on distributional outcomes 48
- Conclusion: Making inclusiveness happen in Korea 50
- References 51
- Annex 1.A. 57
- Notes 59

2 The future of work and skills 61
- Introduction and key findings 62
- Korea's future of work challenges: What does the international comparison suggest? 64
- Policy requirements for a more inclusive and productive future of work in Korea 68
- Policy options for strengthening the inclusion of under-represented groups 86
- References 104
- Notes 108

3 The future of doing business 110
- Summary and key policy insights 111
- Reconciling growth and inclusiveness in Korea: main challenges 115
- Addressing the productivity gaps 121
- Promoting business dynamism 143
- Re-thinking the global value chain strategy of Korea 155
- Conclusion and priorities 167
- References 168
- Notes 174

Tables

Table 1.1 Policies under the inclusive growth pillar 32
Table 1.2 Policies under the innovation-driven growth pillar 33
Table 1.3. OECD Dashboard of Inclusive Growth Indicators 48
Table 2.1. The incidence and relative pay of different types of non regular employment, 2007-2019 70
Table 2.2. Comparison of regular and non regular workers, 2019 71
Table 2.3. Why non-regular workers accept non-regular employment 72
Table 2.4. One-year and three-year mobility from non-regular to regular work 81
Table 2.5. The points system for attributing EPS workers to employers in manufacturing, April 2019 102
Table 3.1. Trade exposure to US-China bilateral trade relationship 157

Annex Table 1.A.1. Dashboard on Inclusive Growth in Korea 57
Annex Table 1.A.2. Sustaining growth and equitably sharing the benefits from growth in Korea 58
Annex Table 1.A.3. Supporting business dynamism and inclusive labour markets 58
Annex Table 1.A.4. Investing in people and places left behind, providing equal opportunities 58
Annex Table 1.A.5. Building efficient and responsive governments 59

Figures

Figure 1. Virtuous circle between growth and inclusiveness 11
Figure 1.1. The Framework of Policy Action on Inclusive Growth 19
Figure 1.2. Korea and OECD trends by indicator: Growth and ensuring equitable sharing of benefits from growth 21
Figure 1.3. Korea and OECD trends by indicator: Equal opportunities and foundations of future prosperity 23
Figure 1.4. Intertwined challenges in the labour and product markets 24
Figure 1.5. Labour productivity, 2017 25
Figure 1.6. The wage gap between men and women is sizeable and is diminishing very slowly 27
Figure 1.7. Korea and OECD trends by indicator: Inclusive and well-functioning markets 28
Figure 1.8. Korea and OECD trends by indicator: Responsive and efficient governance 29
Figure 2.1. The march of the robots 65
Figure 2.2. Robot use in Korea is strongly concentrated by sector 65
Figure 2.3. Jobs at risk of automation in Korea and other OECD countries 66
Figure 2.4. Korea is one of the fastest ageing countries 67
Figure 2.5. Korea has wide wage dispersion and a relatively high share of low-wage workers 68
Figure 2.6. Pay is significantly higher for regular workers and workers employed by large firms 73
Figure 2.7. Minimum wage as a percentage of the median wage in 2016 and 2019 76
Figure 2.8. Korea's trade union density and collective bargaining coverage is well below the OECD average 79
Figure 2.9. The labour markets are polarizing 82
Figure 2.10. Proficiency in problem-solving in technology-rich environments among adults 83
Figure 2.11. The skill gap between younger and older workers in Korea is large 83
Figure 2.12. Differences in training participation and willingness to train between low- and high-skilled adults, by country, 2012, 2015 84
Figure 2.13. Motherhood has a strong effect on women's employment in Korea 87
Figure 2.14. Low paid employment is common in Korea, especially for women workers 89
Figure 2.15. The majority of Korean young people choose to go to college or university 92
Figure 2.16. Fewer than half of young people in Korea are employed 93
Figure 2.17. Korean college or university graduates are more likely to be NEETs than their lower-educated peers 94
Figure 2.18. High employment rates for older workers coexist with high poverty rates in Korea 97
Figure 2.19. Workers in Korea effectively retire later than in any other OECD country 98
Figure 2.20. The share of foreigners in employment has increased sharply over the decade 101
Figure 2.21. Employers of foreign workers report difficulty finding Korean workers 103
Figure 3.1. High growth rates in the past led to fast income convergence 116
Figure 3.2. Productivity growth is unbalanced across sectors 117
Figure 3.3. Korea has one of the largest productivity gaps between manufacturing and services 117
Figure 3.4. There is a large gap in productivity between large firms and SMEs 118
Figure 3.5. Women and elder workers mostly work in small firms in the service sector 119
Figure 3.6. Virtuous circle between growth and inclusiveness 121

Figure 3.7. Productivity disparities between industries are larger in Korea than in other OECD countries 122
Figure 3.8. Size productivity gaps are larger than in other OECD countries in most industries 123
Figure 3.9. Productivity gaps between laggards and frontier firms are large by OECD standards 125
Figure 3.10. Wage gaps relative to large manufacturing firms reflect the productivity gaps 126
Figure 3.11. Large wage differentials between frontier firms and laggards in manufacturing 128
Figure 3.12. Uneven diffusion for key ICT tools 129
Figure 3.13. Low adoption of productivity-enhancing ICTs that are well suited to SMEs 131
Figure 3.14. Korea's innovative ability is very concentrated and not oriented towards publishing scientific research 132
Figure 3.15. The gap between R&D in services and in manufacturing is the largest in the OECD 132
Figure 3.16. Young Korean women have a high potential to harness digitalisation 134
Figure 3.17. Firm-based training lags behind, especially for Koreans with low skill levels 135
Figure 3.18. Gender differences are sizeable in Korean businesses 136
Figure 3.19. The size distribution is skewed towards micro-businesses and SMEs in Korea 145
Figure 3.20. The size distribution is heterogeneous across industries 146
Figure 3.21. The Korean business environment appears very dynamic at first sight 147
Figure 3.22. Most micro-entrants do not scale up…if they survive at all 148
Figure 3.23. Survival and post-entry growth are heterogeneous across industries 149
Figure 3.24. Size-contingent labour laws create disincentives to grow in France 151
Figure 3.25. Korea has the highest GVC participation among G20 economies 156
Figure 3.26. Korea has the highest GVC participation among G20 economies 157
Figure 3.27. Most exposed Korean industries to bilateral US-China trade 158
Figure 3.28. Korea is among the main hubs in GVCs for manufacturing 159
Figure 3.29. Contrasted outcomes when looking at the change in GVC centrality for Korean industries 160
Figure 3.30. Korea has generally increased its income in GVCs because of a higher domestic and foreign demand 162
Figure 3.31. Korea has a strong GVC comparative advantage in five manufacturing industries 163
Figure 3.32. Some service sectors are shielded by high trade restrictions 164
Figure 3.33. Within manufacturing GVCs, Korea specialises in R&D tasks 165

Boxes

Box 1.1. What does inclusive growth imply? The OECD Framework for Policy Action on Inclusive Growth 18
Box 1.2. The role of business in inclusive growth 35
Box 1.3. Women's economic empowerment in Iceland 39
Box 1.4. The 2018 reform for continuous training in France 40
Box 1.5. Fostering collaboration between education institutions and businesses: country practices 43
Box 1.6. Improving trust through citizen engagement: the case of the Netherlands 47
Box 1.7. From well-being measurement and evidence-building to a well-being budget and mainstreaming in policy-making in New Zealand 49
Box 2.1. The revised Minimum Wage Act 77
Box 2.2. International experience with minimum wage commissions 78
Box 3.1. New evidence based on MultiProd, DynEmp and TiVA 113
Box 3.2. The challenge of reforming the service sector 138
Box 3.3. Financial support for SMEs and start-ups 150
Box 3.4. Size contingencies and disincentives to grow 150
Box 3.5. Streamlining public support for SMEs and start-ups 154
Box 3.6. The exposure of Korea to protectionism 157
Box 3.7. GVC centrality 159

Executive summary

Korea's balanced response to the Covid-19 pandemic has addressed the health emergency, while limiting the damage to the economy and people's livelihoods

Governments, policy-makers, scientists and medical professionals worldwide are confronting the severe health crisis of the Covid-19 pandemic, as well as addressing its social and economic ramifications. While the prospects for developing an effective remedy are on the horizon at the time of writing, lessons are emerging from country approaches to managing the crisis.

Korea stands out as a success, with early and decisive action in simultaneously keeping the disease at bay with innovative digital solutions for testing and symptom tracking, while avoiding a total lock-down of the economy. The government has introduced unprecedented measures to mitigate the pandemic's impact, with supplementary budgets (voted or proposed) totalling about 3.5% of annual GDP, of which about 70% envisioned for being debt-financed, with the remainder funded through savings on government expenditure (OECD, 2020[7]). The supplementary budgets provide resources for the health sector, loans to SMEs, emergency support to households, assistance for severely hit industries and employment support.

Korea has played an important role as a leading exporter of medical test kits, having quickly built a successful export industry (20% rise in April alone). GVCs helped drive this innovation, although the crisis also highlighted the fragility of global health supply chains. A permanent slump in world trade is a downside risk. As an export-oriented economy, Korea is vulnerable to further weakness in foreign demand and to lasting disruptions in global value chains.

Strong and rapidly implemented fiscal and monetary policy measures to support households and businesses helped Korean economy to contract much less than other OECD economies in 2020. The projected contraction in GDP in 2020 is considerably milder than in other OECD countries. Real GDP in Korea is projected to decline by 1.0% in 2020 and to grow by 3.1% in 2021 (OECD, 2020[7]) compared to a projected fall in global GDP by 4.5% in 2020 and 5.0% in 2021.

Labour markets were disrupted by reductions in working hours, job losses and the enforced shutdown of businesses. The pandemic compounds pre-existing challenges, many of which are shared to various degrees by most OECD countries. Better mobilising labour resources, especially from women, older workers and youth, can partly counteract this trend, as well as help build a more inclusive economy and society. The rise in Korea's unemployment rate has been modest at the onset of crisis, from 3.3% in February to 4.5% in May 2020; however, partly linked to low participation of women in the labour force. As in other OECD countries, the labour market recovery in Korea will be gradual until the end of 2021 (OECD, 2020[8]).

As in many OECD countries, the unemployment increase has also disproportionately affected non-regular workers. As shown in the *OECD Employment Outlook* (2020[8]), self-employed, temporary and part-time workers – for example – account for up to 40% of employment in the most affected sectors. The young are once again at risk of becoming the biggest casualties of the crisis: youth unemployment in the OECD

jumped from 11.3% in February, to 16.7% in June. The COVID-19 outbreak has hit temporary and daily workers hard, with the number of temporary workers plunging by 501 000 in May 2020 (OECD, 2020[8]).

The uneven labour market impact of COVID-19 crisis may exacerbate already large income disparities in Korea. In the first quarter of 2020, the average monthly income of the lowest quintile households remained the same as the first quarter of 2019 while that of the highest quintile increased by 6.3% (OECD, 2020[1]). In response, the Korean government has introduced a range of measures to support employment, including an emergency employment security subsidy, relief checks (emergency disaster relief payments) to all households, emergency employment security subsidy for vulnerable workers, and increased subsidies for job retention scheme (OECD, 2020[8]). Going forward, Korean government's efforts to strengthen social protection along with easing labour market regulations once the COVID-19 crisis is overcome would promote the reallocation of workers towards their most productive use and reduce labour market duality.

Korea's economic performance in the last decades has been impressive, but the growth model has left many behind

Over the past decades, Korea has made impressive leaps on material well-being and has made significant progress on some dimensions of non-economic well-being. Per capita income has increased from 6% of the OECD average in 1970 to 97% in 2019 (OECD, 2019[9]) while life expectancy has increased by a significant 20 years in this period. Capitalising on the increasingly well-educated population, Korean exporters have climbed the value-added ladder and many have become respected global household names.

The previous export-driven growth strategy, by favouring and supporting a narrow range of sectors and businesses, has contributed to a number of challenges related to inclusiveness and sustainability for the Korean economy with growing productivity divides among firms, industries and workers, and in absence of strong redistribution and vibrant social dialogue. For instance, Korea's relative poverty rate is well above the OECD average, reaching 45.7% of those older than 65 years. Along with Estonia and Latvia, Korea is among the OECD countries with the largest gender poverty gap (OECD, 2019[10]). Similar to a number of other OECD economies, income and wealth concentration at the top of the income distribution increased in the previous decade. Between 2007 and 2014, the income share of the richest 1% rose from 7.5% to 11.2%. Workers in the bottom 10% of the income distribution saw virtually no wage growth over the past two decades. As in many other OECD countries, social mobility represents a challenge in Korea – currently it would take a child born into a low-income family about five generations (or up to 150 years) to reach the average level of income in Korea, compared to the OECD average of 4.5 generations (OECD, 2018[11]) To enhance social mobility and promote equal opportunities, Korea has stepped up investments in Early Childhood Education and Care (ECEC) and education, yet annual average tuition fees from primary to tertiary education are still above the OECD average in Korea, which puts children of lower socio-economic background in a disadvantaged position.

Labour market dualism remains a key challenge, despite recent progress in extension of the social safety net, regularisation of workers and support to groups underrepresented in the labour market (youth, women, older workers)

Over the past few years, the government has significantly stepped up efforts to deliver on job creation and to regularise public sector workers, thus providing better pay, working conditions and social guarantees. Going forward, measures have been announced to facilitate the employment of groups currently underrepresented in the job market namely women, youth and older workers. They will also expand the basic social insurance and develop personalised accident insurance including for platform workers.[1] Korea has also extended the coverage of the Unemployment Benefit Guarantee, and introduced support for training and upskilling of workers transitioning between workplaces.

Despite these efforts, labour market dualism, large wage disparities and limited opportunities for some societal groups remain a concern. Labour market dualism is clearly indicated by the high proportion of non-regular workers, who account for about one-third of all employees and whose pay and other terms of employment are considerably less attractive than those of regular workers. For example, only 70.8% of non-regular workers are covered by employment insurance. Temporary workers earn less than 60% of the hourly wage of a standard worker (OECD, 2015[12]). Both men and women in temporary employment have lower probabilities of moving into standard employment than the unemployed (OECD, 2015[12]).

Wage dispersion was one of the highest in the OECD and more than 20% of full-time workers earned less than two-thirds of the median wage in 2017. Women, youth and the elderly tend to be employed in smaller, less productive firms. For example, in 2017, older workers accounted for 37% of the economically active population, with 21 percentage points corresponding to employment in small service firms and only 1 percentage point in large manufacturing firms. The gender wage gap at 32.5% was among the highest among the OECD countries in 2019. It was also mirrored in the labour participation gap, with only 52.9% of women participating in the labour market in 2018, compared to the participation rate of 73.7% among men.

Finally, in Korea, like in a number of OECD countries, labour productivity growth and median wage growth have decoupled, reflecting a decline of labour share in national income. Dualisms and disparities across labour markets go hand in hand with dualisms and disparities in firms.

Wide productivity gaps persist across firms and workers

OECD research on the *Productivity-Inclusiveness Nexus* (2018[13]) has shown that the composition and quality of growth has a direct bearing on equality of outcomes. In Korea, labour productivity gaps between large and small companies are holding back aggregate productivity growth. In Korea, labour productivity is 40% lower in service SMEs than in large manufacturing firms, as compared to 20% in other countries. Productivity in SMEs in manufacturing has fallen to less than one-third of that in large firms. Overall, labour productivity is significantly below the OECD average (USD 37 of GDP per hour worked in Korea, compared to USD 54.7 in the OECD).

Korea is also characterised by low survival and scale-up rates amongst the many small start-ups and young firms despite the large number of schemes supporting SMEs (more than 1 300). In the market services sector, only 2.5% of entrants with less than 10 employees achieve growth, compared to 6% in other OECD countries on average. Assessing, evaluating and streamlining existing SME support programs could help addressing the low survival and scale-up rates.

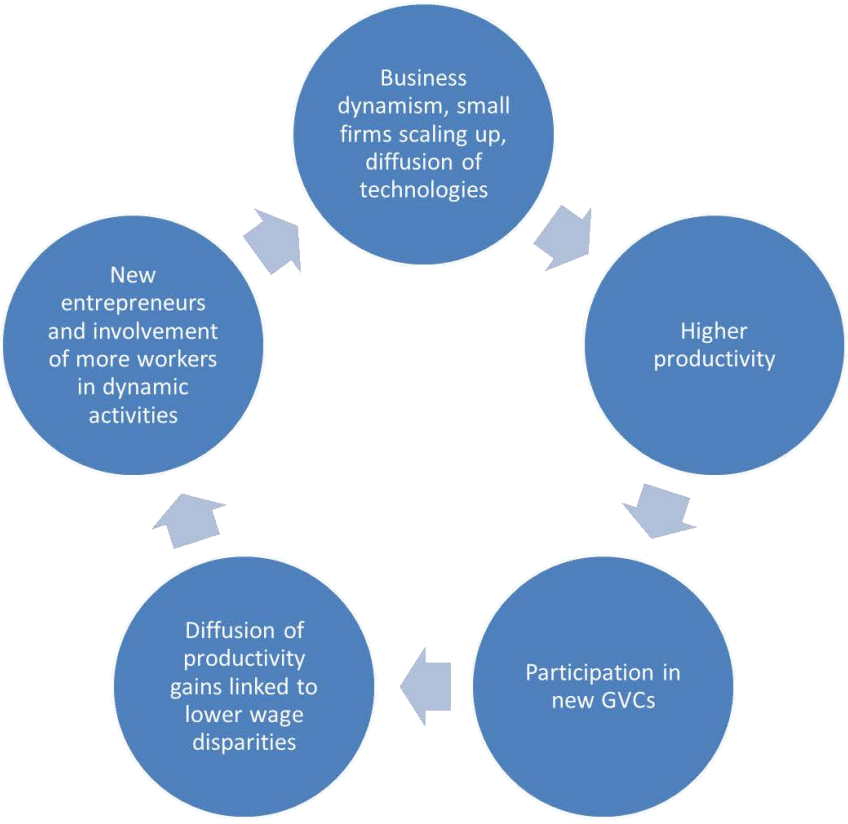
Technology diffusion has also been uneven. Although virtually all Korean companies have broadband access, and many of them use basic ICT tools such as website and enterprise resource planning (ERP)

software, they tend to lag behind in terms of other key tools, such as consumer relationship management (CRM) support, cloud computing, e-sales or big data.

OECD research (presented in this review) shows that a focus on pro-growth policies that target efficiency in isolation has brought about unintended adverse social and economic consequences. Indeed, past Korean winner-picking and specialisation policies may have weakened competition and protected incumbents, contributing to productivity gaps across firms and sectors, hence hindering aggregate productivity growth.

To establish itself as a global front-runner of the fourth Industrial revolution, the current administration has taken a number of pro-innovation measures. For instance, Korea has introduced regulatory sandboxes and Regulation-Free Special Zones to encourage innovation and has boosted investment in industries that will fuel the digital economy (e.g. blockchain autonomous driving, artificial intelligence, data networks and biotech). Some of these measures that are part of the government's push to boost innovation and Korea's international competitiveness may have the same unintended consequences that similar policies had in the past. Namely, some measures favour large incumbent companies while making it challenging for SMEs to compete on equal footing. In 2019, the government announced provisions to level the playing field between the manufacturing and services sectors, but additional measures may be needed to prevent large firms from capturing the productivity gains of smaller firms (e.g. through competition policy, trade and investment reforms and measures aimed at preserving the intellectual property rights of SMEs) and to streamline the support available to SMEs. Diversifying exports and encouraging the services sector to integrate in Global Value Chains (GVCs) can also allow a broader set of firms to benefit from gains from trade and can improve the resilience of the Korean economy to external shocks. All these measures can be key to unlocking the virtuous circle between productivity and inclusiveness (Figure 1and Chapter 3).

Figure 1. Virtuous circle between growth and inclusiveness



Korea can position itself to gain from the megatrends of digitalisation, ageing and reorganisation of GVCs, but proactive policies are needed to avoid the deepening of socio-economic divides

The megatrends of digitalisation, ageing and reorganisation of global trade networks will have a profound impact on the Korean economy, as in many other OECD countries. Korea is investing significantly in the innovative capacity of the economy and is a frontrunner in terms of R&D investment among OECD countries. Korea's central position in a number of GVCs for high value-added industries can help Korea position itself in cutting edge manufacturing sectors and introduce services in its export mix (which are less vulnerable to barriers and external shocks). And while population ageing will bring its share of challenges, it will also mean more demand for new goods and services that cater to older demographics.

Comprehensive policy packages with inclusiveness in design will be needed to ensure that Korea harnesses the benefits of the megatrends, while mitigating their possible adverse effects on inclusion and sustainability. For instance, digitalisation will lead to the automation of around 10% jobs in Korea and significantly affect a further 33%. Moreover, intergenerational, urban-rural and gender divides are already emerging when it comes to access to and use of new technologies. Finally, digitalisation and reorganisation of GVCs could exacerbate the productivity disparities between frontier firms and the rest. Population ageing brings and exacerbates a range of challenges, such as a shrinking working-age population, pressures on public finances, social exclusion and isolation and old age poverty.

Going forward, it is important to promote inclusive policy-making by effectively engaging with citizens, while looking at ways to make social spending and redistribution more effectively targeted to low-income groups

To capitalise on the measures promoted under both pillars of the current administration's vision for an Inclusive and Innovative Nation, and to achieve a growth model that puts people in the centre of all policy making, it is crucial to implement in a coherent and balanced manner both innovation and inclusiveness pillars. This process should be underpinned by a measurement and evaluation framework that tracks progress on policy objectives and regularly assesses the impact of measures undertaken on the intended distributional outcomes. It will be important to ensure that the measurement framework is populated with timely and internationally comparable statistics on the distribution of economic and non-economic well-being across the population, including granular data for the top income distribution (top 1%, 5% and 10% income earners).

Special consideration should be given to embed distributional considerations into budgeting and more widely into policy evaluation and design, following the example of countries such as New Zealand, Ireland and to some extent Italy.

To promote trust in institutions and to raise support for policy reforms, it is important to move to an effective engagement of Korean citizens in the decision- and policy-making process. Equally crucial is to demonstrate a commitment to addressing perceptions of undue advantages, for example vested interests in business, education and other spheres of life.

In an ageing population enjoying a sustained increase in living standards, pressures for more and better public services might need to be addressed in the near future. At the same time, there is a need to pay close attention to the perceptions and attitudes of the population towards acceptability of possible tax increases in the context of low trust in government, which is a challenge faced by a number of OECD countries. Despite more than tripling since 1990, social spending remains low by OECD standards, 11.1% of GDP in 2018 as compared to 20.1% on average in the OECD (2019[14]), and taxes and transfers can be used more effectively to address inclusiveness challenges. The progressiveness of the tax system has

recently been strengthened (e.g. higher personal income tax rate on higher incomes introduced in 2017 and 2018) but remains weak (Causa and Hermansen, 2017[15]).

In the context of low public spending, ineffective redistribution and the electoral dynamics of an ageing society, there is a growing intergenerational divide between the young and the elderly. The young are unhappy with the welfare system, which requires them to take responsibility for the elderly, while simultaneously having to compete with older people for jobs. The intergenerational tension is representative of a broader societal trend, i.e. a lack of social cohesion and the erosion of societal ties. These have not traditionally been areas targeted by public policy, and present a missed opportunity. A strong social network, or community, can provide emotional support during both good and bad times as well as provide access to jobs, services and other material opportunities. In Korea, 78% of people believe that they know someone they could rely on in a time of need, the lowest rate in the OECD, where the average is 89% (OECD, 2017[16]). Recent local level policies in Korea have looked at some aspects of the isolation and exclusion of the elderly who live alone. For example, the Seoul Metropolitan Government has established a Comprehensive Plan for 50+ Assistance, which provides life training, emotional support, cultural experiences and retraining for continued social opportunities among the newly retired (OECD, 2018[17]). Successful initiatives of this kind that foster inclusive communities could be scaled up at the national level, linking into related policy areas such as education, skills, housing, gender or connectivity policies.

The following table summarises the key findings of the *Inclusive Growth Review of Korea* as well as possible actions that could leverage and complement government's current efforts towards inclusive growth.

Main Findings	Priorities for policy action on inclusive growth
First Pillar of the OECD Inclusive Growth Framework – Investing in people and places left behind	
In 2017, 18.4% were NEET in Korea, compared to 13.2% on average in the OECD. Korea has reintroduced apprenticeships, *Meister* schools and incentives for more labour-relevant degrees and competency-based recruitment practices.	• Continue efforts to diversify vocational training options. • Base the curriculum on the National Competency Standards (NCS). • Reduce labour market mismatch for young people by enhancing links between vocational training and schools, universities and the industry. • Enhance career counselling, especially for disadvantaged youth.
Despite dedicated policy action over the previous years, female participation in public life is low by OECD standards. Gender gaps also persist in employment, pay, and poverty.	• Low- and no-cost measures that can be implemented without delay include campaigns that address attitudes and stereotypes regarding women's career opportunities (e.g. boosting the participation of girls and women in STEM), their participation in the labour market and in public life. • Encourage fathers to take paternity leave through higher rates of compensation for shorter time periods. • Continue expanding coverage of the Employment Insurance (EI) system to parents who are currently not eligible.
The relative poverty rate of those over age 65 is 45.7%, far above the 12.9% OECD average (OECD, 2018[18]). The Basic Pension is continuously increased with the latest change in April 2019. National Pension Service Act expanded the coverage by allowing deferred payment of pension premiums for career breaks due to childbirth, etc. In addition, a subsidy for NPS contribution paid by the unemployed and a subsidy for employees at small firms was introduced.	• Continue increasing the NPS coverage and the Basic Pension. • Strengthen the pension scheme coverage for self-employed and non-regular workers. • Gradually raise government revenue to finance greater social spending, focusing on taxes with a less negative impact on growth, such as VAT and environment-related taxes that consider inclusiveness aspects in their design.
Second Pillar of the OECD Inclusive Growth Framework – Supporting business dynamism and inclusive labour markets	
Labour market inclusiveness	
Regular workers are highly protected in Korea, particularly in large firms, as a result of labour laws, court decisions, business practices, social customs and labour unions. Non-regular workers have significantly lower pay, conditions and guarantees than regular workers, e.g. only	• Break down dualism through a comprehensive strategy that would ensure that employment protection for regular workers is not overly stringent and make it more transparent, while increasing social insurance coverage for

Main Findings	Priorities for policy action on inclusive growth
70.8% of non-regular workers are covered by employment insurance. The government aims to transform the contracts of 205 000 non-regular workers in the public sector to regular status by 2020. In 2018, the subsidy to firms that convert non-regular workers to regular status was increased.	non-regular workers and improve their access to training and other active labour market policies.
The government has announced plans to expand basic social insurance by revising asset and income evaluation, and to develop personalised accident insurance including for platform workers.	• Work to further adapt social protection systems to emerging forms of work, including by linking entitlements to individuals rather than jobs.
Older workers tend to be retired in their early fifties and then continue in employment with inferior status, pay and benefits.	• Support older workers in retaining the skills needed for the labour market. • Promote a flexible wage system based on performance and job category, rather than seniority, introduce a wage peak system, while abolishing firms' right to set a mandatory retirement age.
Training participation is 47.6% higher among high-skilled than low-skilled adults. The government plans to expand job training to all employees (including the self-employed), covering 60-70% of costs incurred. The 2018 law reducing maximum working hours from 68 to 52 per week will be extended to all businesses with five or more employees by July 2021.	• Build an effective system of lifelong learning based on National Competency Standards (NCS) to ensure that workers can use and upgrade their competences throughout their working lives. • Continue removing barriers for up-skilling, especially for non-regular and low-skilled workers. • Enforce adjustments in working hours to ensure that the lowest skilled do not forego training because of lack of time and are as likely as the highest skilled to participate in training.
The minimum wage increased by 29% between 2017 and 2019, with a planned further increase of 2.9% in 2019. In 2018, the minimum wage had increased to 59% of the median wage (for full-time workers), one of the highest proportions in the OECD.	• Take action to ensure that the increase in the minimum wage, including in the context of the simultaneous reduction in working hours, does not result in an increase in informal and/or non-regular work by pricing low-skilled workers out of jobs.
Collective bargaining coverage is low by OECD standards (12% in Korea, as compared to the OECD average of 32% in 2016), with coverage concentrated in manufacturing, construction and large firms.	• Facilitate inclusive dialogue with social partners and other relevant stakeholders and, where necessary, adapt today's labour market, skills and social policies to emerging needs. • Set up an effective evaluation framework to assess progress with implementing the policies to support more inclusive labour markets in Korea.
Business dynamism	
Productivity in SMEs in manufacturing has fallen to less than one-third of that in large firms. Productivity in the service sector is 43% of that in manufacturing. The productivity gaps mirror wage disparities; issues of labour market duality and productivity are closely intertwined.	• Continue addressing the productivity disparities. Push forward with plans to provide the service sector with the same level of fiscal, tax and financial support as manufacturing has had. • Promote technology diffusion between leader and laggard firms.
Korea has a very developed set of policies aimed at helping SMEs and young firms and the administration has recently reinforced support in 2019-20 through loans, extension of the Growth Support Fund, guarantees, a new "Scale-up Fund", a New Capital Market Innovation Plan, and new rules for financial institutions providing loans and credit guarantees. Nevertheless, Korea's business environment is characterised by low survival rates of entrants and scale-up challenges.	• Address size contingencies in schemes supporting firms, in tax laws and in labour laws, as they discourage small firms from growing and moving on from the SME category. • Help start-ups and SMEs navigate the complex landscape of available support programmes and measures by providing a "one-stop shop" for SME support. • Assess, evaluate and streamline existing support.
Korea has introduced a number of innovative policies to support innovation and boost business dynamism, including regulatory sandboxes and Regulation-Free Special Zones.	• Further encourage experimentation and venturing into new activities by promoting competition through regulatory reform and market selection through better insolvency regimes.
By OECD comparison, Korea has relatively high trade and investment barriers that can partly explain productivity gaps between industries. These barriers typically reduce competitive pressures and hinder the creative destruction process that forces inefficient businesses to exit the market.	• Promote competition through trade and investment liberalisation and by addressing unfair business practices faced by small firms. • Target horizontal measures (i.e. not sector-specific) first, such as simplifying procedures to set up companies.
In the last three decades, Korea has increased its productivity and income through greater participation in Global Value Chains (GVCs) and currently has the highest index of participation among the G20	• Rebalance the participation of Korea in GVCs from manufacturing to service activities to promote inclusiveness, productivity growth and preserve Korea's

Main Findings	Priorities for policy action on inclusive growth
economies. While Korea ranked 7th among the top 10 manufacturing hubs in GVCs, it ranked only 21st among services.	position as one of the main manufacturing hubs in the context of *servitisation* of manufacturing (services being bundled with manufactured goods), the increasing role of services in the digital economy, and the resilience of the service sector to external shocks and trade disputes.
Third Pillar of the OECD Inclusive Growth Framework – Building efficient and responsive government	
Korea has developed a wide range of well-functioning public institutions to ensure effective public service delivery. Like a number of OECD countries, however, Korea is experiencing a low level of trust in public institutions.	• Demonstrate commitment for preventing and tackling policy capture. • Address perceptions of unfairness in business, education and other facets of public life. • Move to effective engagement of civil society in the decision- and policy-making process. • Formalise coordination mechanisms across ministries, other institutions and stakeholders to ensure a whole-of-society buy-in for the growth model that puts people at the centre of policies for pursuing inclusiveness and innovation.
Complex long-term strategies need to be underpinned by a monitoring framework that tracks progress over time and informs about needed adjustments in policy and budget indicators. Existing frameworks, such as the key performance indicators (KPI) used in the budgeting process and the indicator framework of the Special Committee on Income-led Growth should be consolidated to track developments over time in a comprehensive manner.	• Develop a comprehensive measurement framework for tracking progress and evaluating policy effectiveness and their impact on inclusiveness, including of reforms in the labour market and in promoting business dynamism and innovation. • Embed the measurement framework into the budgeting cycle and institutionalise the framework for longevity and continuity across the electoral cycle.
The progressiveness of the tax system has recently been strengthened (e.g. higher personal income tax rate on higher incomes introduced in 2017 and 2018, establishment of the refundable child tax credit in 2015), but remains weak as a relatively large share of benefits go to middle- and high-income households. Redistribution through taxes and transfers has been ineffective in addressing the inclusiveness challenges as the bottom 40% of households pay more in taxes than they receive in transfers (Causa and Hermansen, 2017[15]). In addition, social spending remains low by OECD standards (11.1% of GDP in 2018 as compared to 20.1% on average in the OECD) despite more than tripling since 1990.	• Address demands for redistribution, provide more tailored support to societal groups and individuals left behind. • Monitor the appetite for increase in taxes to finance quality public services and investment in future productivity (e.g. in skills and health of the population).

References

Causa, O. and M. Hermansen (2017), *Income redistribution through taxes and transfers across OECD countries*, OECD Publishing, Paris, https://doi.org/10.1787/bc7569c6-en. [15]

OECD (2020), *OECD Economic Outlook, Volume 2020 Issue 2*, OECD Publishing, Paris, https://doi.org/10.1787/39a88ab1-en. [7]

OECD (2020), *OECD Economic Surveys: Korea 2020*, OECD Publishing, Paris, https://doi.org/10.1787/2dde9480-en. [1]

OECD (2020), *OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis*, OECD Publishing, Paris, https://doi.org/10.1787/1686c758-en. [8]

OECD (2019), *Investing in Youth: Korea*, Investing in Youth, OECD Publishing, Paris, https://dx.doi.org/10.1787/4bf4a6d2-en. [4]

OECD (2019), *OECD National Accounts Database*, http://dotstat.oecd.org/Index.aspx?DataSetCode=SNA_TABLE1. [9]

OECD (2019), *OECD Social Expenditure Database*, https://www.oecd.org/social/expenditure.htm. [14]

OECD (2019), *Recruiting Immigrant Workers: Korea 2019*, Recruiting Immigrant Workers, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264307872-en. [5]

OECD (2019), *Rejuvenating Korea: Policies for a Changing Society*, OECD Publishing, Paris, https://dx.doi.org/10.1787/c5eed747-en. [6]

OECD (2019), *Society at a Glance 2019: OECD Social Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/soc_glance-2019-en. [10]

OECD (2018), *A broken social elevator? How to promote social mobility*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264301085-en. [11]

OECD (2018), *OECD Economic Surveys: Korea 2018*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-kor-2018-en. [18]

OECD (2018), *Opportunities for All: A Framework for Policy Action on Inclusive Growth*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264301665-en. [17]

OECD (2018), *The Productivity-Inclusiveness Nexus*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264292932-en. [13]

OECD (2018), *Towards Better Social and Employment Security in Korea*, Connecting People with Jobs, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264288256-en. [2]

OECD (2018), *Working Better with Age: Korea*, Ageing and Employment Policies, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264208261-en. [3]

OECD (2017), *How's Life? 2017: Measuring Well-being*, OECD Publishing, Paris, https://doi.org/10.1787/how_life-2017-en. [16]

OECD (2015), *In It Together: Why Less Inequality Benefits All*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264235120-en. [12]

Note

[1] Individuals who use an app (such as Uber) or a website (such as Amazon) to match themselves with customers, in order to provide a service in return for money.

1 Progress towards inclusive growth in Korea

Over the last thirty years, Korea has shown an impressive performance in catching up with the income levels of OECD best performers. Growth has, however, yet to translate into equal gains for all groups of Korean society. Affluent households have seen their living standards increase faster than those of the poorest and the middle class.This chapter assesses the main inclusive growth challenges in Korea, by applying the OECD Inclusive Growth Methodology, which consists of a Dashboard of 24 inclusive growth indicators and a framework for policy action on inclusive growth. After having analysed some of the recent measures enacted by the government to foster inclusive growth, the chapter suggests areas where additional efforts may be needed, particularly in better aligning pro-innovation and pro-productivity policies with policies for inclusion. The chapter also highlights the importance of building more space for engagement with stakeholders, which will be key for implementing policies effectively.

Introduction

A number of OECD countries have experienced an increase in income inequality and stalling social mobility in recent years (OECD, 2018[1]). This has gone hand in hand with a slowdown of productivity growth that has further hampered wage growth, especially for some categories of workers and firms. Korea has experienced similar trends and despite the impressive catching up with OECD economies over the last thirty years, it remains a country with a number of deeply rooted inequalities. Inequalities compromise future prosperity in a context where ageing and digitalisation are adding further social and economic pressures to the economy and the society.

Building on more than ten years of comprehensive research on the drivers and consequences of inequalities catalysed by the OECD Inclusive Growth initiative, this chapter assesses the main inclusive growth challenges in Korea. The chapter applies the OECD Inclusive Growth Methodology, which consists of an Inclusive Growth Dashboard and an Inclusive Growth Framework for Policy Action (see Box 1.1). The OECD defines inclusive growth as growth that is distributed fairly across society and creates opportunities for all. The IG Dashboard and Framework operationalise this definition, providing guidance on the key results that an inclusive growth model ought to achieve and on the best pathways for achieving those outcomes.

OECD research on inclusive growth has shown that the accumulation of disadvantages for certain societal groups can have adverse effects on the prosperity and well-being of all (OECD, 2015[2]; 2015[3]; 2011[4]; 2017[5]; 2015[6]), but also on productivity and economic growth (OECD, 2017[7]; Llena-Nozal, Martin and Murtin, 2019[8]). In addition, failures to address inequalities may lead to the erosion of the social contract, to social instability and to disengagement from politics (e.g. through low voter turnout) with direct consequences for the legitimacy of governments to set priorities and implement policies (OECD, 2018[1]).This is why action to address inequalities is urgent and the ambition of the current Korean administration to make the economy working to the benefits of all is timely and appropriate.

After having analysed some of the recent measures enacted by the government to foster inclusive growth through the prism of the OECD Framework for Policy Action on Inclusive Growth, the chapter suggests areas whether additional efforts may be needed, particularly in terms of better aligning pro-innovation and pro-productivity policies with policies for better inclusion. The chapter also highlights the importance of building more space for engagement and consultation with stakeholders, which will be key for implementing policies effectively.

Box 1.1. What does inclusive growth imply? The OECD Framework for Policy Action on Inclusive Growth

Since 1960, when the OECD foundations were laid down, the OECD recipe for sustainable growth has always been about improving the overall well-being for all, not just the few. The last crises highlighted the need for an economy that can fully deliver for citizens, address the issue of rising inequality both in terms of present outcomes and of future opportunities for the next generations and restore trust in the action of government. These principles are front and center in the OECD Secretary-General's *21 for 21* Agenda for "putting people at the center of policy", defining inclusive growth as:

> *Inclusive growth is about economic growth that is distributed fairly across society and that creates opportunities for all. This fundamentally changes the conversation – from one that focuses on efficiency of growth to the one that looks at what could be done in terms of equity to ensure equal opportunities in the first place.*

At the 2017 OECD Ministerial Council Meeting, ministers of OECD member countries stated that growth should be strong, sustainable, balanced and inclusive. Ministers asked the OECD to work through its committees and relevant bodies on the development of a *Framework for Policy Action on Inclusive Growth* for the 2018 Ministerial Council Meeting, and to document inequalities of income and opportunities through a comprehensive evidence-based analysis [C/MIN(2017)9/FINAL].

The OECD dashboard of Inclusive Growth Indicators is organised around four categories:

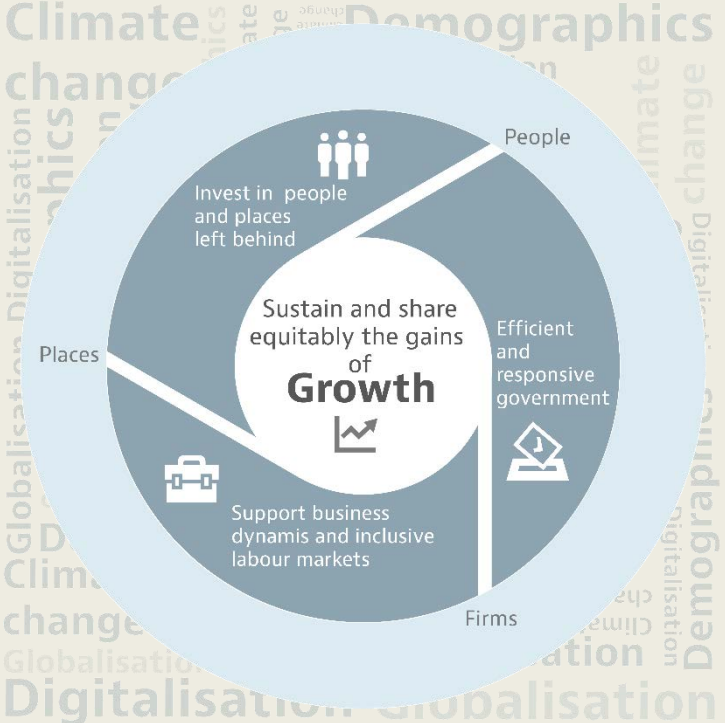
1. **Growth and ensuring equitable sharing of benefits from growth**
2. **Inclusive and well-functioning markets**
3. **Equal opportunities and foundations of future prosperity**
4. **Governance**

See further details on the dashboard in Annex 1.A.

The *OECD Framework for Policy Action on Inclusive Growth* aims to help governments sustain and better share the benefits from economic growth. Supported by a dashboard of indicators to monitor trends on growth and inclusiveness, the Framework identifies possible policy responses that can improve outcomes in terms of inclusive growth. It builds on a range of OECD strategies and projects, including the Jobs Strategy, Skills Strategy, Innovation Strategy, Going for Growth Strategy, Going Digital project and Green Growth Strategy, among others. Moreover, it is extensively supported by the analysis set out in Part II of the present report.

The Framework highlights three key dynamics that policies can help to catalyse, that illustrates the main building blocks of policy action to *sustain and more equitably share the gains of economic growth by: (1) Investing in people and places that have been left behind, (2) Supporting business dynamism and inclusive labour markets, and (3) Building efficient and responsive governments.*

Figure 1.1. The Framework of Policy Action on Inclusive Growth



Source: (OECD, 2018[9]), *Opportunities for All: A Framework for Policy Action on Inclusive Growth*, OECD Publishing, Paris, https://doi.org/10.1787/9789264301665-en.

Inclusive growth trends in Korea

Sharing equitably the fruits of growth

Recently surpassing the USD 30 000 per-capita income threshold, Korea's GDP per capita has increased from 6% of OECD average in 1970 to 97% in 2019 (OECD, 2019[10]). Capitalising on a well-educated population and an innovative manufacturing sector, GDP per capita grew in Korea more than on average in the OECD after the global financial crisis.

Growth has yet to translate into equal gains for all groups of Korean society, however. Affluent households have seen their living standards and wealth increase faster than those of the poorest and the middle class. As observed in a number of other OECD economies, in Korea, the incomes and wealth of the rich grew before and after the Great recession. Between 2007 and 2014, the income share of the richest 1% rose from 7.5% to 11.2% in Korea (OECD, 2018[1]). No more recent data are available on a comparable basis, suggesting that additional statistical efforts should be made for tracking income distribution at the top on an internationally comparable level.

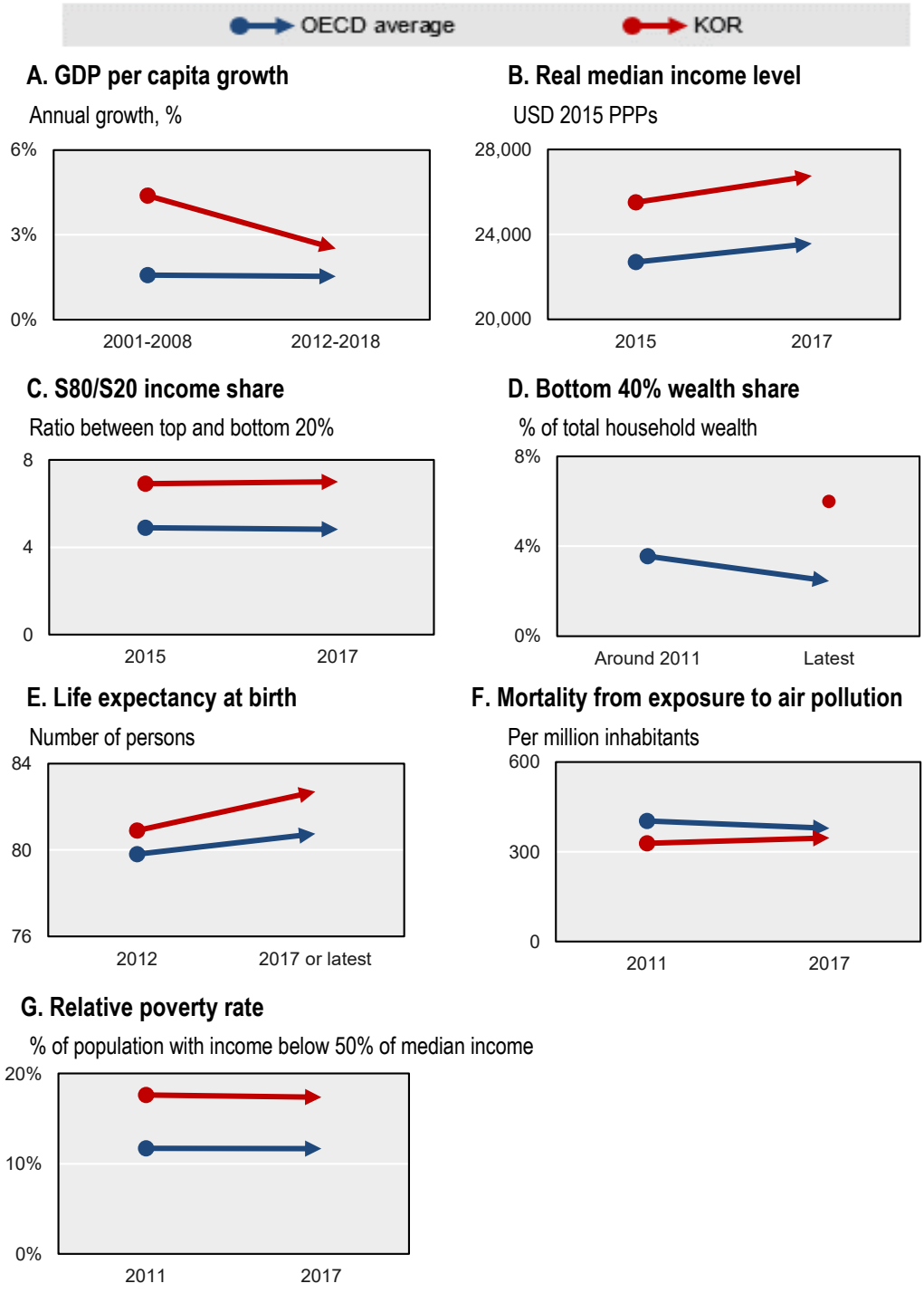
When looking at all population groups, income inequality[1] has remained stable and above the OECD average: between 2015 and 2017 the gap between the top and bottom 20% income earners increased from 6.9 to 7 in Korea, and from 4 to 5 in the OECD on average (Figure 1.2). In 2016 the bottom 40% held 6% of all assets, which is more than in the OECD on average (2.5%). Non-material wellbeing has improved in some areas. Since 1970, life expectancy has increased by 20 years, the second largest increase in the OECD (OECD, 2017[11]). In 2018, life expectancy was 82.7 years, 1.9 years above the OECD average, up from 80.2 in 2010.

In the context of the COVID-19 pandemic, effective measures to contain the spread of COVID-19 have limited the estimated fall in GDP to just over 1% in 2020, the smallest decline in the OECD. Growth is expected to pick up to about 3% in 2021 and 2022. Global GDP was projected to contract by 4.2% in 2020 and grow by 4.2% in 2021 and 3.7% in 2022 (OECD, 2020[12]).

The emergence and intensification of trade tensions in 2018-19 has weighed on investment in Korea (OECD, 2019[13]). At the same time, growth has come with high pollution and resource consumption in Korea where high population density exacerbated environmental challenges (OECD, 2017[14]; Islam, 2015[15]). For example, outdoor air pollution contributed to 347 deaths per million inhabitants in 2017, up from 329 in 2011.

Poverty, despite a decline in recent years, remains above the OECD average, and is especially high among the elderly: with 45.7% of people above 65 living in relative poverty compared to the OECD average of 12.9% (OECD, 2018[16]).

Figure 1.2. Korea and OECD trends by indicator: Growth and ensuring equitable sharing of benefits from growth



Notes: Panel A: Gross domestic product (expenditure approach), US Dollar 2015, Per head, constant prices, constant PPPs, OECD base year; panel B: In 2015 PPPs, current income definition; panel F: Exposure to $PM_{2.5}$ and ozone.
Sources: Panels A and B: *OECD National Accounts Database,* https://stats.oecd.org/Index.aspx?DataSetCode=NAAG;
panels C and G: *OECD Income Distribution Database,* https://stats.oecd.org/Index.aspx?DataSetCode=IDD;
panel D: (Balestra and Tonkin, 2018[17]), "Inequalities in household wealth across OECD countries: Evidence from the OECD Wealth Distribution Database", *OECD Statistics Working Papers*, No. 2018/01, OECD Publishing, Paris, https://doi.org/10.1787/7e1bf673-en;
panel E: OECD (2019), Life expectancy at birth (indicator). https://data.oecd.org/healthstat/life-expectancy-at-birth.htm;
panel F: *OECD Green Growth Indicators*, https://stats.oecd.org/Index.aspx?DataSetCode=GREEN_GROWTH.

Equal opportunities and foundations of future prosperity

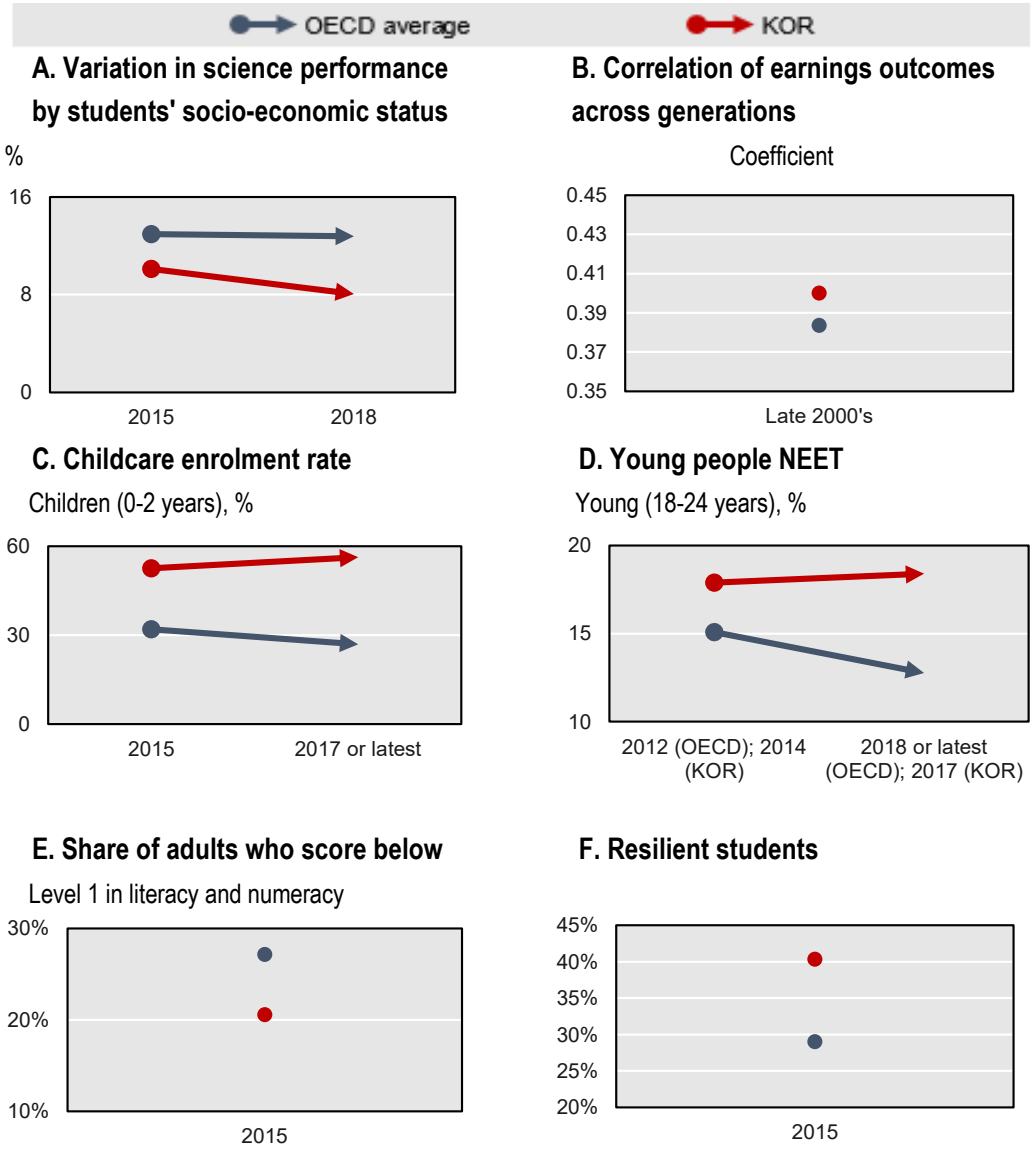
The picture on equal opportunities and social mobility is mixed in Korea. On the one hand, it would take a child born into a low-income family about five generations – or up to 150 years – to reach the average level of income in Korea, compared to the OECD average of 4.5 generations (OECD, 2018[18]). On the other, nearly 50% of children are now starting off their careers in a higher occupational class than their parents (OECD, 2018[18]).

Social mobility partly depends on educational opportunities and Korea does well on average, although in some aspects the picture has become less favourable. In 2018, 11% of the variation in mathematics performance in the Programme for International Student Assessment (PISA) was explained by socio-economic status in Korea, compared to 14% on average across the OECD countries. In PISA science performance, 8% of variation was explained by the socio-economic status in 2018, lower than in the OECD and seeing a 2.1% decline since 2015. However, the performance gap in reading between socio-economically advantaged and disadvantaged students in Korea increased from 69 score points in 2009 to 75 score points in 2018, while remaining below the OECD average of 89 score points (OECD, 2019[19]). Korea is also above the OECD average in the resilience of students. In 2018, the rate for disadvantaged students who scored in the top quarter of reading performance was the fifth highest in the OECD after Estonia, Turkey, United Kingdom and Canada. Overall, Korea ranked among top OECD PISA performers and mean scores in reading, mathematics and science in 2018 were close to the level observed in 2015 (OECD, 2019[20]).

Considerable investment by government to enhance the accessibility of early childhood education and care (ECEC) has helped to increase enrolment by 18.1 percentage points between 2010 and 2017, from 38.2% to 56.3% (Figure 1.3), outpacing the increase in enrolment in any other OECD country in this period. Despite increasing levels of public spending in education, annual average tuition fees are still above the OECD average in Korea, both in public and private institutions. Private expenditure on primary through tertiary education ranked as the 6th highest in the OECD in 2015. This puts children with lower socio-economic backgrounds at a disadvantage.

The proportion of young people neither in education, employment nor training (NEET) is 18.4%[2] (OECD, 2019[21]), which is high compared to the OECD average and has increased slightly in recent years (Figure 1.3). Overall, 4.4% of Korean civilian youth aged 15-29 were enrolled in some form of informal education or university or company entry exam preparation in 2017 as their primary activity. In line with OECD NEET's definition, these young people are considered NEETs. Excluding these youth would imply a drop in the overall NEET rate from 18.4% to 14.1%, close to the OECD average (OECD, 2019[22]).

Figure 1.3. Korea and OECD trends by indicator: Equal opportunities and foundations of future prosperity



Notes: Panel A: Denotes variation in the PISA index of economic, social and cultural status (ESCS); panel B: Earnings elasticities for father to son, late 2000's; panel C: Early childhood education = ISCED 0, other registered ECEC services = ECEC services outside the scope of ISCED 0, because they are not in adherence with all ISCED criteria. To be classified in ISCED 0, ECEC services should: 1) have an adequate intentional educational properties; 2) be institutionalised (usually school-based or otherwise institutionalised for a group of children); 3) have an intensity of at least 2 hours per day of educational activities and a duration of at least 100 days a year; 4) have a regulatory framework recognised by the relevant national authorities (e.g. curriculum); and 5) have trained or accredited staff (e.g. requirement of pedagogical qualifications for educators); panel F: A student is classified as resilient if he or she is in the bottom quarter of the PISA index of economic, social and cultural status (ESCS) in the country/economy of assessment and performs in the top quarter of students among all countries/economies, after accounting for socio-economic status.

Sources: Panels A, C and D: (OECD, 2019[23]), *Education at a Glance 2019: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/f8d7880d-en; panel B: (OECD, 2018[18]), *A Broken Social Elevator? How to Promote Social Mobility*, OECD Publishing, Paris, https://doi.org/10.1787/9789264301085-en; panel E: (OECD, 2016[24]), *Skills Matter: Further Results from the Survey of Adult Skills*, OECD Skills Studies, OECD Publishing, Paris, https://doi.org/10.1787/9789264258051-en; panel F: (OECD, 2016[25]), "Graph I.6.10 – Percentage of resilient students", in *PISA 2015 Results (Volume I): Excellence and Equity in Education*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/9789264266490-graph80-en.

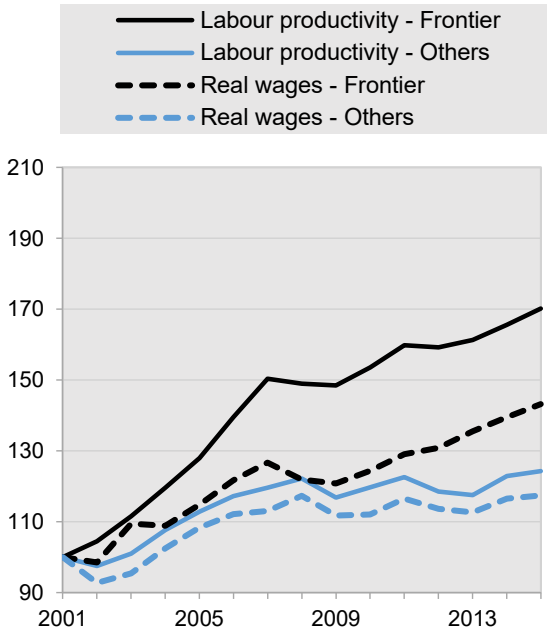
Understanding the drivers of inequalities through the Productivity-Inclusiveness Nexus

OECD work on the *Productivity-Inclusiveness Nexus* (OECD, 2018[26]) has shown that in a number of OECD countries inequalities across firms and wages results from a "sorting" effect that separates frontier firms (and their workers), which are able to access the best technologies and skills, from those that are less productive and fail to compete on the same grounds.

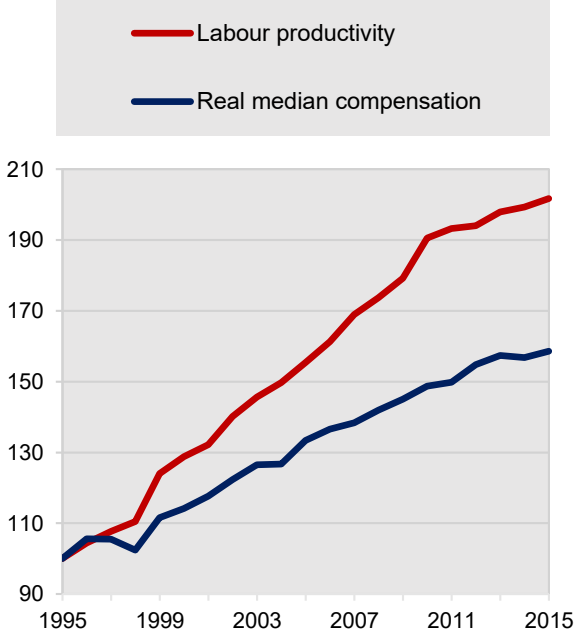
There are indications that the previous growth model in Korea has followed this trend (see chapter 3 for a detailed analysis), giving rise to significant productivity gaps among firms, particularly between manufacturing and services firms as well as between large and small firms (OECD, 2018[16]). In Korea, labour productivity is 40% lower in service SMEs than in large manufacturing firms, as compared to 20% in other OECD countries. These productivity gaps are mirrored in disparities between the wage and productivity levels of their workers. Productivity in SMEs in manufacturing has fallen to less than one-third of that in large firms (OECD, 2018[16]). Real value added per worker in SMEs is only 29% relative to large firms. The growing productivity gaps between frontier firms and the rest are mirrored in disparities in wage levels across the OECD. Like in a number of OECD countries, in Korea labour productivity growth and median wage growth have decoupled (Figure 1.4).

Figure 1.4. Intertwined challenges in the labour and product markets

A. In OECD, average wages and labour productivity have decoupled (frontier firms and others)



B. In Korea, real median wages have decoupled from labour productivity (all firms)

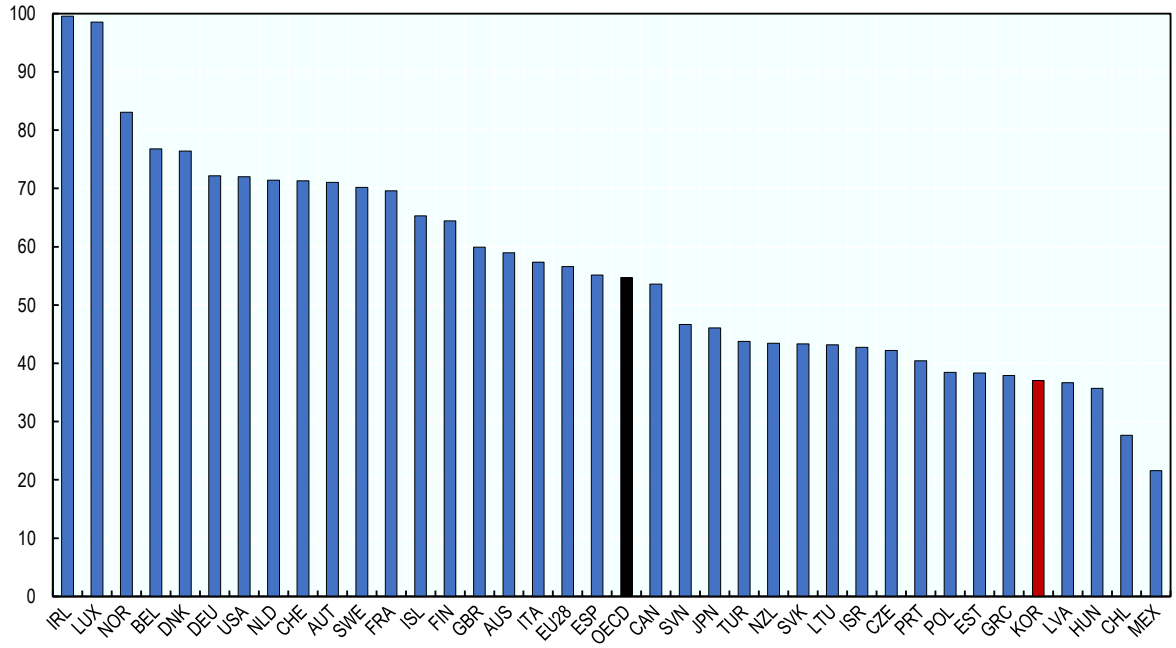


Note: Panel A: Excluding primary, housing and non-market industries. OECD is an employment weighted average of 24 countries (Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Poland, Slovak Republic, Spain, Sweden, United Kingdom and United States).
Source: (OECD, 2018[27]), *OECD Economic Outlook, Volume 2018 Issue 2*, OECD Publishing, Paris, https://doi.org/10.1787/eco_outlook-v2018-2-en and (Pak, Pionnier and Schwellnus, 2019[28]), "Labour Share Developments in OECD Countries Over the Past Two Decades", *Economics and Statistics*, No. 510-512, Special Issue 50th Anniversary, pp. 17-34, https://www.persee.fr/doc/estat_0336-1454_2019_num_510_1_10898.

Productivity disparities had a negative overall effect on the speed of productivity growth, which decelerated in the 2011-17 period as compared to the pre-crisis period, while still remaining above the OECD average for the selected peer countries. The level of labour productivity (GDP per hour worker, expressed in USD, current prices and current PPPs) – at 37 in 2017 – remained significantly below the OECD average of 54.7 (Figure 1.5) (OECD, 2019[29]). The employment to population ratio is above the OECD average and has been improving in recent years. However, the IG dashboard (Figure 1.7) shows that the labour market could perform better by sharing the benefits of growth more evenly across workers. Though improving markedly compared to the previous period, the earnings dispersion[3] between the top 10% and the bottom 10% at a ratio of 4.3 in 2017 was higher than in the OECD on average (3.3 times) and higher than in any of the peer countries (Annex 1.A).

Figure 1.5. Labour productivity, 2017

GDP per hour worked, total economy, US dollars, current prices and current PPPs



Source: (OECD, 2019[30]), "Labour productivity, 2017: GDP per hour worked, total economy, US dollars, current prices and current PPPs", in *Economic growth and productivity*, OECD Publishing, Paris, https://doi.org/10.1787/795d3103-en.

Among the factors accounting for subdued productivity growth is an insufficiently dynamic business environment. The OECD has shown that a dynamic business environment is necessary to ensure on the one hand broad-based innovation and productivity growth and on the other that wage growth is aligned with labour productivity (see Chapter 3). The Korean business environment appears very dynamic at first sight as the share of young firms is significantly larger in Korea than in other OECD countries. The start-up ratio is particularly high among small firms. The business environment is also characterised by relatively important flows of job creation and destruction, in particular among small firms. Yet, this apparent dynamism hides large impediments to scaling-up. The survival share of entrants is very low by OECD standards. Small entrants, which account for most job creation, grow much less than in other OECD countries. In the market services sector, only 2.5% of entrants with fewer than 10 employees grow, compared to 6% in other OECD countries on average. Such characterisation of doing business in Korea (high start-up ratio but little scaling-up) points to an environment that is particularly unconducive to sustainable entrepreneurship and growth. This contributes to perpetuating productivity and wage gaps

between large conglomerates and the rest of the economy, and hence to the concentration of productivity gains in a small part of the workforce.

Technology diffusion has also been uneven – while virtually all Korean companies have broadband access, and many of them use basic ICT tools such as website and enterprise resource planning (ERP) software, they tend to lag behind in terms of other key tools, such as consumer relationship management (CRM) support, cloud computing, e-sales or big data. For example, in Korea on average, only 17.2% of businesses use cloud computing services in 2018, as compared to 32.1% in the OECD (see Figure 1.7).

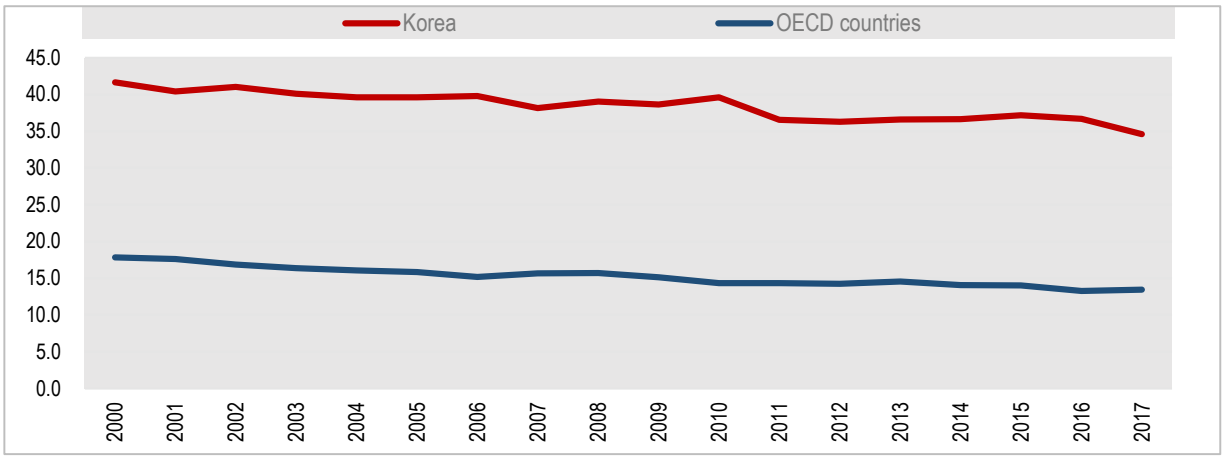
Dualisms and disparities across firms go hand in hand with dualisms and disparities in labour markets. In Korea, non-regular workers do not enjoy the same pay, guarantees or upskilling opportunities as regular workers. For example, non-regular workers earn approximately one-third less than regular workers, although their skills are reported to be comparable. Only 70.8% of non-regular workers are covered by employment insurance. Temporary workers earn less than 60% of the hourly wage of a standard worker (OECD, 2015[3]). Both men and women in temporary employment have lower probabilities of moving into standard employment than the unemployed (OECD, 2015[3]).

In addition in Korea there are limited prospects for youth, women and older workers, who are disproportionately employed in small service firms and/or have non-regular status. While there can be certain benefits to non-regular employment (e.g. more flexibility, better work-life balance), nearly half of part-time workers noted that they accepted non-regular employment because of the lack of alternatives (Statistics Korea, 2018[31]) see Chapter 2 for details. According to KOSIS (Korean Statistical Information Service) Economically Active Population Survey, in 2017, women accounted for 41% of the active population, with 23 percentage points corresponding to employment in small services firms and only 1 percentage point in large manufacturing firms. The pattern is similar for elder workers, whose participation rate was 37% in 2017 with 21 percentage points corresponding to employment in small services firms and only 1 percentage point in large manufacturing firms. 5.8% of regular workers are over the age of 60, while for non-regular workers the share is 25%. Also Korean women and youth are more likely than men to hold non-regular jobs, a pattern similar to many other OECD countries.

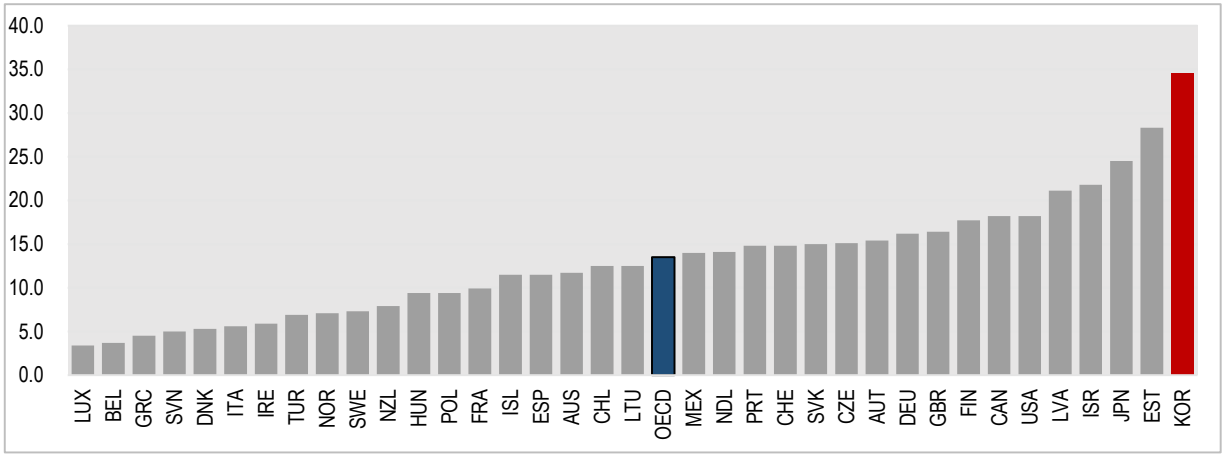
Regardless of their specific employment status, labour market outcomes of women are significantly worse than those of men. Despite some progress in reducing the gender gap, Korea's performance is still among the weakest in the OECD at 32.5% in 2019, compared to the OECD average of 13.0 in 2018% (Figure 1.6). Each percentage point in this gap represents missed opportunities and wasted potential for each person, and collectively for the economy.

Figure 1.6. The wage gap between men and women is sizeable and is diminishing very slowly

A. Gender wage gap (in %) in Korea and OECD countries since 2000



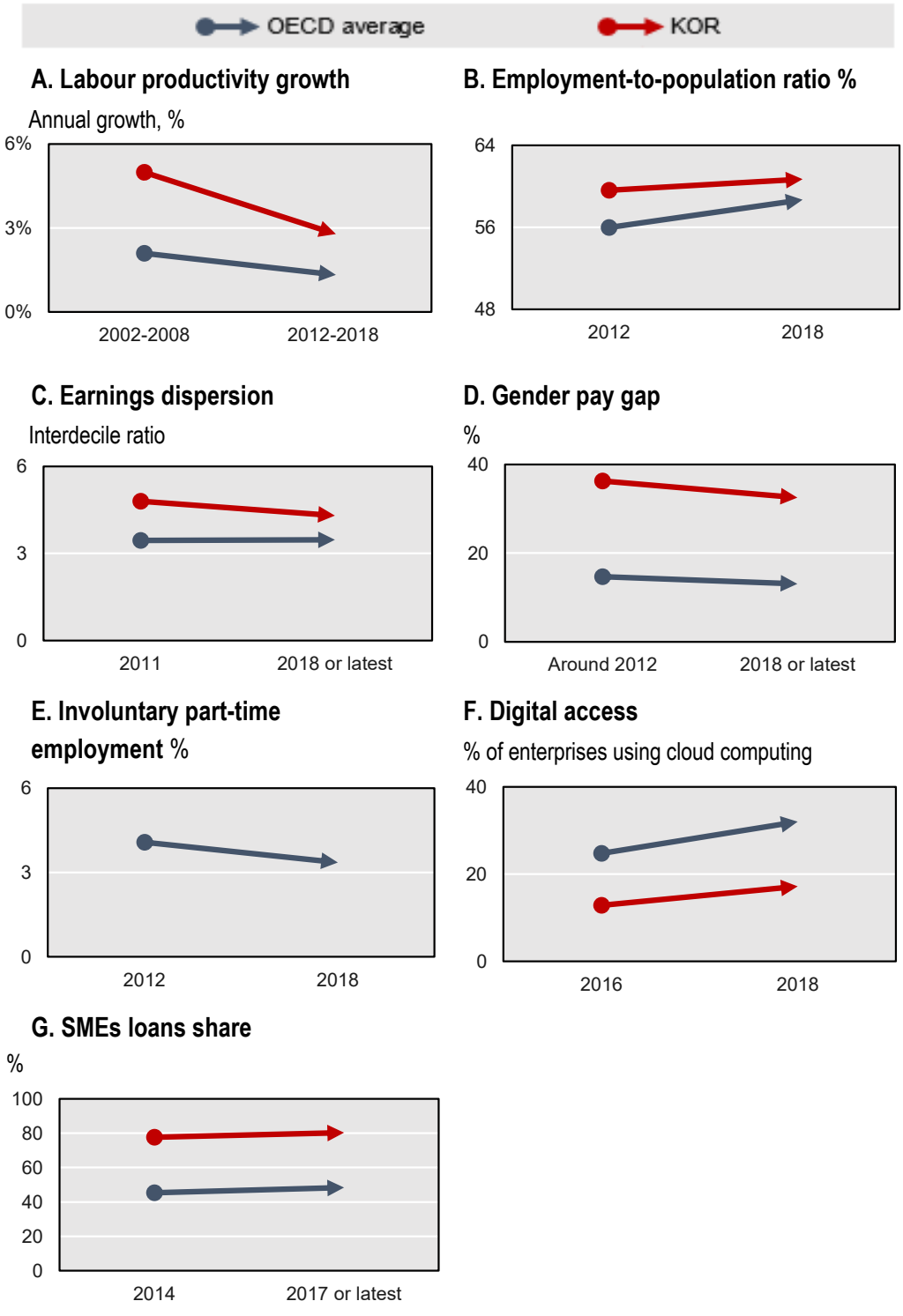
B. Gender wage gap (as a %) in Korea and OECD countries in 2017 (or latest available year)



Notes: Data for 2017 for Austria, Canada, Chile, Denmark, Finland, Germany, Greece, Ireland, Israel, Japan, Korea, Portugal, Slovak Republic, Sweden and the United States; for 2014 for Estonia, France, Latvia, Lithuania, Luxembourg, the Netherlands, Slovenia, Spain and Turkey; for 2015 for Norway; for 2016 for Belgium, Hungary, Iceland, Italy and Poland; and for 2018 for Australia, the Czech Republic, Mexico, New Zealand, and the United Kingdom.
Source: OECD, *Decile ratios of gross earnings*, https://stats.oecd.org/Index.aspx?DataSetCode=DEC_I.

The large gender pay gap in Korea is mirrored in a sizeable participation gap reaching 20.8 percentage points in 2018 (participation rate for men is 73.7% and is 52.9% for women), which was the fourth largest in the OECD after Turkey (38.5 percentage points), Mexico (33.9 percentage points) and Chile (21.5 percentage points) (OECD, 2019[32]).

Figure 1.7. Korea and OECD trends by indicator: Inclusive and well-functioning markets



Note: Panel A: 2010=100. Labour productivity is measured as GDP per hour worked in USD constant prices 2010.
Source: Panel A: *OECD Productivity Statistics Database*, https://stats.oecd.org/Index.aspx?DataSetCode=PDB_LV; panels B and E: *OECD Employment Database*, https://data.oecd.org/emp/employment-rate.htm#indicator-chart; panel C: (OECD, 2019[33]), *OECD Employment Outlook 2019: The Future of Work*, OECD Publishing, Paris, https://doi.org/10.1787/9ee00155-en; panel D: (OECD, 2018[34]), *OECD Employment Outlook 2018*, OECD Publishing, Paris, https://doi.org/10.1787/empl_outlook-2018-en; panel F: *OECD ICT Database*, https://stats.oecd.org/Index.aspx?DataSetCode=ICT_BUS; panel G: (OECD, 2018[35]), *Financing SMEs and Entrepreneurs 2018: An OECD Scoreboard*, OECD Publishing, Paris, https://doi.org/10.1787/fin_sme_ent-2018-en.

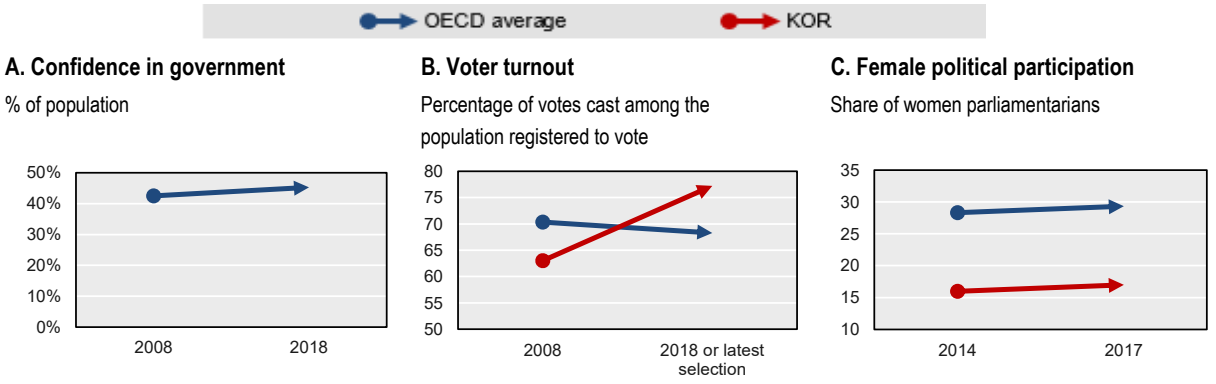
Building efficient and responsive governments

Korea has developed well-functioning public institutions to secure transparent and inclusive governance. Korea is, for example, the only country that has mandated all local governments to adopt a participatory budgeting system (Kim, 2018[36]). In 2015, Korea scored above the OECD average in stakeholder engagement for developing regulations and regulatory impact assessment in the OECD indicators of regulatory policy and governance (Figure 1.8). It scored around the average for ex post evaluation of regulations (OECD, 2015[37]). It scored around the average for ex post evaluation of regulations.

The participation rates in the 2016 presidential elections were above the OECD average; voter turnout shows an upward trend from 63% in 2008 to 77% in the most recent presidential elections. In the OECD on average, voter turnout has been relatively stable at 68% in 2011 and 2018. A few countries, however, have seen sizeable differences in voter turnout over the past decade. Japan, for example, saw a 16 percentage point drop in voter turnout between 2008 (69%) and 2016 (53%).

Women's participation in politics, measured as the proportion of female parliamentarians in the national legislator is low when compared to the OECD average and is the fourth lowest in the OECD after Chile, Hungary and Japan.

Figure 1.8. Korea and OECD trends by indicator: Responsive and efficient governance



Notes: Panel A: The trust data for Korea's last election is not presented in Figure 1.8 (panel A) due to unavailable data at a comparable basis. The OECD average includes OECD members' available trust data from 2018 or the latest election before 2018. Panel B: National elections refer to parliamentary elections, with the exceptions of Brazil, Finland, France, Korea, Mexico, the Russian Federation and the United States, where Presidential elections are considered. Australia, Belgium, Brazil, Luxembourg and Turkey enforce compulsory voting. In Chile, compulsory voting was dropped in 2012. Panel C: Data covers lower or single house of parliament. Data for 30th November of each year.
Source: Panel A: Gallup World Poll, in (OECD, 2017[38]), "Trust in government", in Government at a Glance 2017, OECD Publishing, Paris, https://doi.org/10.1787/gov_glance-2017-76-en; panel B: International Institute for Democracy and Electoral Assistance (IDEA), https://www.idea.int/data-tools/data/voter-turnout; panel C: *Inter-Parliamentary Union (IPU) PARLINE database*, https://data.ipu.org/.

Megatrends are shaping challenges and opportunities for inclusive growth tomorrow

Global megatrends, notably digitalisation, ageing and demographic change, climate change and global integration represent a new set of opportunities to revive the Korean economy and make it work for all its people, as analysed by Chapter 2 and 3 of this review. For example, the OECD estimates that the share of jobs at high risk of automation, (i.e. those with a probability of being automated of at least 70%) is around 14%, on average, across the OECD and 10% in Korea. A further 33% of jobs in Korea (32% on average across the OECD) will go through a significant transformation. The risk of automation is higher among low-skilled workers; and the low-skilled are also less likely to participate in training. In Korea, the difference in training participation between the high-skilled and low-skilled adults is almost 48 percentage points (OECD, 2019[39]).

As a result of longer life expectancy and low fertility rates (1.05 children per woman in 2017 (OECD, 2019[40]), Korea is further experiencing population ageing, which is expected to continue in the long-term. The demographic change in Korea is so rapid that its population is expected to go from the fourth youngest in the OECD in 2012 to the third oldest by 2050 (OECD, 2016[41]). The share of the population older than 65 years is expected to increase from 14% to 30% in the next 20 years. Similarly, the elderly dependency ratio (percentage ratio of over 65 years old and the 15-64-year-old population) is expected to rise from 18% to 72% in 2014-50, which is the highest growth rate among all OECD countries. The working age population between 15 and 64 years of age started to decline in 2017 and is expected to decline by 15% between 2010 and 2040 (OECD, 2018[42]). In addition, the share of immigrants in Korea's employment has more than doubled in the past decade, although still relatively low at 3.6% in 2015.

The nature of globalisation is changing, in particular in terms of reorganisations of Global Value Chains (GVCs). Among the G20 Economies, Korea has the highest GVC participation[4] and it is an important hub in global production networks (Criscuolo and Timmis, 2018[43]), however, mostly through its most productive manufacturing firms in a limited set of industries. Future expansion through GVCs for Korea may depend crucially on its ability to review its service sector and rebalance participation in GVCs from manufacturing to services. In the digital era, manufacturing firms rely more and more on services to generate income (servitisation[5], mass customisation and importance of knowledge-based services for innovation).

A vision for an innovative and inclusive nation

The trajectory of Korea's policy developments towards inclusive growth

Up until the early 1990s, the Korean economy experienced improvements in terms of more equitable growth as the nation moved towards democratization and industrialization. Even though growth slowed down and income inequality started to widen, especially after the Asian financial crisis and exacerbated by the 2008 financial crisis, Korea's per capita GDP reached USD 30 000 in 2018.

Against this attainment, the Korean economy has come to face a set of global and domestic challenges, including the global slowdown in economic growth and trade, in light of trade measures (including tensions, for example, between Korea's key trade partners the US and China). The global economic growth rate has decreased from an average of 3.5% in 2000-07 to 2.8% in 2011-17, and world trade has declined sharply from 7.3% to 4.0% during the same period (OECD, 2020[44]).

Domestically, structural issues such as worsening distribution and weakening growth momentum stood in the way. Tackling these issues has been difficult, coupled with adverse demographic changes including rapidly aging population and low birth-rate – and a need for improving the quality of life on par with Korea's economic growth.[6]

In the face of these socio-economic challenges, past administrations have responded with active policy measures moving away from growth-first policies. The Roh Moo-Hyun administration (2003-08) introduced a policy roadmap titled "Vision 2030"[7] aimed at equitable and shared development. The two successive administrations, thereafter, focused on creating jobs and future growth engines.[8] Despite pre-emptively recognizing the problems of low growth, income polarization, and employment instability, and thus putting forth policy actions in response, more proactive efforts were necessary to tackle the challenges.

The current administration is putting inclusive growth in the spotlight

The administration of President Moon Jae-in has since 2017 introduced the vision for an *Innovative and Inclusive State* to bring inclusive growth at the front and center of government policies in Korea with the aim to improve the quality of life of the general public via three pillars: income-led growth, innovation-driven growth, and fair economy.

1. **"Income-led growth"** laying the foundation for sustainable growth through the creation of jobs, income support for vulnerable groups, the expansion of social safety nets, and the reduction of core living expenses.
2. **"Innovation-driven growth"** aimed at building the groundwork for innovation by upgrading major existing industries, creating new promising industries, and reforming regulations.
3. **"Fair economy"** highlighting the creation of a healthy market economy by improving corporate governance and constructing mutually beneficial, cooperative inter-firm relationships, especially between large firms and SMEs.

The **pillar on innovation-led growth** (Table 1.1) strives to boost Korea's R&D capacities and competitiveness in key industries along three key areas of action: strategic investment in selected industries, innovation in the regulatory system and the creation of venture and start-up ecosystem.

The **pillar on inclusive, fair economy** (Table 1.2) aims to lift the income and purchasing power of the low- and middle-income population. It seeks to deliver inclusive growth by strengthening social safety nets and creating opportunities. Social spending is scheduled to rise at a 9% annual rate over 2017-21, boosting its share to 27% of central government spending (OECD, 2019[45]). The government aspires to achieving a decent life for all by 2022, ensuring dignity at every stage of life through stronger safety nets, investment in people and skills, improved job quality, as well as a more inclusive financial system.

Getting ready for the future of work by addressing labour market dualisms and social protection as part of the administration's pillar on inclusive growth

The current administration highlights four priorities for policy action on **inclusiveness**: (i) job creation and improvements to job quality, (ii) lowering living expenses (e.g. in education, health and care), (iii) boosting household income, and (iv) the expansion of the social safety net (Table 1.1). Progress was made in converting jobs into permanent ones, with 593 000 permanent jobs added year-on-year, the largest increase since February 2014. In 2020, the administration maintained the focus on employment growth and industrial restructuring for the future (MOEF, 2019[46]).

In particular, the key policy directions to enhance inclusiveness are the following. To stabilize workers' living conditions and reduce the wage gap, the minimum wage was increased by 27.3 %p during 2018-19, meeting the OECD average. A 52-hour work week was implemented to resolve customary practices of long working hours, and policies were gradually introduced by company size to alleviate the burden caused by the reduction of working hours (Statistics Korea, 2020[47]).

The unemployment benefit was raised from 50% to 60% of the average wage, along with an extension of the payment period from 90-240 days to 120-270 days. For low-income and young groups of population not covered by the existing employment safety net, the National Employment Support System provided services; such as job search counselling and KOR 500 000 per month for 6 months (Statistics Korea, 2020[47]). Furthermore, an amendment to the Employment Insurance Act has been planned to include the currently marginalized "dependent workers under special employment relationships" such as home-visit tutors, insurance salespersons and artists. In the long-term, the coverage is envisioned to be expanded to all workers including the self-employed. Earned Income Tax Credit (EITC) and Child Tax Credit (CTC) have eased age and income requirements and increased the payment amount.

Table 1.1 Policies under the inclusive growth pillar

Main policy direction	Major supporting measures implemented during 2017-19
Job creation and quality	• Expansion of private job creation through tax incentives for employing groups underrepresented in the labour market (youth, women) and for conversion of non-regular to regular employees • Job creation in the public sector, conversion of non-regular workers into regular workers • Financial incentives for SMEs to hire youth and an asset formation scheme to encourage youth to work in SMEs • Reduction of working hours from 68 to 52 per week (40 regular hours plus 12 overtime hours)
Reduction of living expenses	• Reduction of medical expenses through improved health insurance coverage and reduction of out of pocket expenditures • Reduction of care costs for the elderly • Lower education costs through introduction of free high school education and support for higher education to low income families
Increase in household income	• Increase in the minimum wage with support to SMEs • Expansion of the use of the Earned Income Tax Credit (EITC) and the Child Tax Credit • Social insurance support
Expansion of social safety net	• Extension of the Unemployment Benefit Guarantee • Enhancement of Employment Insurance Coverage • Introduction of the National Employment Support System • Relaxed requirements for Supporting Basic Livelihoods • Introduction and extension of the childcare allowance • Expansion of the coverage and increase of the rate of the Basic Pension

Source: Table contents derived from compilation provided by the Ministry of Economy and Finance of Korea.

In order to support low-income groups, basic pension (paid to the elderly in the bottom 40% of the income bracket) and disability benefits have been expanded from KOR 250 000 to KOR 300 000 per month. Child allowances have also been extended to all households with children under the age of 7 – originally available only to those in the bottom 90% income group with children under the age of 6.

Additionally, reduction of key living expenses was accomplished by abolishing elective medical expenses, widening the health insurance coverage rate from 62.7% to 63.8% (2017-18), and free high school education has been considered for introduction in stages by 2021. As for housing costs, 1.05 million public housing units were planned in the period of 2018-22, of which 429 000 units have already been supplied (Statistics Korea, 2020[47]).

In order to continue the momentum on improving inclusiveness in the Korean society, the government put focus on improving economic and social participation of vulnerable groups through, for example, childcare and education support as well as provision of strong employment and social safety net. The opportunity to receive fair and equal education, regardless of the child's socioeconomic background, is considered important as it creates a level playing field in the future. To this end, the government aims to strengthen the existing public education and childcare system and cater education programs and policies specific to children with disabilities. Moreover, besides the conventional route to employment of attending university, job-seeking as a high school graduate is being supported with appropriate career guidance and training programs.

In the context of employment safety nets are required to bridge the gap in the labour market. Some key measures may include expanding the coverage of social and employment insurance to protect new forms of workers such as freelance and platform workers, and strengthening vocational training for vulnerable populations such as youth, women, and the elderly. A secure social safety net is also important for marginalized groups; for example, such as social benefits under the "National Basic Living Security Act" to ensure a minimum standard of living for the low-income class, the elderly, and the disabled – as well as ongoing government's efforts to improve the quality of public health care and to close the regional gap in access to medical care.

Supporting business dynamism with the administration's innovation policy package

The pillar on **innovation** aims to boost Korea's R&D capacities and competitiveness in key industries along three key areas of action: strategic investment in selected industries, innovation in the regulatory system and the creation of an ecosystem that nurtures start-ups and entrepreneurship (Table 1.2). In the second half of 2019, government efforts concentrated on boosting the economy, restructuring industries and promoting inclusive growth (MOEF, 2019[48]).

Table 1.2 Policies under the innovation-driven growth pillar

Main policy direction	Major supporting measures implemented during 2017-19
Strategic investment in selected industries	• Boost in the R&D budget • Investment in 3+1 strategic areas – data, artificial intelligence (AI), hydrogen economy + human resources development • Support to eight key industries: future cars, bio health, smart industry industrial complex, fintech, new energy industry, smart cities, smart farms and drones
Innovation in the regulatory system	• Introduction of a regulatory sandbox and Regulation-Free Special Zones providing an opportunity to test and verify new technology and services for a certain period before applying regulation • Introduction of a negative listing system
Creation of venture and start-up ecosystem	• Tax reductions and exemptions for start-ups • Creation of shared industrial facility for start-ups (with production equipment such as 3D printing) • Expansion of commercialisation support • Support to SMEs, e.g. low interest rate loans for small businesses and self-employed workers • Extension of the application of Small Business Start-up Support Act to all industries, including services

Source: Table contents derived from compilation provided by the Ministry of Economy and Finance of Korea.

Although the present government gives priority on inclusiveness measures, significant policy efforts have been also made to foster innovation. These include supporting firms during the entire cycle of entrepreneurship, introduction of regulatory sandbox, increased guarantees for angel investment[9], establishment of big data platforms and clusters in thematic areas[10], and extended funding for BIG3[11] industries. To promote fair competition in the private sector, cross-shareholding of large conglomerates was reduced and a win-win cooperation fund between large firms and SMEs was further expanded.

In July 2020, the government announced the Korean New Deal – composing of the Digital New Deal and Green New Deal with stronger safety nets – to transform the economy from a fast follower to a leader, from a carbon-dependent economy to a green economy. It aims to promote digital transformation of the manufacturing industry by establishing data and network infrastructure, and facilitate the transition into a low-carbon and green economy by strengthening the competitiveness of eco-friendly industries such as eco-friendly vehicles, energy generation, and other technologies. A total of KOR 6.3 trillion worth of investment is expected to be made over 2020, and finally by 2025 a total of KOR 160.0 trillion (accumulated) is expected to be invested. A total of 1.9 million jobs is expected to be created during this period (Statistics Korea, 2020[47]).

Main achievements

The current vision for an *Innovative and Inclusive State* differs from past administrations in that it overcomes the legacy of growth-biased policies and strongly promotes harmony between growth and distribution, while also stressing fair economic participation at all levels of the society. By putting people at the centre of policies, the vision strives to ensure equal opportunities and competition in the economy and pursues active redistribution measures, especially targeted to vulnerable groups. Accordingly, Korea has exhibited notable progress in enhancing the standard and quality of life for its citizens.

Real wage growth rate rose from 1.3% to 3.7% during 2017-18 and the proportion of low-wage workers decreased to less than 20% for the first time in 2018. This has led to a gradual increase in household income, especially for low-wage households. As a result of the 52-hour work week, annual working hours were reduced to less than 2 000 hours for the first time in 2018. By expanding EITC and CTC coverage, 4.7 million households received benefits in 2019, an increase of 1.97 million units compared to 2018, with a total payment amounting to KOR 5.0 trillion (Statistics Korea, 2018[31]).

In the labour market, youth employment rate has increased and the female employment rate and labor force participation rate reached 57.8% and 52.9% (2018), respectively, the highest level since 2000. The quality of employment is improving, as evidenced by a growing trend in the number of regular workers and employment insurance subscribers. The annual growth rate of labor productivity improved from 2.79% to 3.58% during 2016-18 (Statistics Korea, 2018[31]).

Similarly, there have been prominent achievements in the area of innovation. The number of venture firms is steadily increasing from 33 360 in 2016 to 36,820 in 2018, supported by a massive growth in investment from KOR 3.4 trillion in 2018 to KOR 4.3 trillion in 2019 – this is the fourth largest venture capital investment to GDP ratio in the world. Additionally, more than 190 cases have been selected for the regulatory sandbox initiative since its introduction in January 2019, and the fin-tech sector has secured KOR 136.4 billion in capital, creating 380 jobs (Statistics Korea, 2020[47]).

Stepping up efforts to promote inclusive growth through a coherent people-first strategy

While the proposed policies look at some aspects that are crucial for inclusive growth, more action is needed to build upon the past efforts and deliver improvements in well-being for all. Comprehensive policy packages are needed to address skills gaps, gender gaps, the underutilised potential of youth and the elderly, as well as to create a level playing field for all businesses. Investment in people's capabilities, for instance in health, in forward-looking skills and training policies, or in broader enabling factors, such as housing, infrastructure and connectivity, are needed to shift towards a sustainable model of prosperity and well-being. Finally, actions in support of broad-based innovation and entrepreneurship can strongly sustain a process of inclusive growth, unlocking a virtuous circle of productivity diffusion as Chapter 3 suggests.

To capitalise on the measures promoted under both pillars of the current administration's vision for an Inclusive and Innovative Nation, and to achieve a growth model that puts people at the centre of all policy making, it is crucial to promote a coherent and balanced implementation of both pillars – as argued by the next section.

Strategic investment and support to key industries could incentivise technology diffusion across the board and diversity hire[12], thus delivering benefits to the wider economy; whereas inclusive policies promoting equal opportunities such as child allowance or educational policies should be targeted to low-income families. It will be important to ensure that the budget allocation towards the two Inclusiveness and Innovative growth pillars reflect inclusive growth policies coherently, namely that inclusive policies are financially powered in a balanced manner vis-à-vis innovation policies.

The planned support to industries in the government's push to boost innovation and international competitiveness needs to build on lessons learned from the past. In 2019, the government announced provisions to level the playing field between the manufacturing and service sectors, but additional measures may be needed to prevent large firms from capturing the productivity gains of smaller firms (e.g. through competition policy, trade and investment reforms and measures aimed at preserving the intellectual property rights of SMEs) and to streamline the support available to SMEs. Diversifying exports and encouraging the services sector to integrate in GVCs can also allow a broader set of firms to benefit from gains from trade and can improve the resilience of the Korean economy to external shocks.

Reducing the segmentation of the labour market and rebalancing the economy towards a globally competitive service sector can help ensure that the benefits of economic activity are more fairly distributed in the society, which in turn may help sustain aggregate demand to support growth.

Box 1.2. The role of business in inclusive growth

The business case for inclusive growth is strong. On a macro level, more equal societies benefit business through a larger middle class and growing consumer purchasing power; enhanced government capacity to invest in education, health and infrastructure; and improved economic and political stability. Rising inequality has limited the ability of the bottom 40% to invest in their education and skills, undermining the development of human capital and potential productivity gains, also making it more difficult for employers to find people with the skills and knowledge they need and that are demanded by today's rapidly digitalising markets. Inequality of opportunity hurts business.

Increased diversity and inclusion, as well as female representation among senior executives and on boards, have been linked to higher business performance and shareholder returns (Hunt, Layton and Prince, 2015[49]). Aligning executive performance evaluation and compensation with long-term business goals, through longer equity vesting periods (Edmans, Fang and Lewellen, 2017[50]), and with sustainability goals (Eccles, Ioannou and Serafeim, 2014[51]) also leads to greater long-term profitability. Similarly, the promotion of responsible tax payment practices correlates with improved returns for some classes of shareholders (Babkin, Glover and Levine, 2017[52]).

In August 2019, the Business for Inclusive Growth (B4IG) initiative was launched on the margins of the G7 Leader's Summit. Under the leadership of the French President Emmanuel Macron and overseen by the OECD, the B4IG coalition of international businesses has pledged and committed to play their part to strengthen equality of opportunity; reduce territorial inequalities; promote diversity and inclusion; and reduce gender inequality by: 1. Advancing human rights in direct operations and supply chains; 2. Building inclusive workplaces; and 3. Strengthening inclusion in company value chains and business ecosystems.

B4IG companies commit to partnering with G7 governments to better link public policies and business practices for inclusive growth and to accelerating on-the-ground initiatives that bring concrete results for people and places left behind. Companies will use the B4IG platform as a multi-stakeholder forum to progress on policy, practice and innovation for inclusive growth, drawing on the OECD's expertise and research, including on responsible business conduct (RBC), quality FDI, the work on business and sustainable development, and OECD standards, such as the Guidelines for MNEs, and the work on Base Erosion and Profit Shifting (BEPS).

Sources: (Babkin, Glover and Levine, 2017[52]), "Are Corporate Inversions Good for Shareholders?", *Journal of Financial Economics,* http://dx.doi.org/10.2139/ssrn.2700987; (Hunt, Layton and Prince, 2015[49]), "Why diversity matters", *McKinsey & Company*, https://www.mckinsey.com/business-functions/organization/our-insights/why-diversity-matters; (Eccles, Ioannou and Serafeim, 2014[51]), "The Impact of Corporate Sustainability on Organizational Processes and Performance", *Management Science*, Volume 60, Issue 11; http://dx.doi.org/10.2139/ssrn.1964011; (Edmans, Fang and Lewellen, 2017[50]), "Equity vesting and investment", *The Review of Financial Studies*. Volume 30, Issue 7, https://doi.org/10.1093/rfs/hhx018.

All in all, policy coherence can be enhanced through specific governance mechanisms, such as regulatory impact analysis (RIA), Budgeting or Policy Evaluation, that systematically assess the distributional impacts of policies and measure their net effect in terms of the overall well-being of the population. Several countries are experimenting with these new tools and processes, often with successful results.

Finally, businesses need to be part of government's effort to promote a shared vision for an inclusive Korea. The economic case for inclusion is strong both at the business level and within the broader economy (through lower growth potential and through public spending on social safety nets that could alternatively

be channelled more productively towards future skills and innovation). Businesses can play a major role in promoting inclusive growth objectives within companies, within communities and along their supply chains (see Box 1.2).

Key dynamics to steer policy action on inclusive growth

Moving beyond GDP metrics and statistical averages, the inclusive growth agenda in Korea should put people at its centre, focus on well-being outcomes, and emphasise the distribution of outcomes across the population. The challenge is that inequalities in Korea, as in other countries, unfold in different ways across the policy areas under responsibility of different ministries. While specific context and social preferences need to be taken into account, the policy action requires a "whole of the government" approach to make sure that financial, fiscal or monetary decisions, among others, do not undermine social cohesion or social progress.

In general, it is crucial to encourage collaboration across Korean administration and ensure that policies are interconnected within the government and across its multiple layers. These interlinkages can be leveraged and reinforced through specific governance mechanisms (such as budgeting) and by establishing regular coordination platforms across levels and layers of governments.

Governing in the aim of promoting inclusive growth also means identifying synergistic policies for growth and inclusiveness and mitigating possible trade-offs and unintended consequences of policies. Some policies hold the promise of improving the life of everyone, for instance high-quality education from early childhood through to school age and beyond, with a focus on granting access to educational opportunities to children from disadvantaged families. Comprehensive and forward-looking skills and training policies are also central to preparing for the future of work and to bridge divides between workers. Other forms of investment in people's capabilities, for instance in health, or in broader enabling factors, such as housing, infrastructure and connectivity, are also needed to shift towards a sustainable model of prosperity and well-being. Finally, actions in support of broad-based and grassroots innovation and entrepreneurship can strongly sustain a process of inclusive growth. To get real traction, the corporate sector, civil society and all citizens have a role to play (see Box 1.2 for the corporate sector).

OECD research on inclusive growth shows however that not every policy reform is necessarily a win-win for inclusive growth. Trade-offs may arise in the case of some tax and benefit reforms, such as shifting from direct to indirect taxes or reducing marginal income tax rates. Likewise, product market reforms may increase both employment and wage dispersion, so that the overall effect on income inequality is ambiguous. Also, their equity effects can depend on reform design and timing. Yet, there are standards and new innovative approaches to policies that can create win-win situations: for example, investing in the skills of children from low-income families, reskilling and upskilling displaced workers or promoting diffusion of technologies and innovation across all firms.

The OECD *Framework for Policy Action on Inclusive Growth* highlights three key dynamics that policies in Korea can help to catalyse. The main building blocks of policy action to ***sustain and more equitably share the gains of economic growth*** are:

1. ***Investing in people and places that have been left behind*** through (i) targeted quality childcare, early education and life-long acquisition of skills; (ii) effective access to quality healthcare services, education, justice, housing and infrastructure; and (iii) optimal natural resource management for sustainable growth. In Korea, this directly translates into policy efforts to invest in children and youth through better quality ECEC and vocational education, as well as affordable tertiary education; empower women and girls through combatting gender stereotypes and boosting their participation in STEM and public life; and improve the lives of the elderly through better options for prolonging working life and expanding pension coverage.

2. ***Supporting business dynamism and inclusive labour markets*** through (i) broad-based innovation, fast and deep technology diffusion; (ii) strong competition and vibrant entrepreneurship; (iii) access to good quality jobs, especially for women and under-represented groups; and (iv) resilience and adaptation to the future of work. In Korea, this directly translates into policy efforts to make labour markets more responsive to the changing world of work through adapting the social safety net; and supporting business dynamism through levelling the playing field for all businesses and promoting a more inclusive GVC strategy.
3. ***Building efficient and responsive governments*** through (i) aligned policy packages across the whole of government; (ii) integration of equity aspects upfront in the design of policy; and (iii) inclusive policy-making, integrity, accountability and international coordination. In Korea, this directly translates into policy efforts to address the trust deficit by engaging with all stakeholders; address intergenerational divides by reconciling the needs of youth and the elderly; governing a complex agenda across policy silos and across political cycles through involving stakeholders; and address pressures for more redistribution, while monitoring political economy aspects of tax increase for accountability and transparency.

The three pillars that underpin the OECD Framework are broadly aligned with the objectives of the Innovative and Inclusive Nation in Korea and address the key foundations of inclusive growth in a comprehensive manner. Whereas the Korean vision looks at innovation as a self-standing pillar for advancing economic growth, the OECD Framework frames innovation as a driver of inclusive growth. Innovation is an engine and enabling condition that can drive productivity gains and business dynamism, under the precondition that these benefits are shared widely and that this aspect is taken into account in the policy design for innovation support.

Investing in people and places left behind, creating opportunities for all

Inequalities may undermine intergenerational mobility. Disadvantages in places of origin, early education, health and the labour market often compound each other throughout the life cycle. The key dynamics for Korea to sustain is:

- ***Continue investing in children and youth through quality ECEC and vocational education, as well as affordable tertiary education***. To further increase the quality of ECEC ensuring an equal start for all children, Korea may consider standardising the curriculum and quality across centres and strengthen the monitoring of quality. A mandatory accreditation for centre-based services was introduced in June 2019 and considers the care environment, management, childcare programmes, interaction with children, teaching methods, health, nutrition and safety. Quality affordable ECEC facilitates equal opportunities early in life, while supporting the return of women to the labour market if they wish to do so.
- ***Strengthen efforts to decouple opportunities from socio-economic backgrounds***. According to the OECD PISA 2018 assessment, socio-economic background plays a lesser role in 15-year-old students' academic performance in Korea than in the OECD on average. Nevertheless, socio-economic status has become a factor in subsequent crucial steps in education affecting employment prospects later on, notably in the entry exams for universities and companies. Korean households spend around 20% of income to pay for after-school private academies (*hakwon*) (Calonge, 2015[53]). Korea has recently introduced measures to reduce costs of tertiary and higher education. The government plans to complete the introduction of free high-school education by 2021, abolish university entrance fees by 2022 and has expanded scholarship support to low-income families and the middle-class. Better alignment between education and the requirements of universities and the labour market would further reduce the pressures on household income to invest in additional training and tutoring. Further strengthening vocational training, through extending apprenticeship programmes and deepening connections with industry, would help to

reduce the share of NEET, as well as minimise labour market mismatch and labour shortages in SMEs.

- ***Empower women and girls by boosting their participation in companies, public sector, administration and research entities*** (e.g. by facilitating acquisition and application of skills in STEM – Science, Technology, Engineering and Mathematics). Korea should continue to actively support and encourage women's and girl's representation in science, technology, engineering and mathematics (STEM), where the share of female Bachelor's graduates is 29.7% (OECD, 2017[54]). Further steps to support women's entrepreneurship through financial start-up support and mentoring, and more equal sharing of care responsibilities would boost women's participation in the economy. In 2019, the government launched a Masterplan for Promoting Women's Entrepreneurship Activities, which is a step in the right direction as it includes financial start-up support, a guarantee program, R&D support and a reporting centre for unfair trade practices (MSS, 2019[55]).
- ***Empower women and girls by addressing gender stereotypes***. Efforts need to be sustained to address gender stereotypes, perceptions and social norms that limit the prospects of women and girls. The issues include potential fields of study, career prospects and professions and the sharing of unpaid care work. Workplace culture and social expectations can still pressure women to withdraw from the labour force, particularly if they choose to have children (OECD, 2017[54]). Korea has a clear track record of implementing legislation, policies and media campaigns that improve the lives of women and girls and could capitalise on this experience. The 2019 edition of the SIGI Global report, for example, shares a case study of Korea's success in the reversal of skewed sex ratios at birth through legal reforms and mass media campaigns (OECD, 2019[56]).
- ***Empower women in decision-making and managerial positions.*** Affirmative action policies to promote women in management positions, such as targets or quotas for the civil service and in politics, can increase the visibility of women in leadership roles (Box 1.3 showcases relevant good practices in Iceland). The target setting in public service at the national level by the Ministry of Personnel Management has brought about improvements. For instance, in 2017, 50.2% of civil servants at the national government level were women. The proportion of women in middle management positions has increased from 8.4% in 2011 to 14.8% in 2017. The policy could evolve by reinforcing women's representation at the senior levels of civil service, where the proportion of women in 2017 was still only 6.5% (Kim, 2019[57]). The government has taken a number of other steps to promote diversity within the civil service through targeted affirmative action policies for persons with disabilities, persons from regions outside Seoul and for people from low-income families. The Ministry for Gender Equality and Family has also introduced a plan to promote women's participation in the public sector and in leadership positions. The government could devise a comprehensive legal framework and policy against discrimination and harassment. It could take affirmative action a step further in institutionalising diversity as a core value in the workplace. Diversity should also drive policy direction and decisions.
- ***Improve the lives of the elderly through better options for prolonging working life and expanding pension coverage***. A large proportion of the elderly population is vulnerable to old-age poverty and tax and transfer policies have not been effective in reducing poverty. With a rapidly ageing society, policies to help the elderly should address education and training, social exclusion and expanding the coverage of the National Pension System. To address digital divides, the Ministry of Science and Technology offers training to improve the digital literacy of the middle-aged and elderly population and reports a narrowing of the digital divides from year to year. To address old-age poverty, the government increased the Basic Pension in 2019. A basic pension of up to KRW 300 000 is provided to the bottom 20% of the income group, and up to KRW 254 000 for the bottom 20-70% to KRW 300 000 (USD 260), while maintaining its coverage at 70% of the elderly. The National Pension Act expanded the coverage in recent years through allowing deferred payment of pension premiums for career break due to childbirth, etc. through introducing a subsidy

of 75% for the NPS contribution paid by the unemployed, and through introducing a subsidy for employees at small firms (with less than nine workers) (OECD, 2018[16]). Further actions could include gradually raising government revenues to finance rising social spending, in the context of population ageing. The government could focus on taxes with a less negative impact on growth, such as the VAT and environment-related taxes (OECD, 2019[45]). Tax reforms should come with inclusiveness objectives incorporated in their design and encourage longer productive employment though investment in skills and health.

Box 1.3. Women's economic empowerment in Iceland

Participation of women in the labour market is the highest among the OECD countries, and women can continue to work until late in their lives, if they wish to do so. Iceland tops the list of the Global Gender Gap Index. It is the top performer on political empowerment and educational attainment and in the top ten on economic participation and opportunity. Iceland also has a high number of women among legislators, senior officials and managers. Snævarr (2015[58]) finds that the "unexplained" gender wage gap (after controlling for other factors) was about 5.1% in 2011-13 and has been decreasing over time. It lies above Sweden, but is lower than in Denmark and Norway.

Iceland was the first Nordic country to enshrine in law (in 1975) the equal status and equal rights of men and women. For publicly-owned companies and public limited liability companies with at least 50 employees, boards of more than three members must be composed of at least 40% of each gender. Moreover, companies with 25 or more employees are required to disclose the gender composition of their employees and managers. Despite a low gender gap, the authorities are determined to reduce it further. The government wants to make it compulsory for all companies with 25 employees or more to develop a certification scheme for gender pay equality, with the aim that all jobs of equal value are paid the same. The obligation imposes implementation costs for the enterprises, such as auditing requirements. In this light, rolling out the scheme gradually, first for bigger firms and then for smaller ones, as proposed by the government, and monitoring the impact will allow the policy to be modified to avoid excessive burdens.

Source: (OECD, 2017[59]), *OECD Economic Surveys: Iceland 2017*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_surveys-isl-2017-en.

- ***Mitigate pressures on public spending, engage Koreans in productive employment for longer***. In the context of one of the world's highest effective retirement rates, it is crucial to upskill and reskill the labour force along the life cycle to address intergenerational skill gaps (see Box 1.4 for an example of the upskilling strategy in France) as many Koreans retire from regular quality jobs in their mid-50s and return to the job market in low-paid jobs or engage in self-employment. In addition, further policy action is needed to address perceptions and social preferences against competences, where businesses opt to hire younger workers rather than retain older workers.

Box 1.4. The 2018 reform for continuous training in France

The Act for the freedom to choose one's future career, which passed into law in September 2018, aims to simplify the training system, strengthen personal initiative and guidance, and to improve the quality and relevance of training. First, regulation and governance have been intensified. A single body, France Compétences, encompasses both central and regional government, as well as workers' and employers' unions, and has replaced a governance system that was spread out across several sectors of industry.

Second, there are changes to the operation of the personal training account. The account was previously measured in training hours, but has now been monetised in euros. The amount of the annual payments is based on workers' skills and comes to between EUR 500 and EUR 800; the total amount is capped at EUR 5 000 and EUR 8 000. Part-time workers – if they work more than 50% of full-time hours – will also benefit from the same rights as full-time employees. An application will be launched in the autumn of 2019 to allow users to access training online. Under the reform, the hours accumulated in pre-existing personal training accounts will be converted into euros at a rate expected to be EUR 15 per hour.

Third, the law introduces guidance for potential beneficiaries, as well as controlling the quality of and information about the training provided. Part of the funds dedicated to professional training and apprenticeship will now be earmarked for the career advice service that is offered. Furthermore, improvements have been made to the monitoring of training quality. Training and apprenticeship bodies will have to be certified to obtain public financing as of 2021. The criteria for this certification, which will be harmonised, will replace a mediocre system that was not sufficiently independent from the training bodies themselves (CNEFOP, 2018[60]). These criteria have yet to be defined by decree.

Sources: French Act for the freedom to choose one's future career (*Loi pour la Liberté de choisir son avenir professionnel*) https://travail-emploi.gouv.fr/IMG/pdf/act_for_the_freedom_to_choose.pdf; (CNEFOP, 2018[60]), *Rapport faisant synthèse des démarches Qualité menées dans le champ de la formation professionnelle, en liaison avec les financeurs*, National Council for Employment, Vocational Training and Careers Guidance, http://www.cnefop.gouv.fr/rapports-139/rapport-qualite-du-cnefop.html; (OECD, 2019[61]), *OECD Economic Surveys: France 2019*, OECD Publishing, Paris. https://doi.org/10.1787/a0eee144-en.

Supporting inclusive labour markets and business dynamism

Inclusive Growth is about triggering a growth process that is underpinned by a broad asset base. It is key to have the necessary pre-conditions for workers, entrepreneurs and firms in place to be productive and innovative in the workplace and in markets, as well as putting strong incentives in place to maintain momentum. This may require workers' real wages to keep up with rising productivity; and that corporate governance models be reassessed in light of new approaches including incorporation types and employee ownership, new business models and vibrant social dialogue; as well as the integration of a long-term perspective in the design of incentives and compensation for shareholders and executives.

A common challenge in Korea is ensure that the radical transformation of labour markets brought about by the emergence of the digital economy does not leave workers or companies behind. The engagement with social partners may need to be strengthened to ensure the creation of quality jobs and non-discrimination in the workplace, as well as to facilitate a smooth transition towards the future of work. Addressing the dualisms that drive inequalities in Korea – labour market dualism, gaps between large and other firms and between the manufacturing and services sector, and limited opportunities for youth, women and older workers – is key to boosting long-term inclusive growth prospects.

Labour market practices and social protection tools need to keep adapting to a changing world of work. Entitlements may need to be linked to individuals rather than jobs. In an increasingly digitalised economy,

characterised by acceleration of advantages for frontier firms, policies that encourage productivity and knowledge diffusion between the frontier firms and the rest will need to be stepped up; policies will also need to address the gap between the manufacturing and service sectors.

More specifically, the key dynamics for policies to support labour market inclusiveness are:

- ***Continue efforts to make labour markets more responsive to the changing world of work***. Promoting inclusiveness and reducing the dualism in the labour market requires a shift from protecting jobs to protecting individuals. This shift requires further reinforcement and strengthening of the social safety net, with broadening the coverage of the employment insurance, the Earned Income Tax Credit (EITC) and the Basic Livelihood Security Programme (BLSP). These measures could be supplemented by introducing more transparency in employment protection for regular workers to improve conversion to regular status and worker retention, to more adequately match wage and productivity levels and help with integrating youth, women and older workers. Policies could strengthen enforcement of the remedial process to redress discrimination in terms of wages and working conditions against non-regular workers who perform tasks similar to regular workers in the same firm. The statutory minimum wage could be used as a tool to raise wages at the bottom of the wage ladder, while ensuring coordination with the EITC and monitoring that low-skilled workers are not priced out of jobs.
- ***Invest in re-skilling and up-skilling workers, as well as those who are unemployed or have left employment for extended periods of time***. In the context of automation that may put 10% of jobs at high risk, and a further 33% may see a large share of tasks automated in Korea, policies that support life-long learning, such as the "People's Learning for Tomorrow Card" should further incorporate portability of training rights along the entire career path. Policies could further remove obstacles for up-skilling, most notably time constraints (which are emphasised by all age groups, but particularly prevalent among the low-skilled), including through enforcing the government policy of reducing the work week from 68 to 52 hours per week. Specific policies need to be considered to improve the labour market prospects of women, youth, older workers and immigrant workers as outlined in the next paragraphs.
- ***Address gender gaps through better pay and enforcement of anti-discrimination measures.*** Career differences between men and women develop early in working life and lead to a gender wage gap that is higher in Korea than in any other OECD country. Pay transparency measures could be introduced to help reduce the gender pay gap. Korea could also tackle discrimination more effectively by increasing sanctions for non-compliance with non-discriminatory workplace practices; strengthening the labour inspectorate to more effectively enforce anti-discrimination legislation; and making it easier for workers to file complaints on discrimination with labour courts. The gender pay gap discourages women, particularly those with higher education, from returning to the labour force after a prolonged absence from the labour market. The labour participation gap between men and women was 20.8 percentage points in 2018. Programmes already put in place, such as awareness raising campaigns Ministry of Gender Equality and Family (for example, by distributing books and educational contents on gender equality), could be expanded, for example by focusing on on-the-job counselling and training and promoting greater working time flexibility and expanding opportunities to work part-time with remuneration proportional to that of workers on full-time regular contracts.
- ***Promote diverse career opportunities for youth.*** The employment rate of young Koreans aged 15 to 29, at 42% in 2017, stands well below the OECD average of 53%, with a considerable share of young Koreans (18.4% in 2017) that are not in education, employment, or training (NEET). Many of these youth are actually preparing for university or company entry exams or following informal education courses. While the school environment is highly competitive in Korea, universities and employers see formal education degrees as insufficient measures of the applicant's skill and ability, preferring their own exams. In turn, it is widely perceived that the formal

education system does not set up students for success in their careers and families invest heavily in informal education to be competitive in entry exams of universities and subsequently companies that offer regular jobs with associated wage premiums and other advantages. Policies could encourage career counselling and promotion of diversified career paths. Improving the public perception of vocational education, expanding Meister Schools and strengthening ties between schools and firms through work-study and apprenticeship programmes would help reduce labour market mismatch.

- ***Prolong productive quality employment through upskilling and wage peak systems.*** The tendency for workers to be forced out of regular jobs in their fifties, makes them vulnerable to poor quality non-regular low-paying jobs and old age poverty. The retention of older workers could be encouraged through training programmes and decoupling wage increases from seniority, linking wage increases to productivity instead – given that nearly 40% of Korean workers that are 55-64 years old hold a non-permanent job. The wage peak system could be expanded, whereby the employer commits to maintaining older workers in their jobs in exchange for a wage cut that is partly compensated by government subsidies granted to the employee. To address old age poverty, the government could continue expanding the Basic Livelihood Security Programme (BLSP), and expand pension scheme coverage for self-employed and non-regular workers.
- ***Improve the Employment Permit Scheme to attract foreign workers.*** To improve the prospects for migrant workers, continued efforts could be made to address the limited wage growth of Employment Permit Scheme (EPS) workers during their stay in Korea, as well as the mobility restrictions which make it difficult for workers to develop higher skill levels. Changes in the programme to select and prioritise higher-skill workers, and to extend their stay to up to 10 years for higher productivity workers, may improve the attractiveness of the programme.
- ***Promote work-life balance.*** Korea has had among the longest working hours in the OECD area for many decades. The average number of hours actually worked per workers in 2017 was 2 024, well above the OECD average of 1 759 hours. Long working hours are widespread regardless of age, gender, company size, industry, and region (OECD, 2018[62]), and have an adverse effect on work-life balance and health. They are also cited as a major reason for the lack of time for skill development. In an attempt to stop chronic overworking, Korea has introduced new measures to lower the maximum hours people can work from 68 to 52 hours – split between 40 statutory work hours and 12 hours of allowed overtime. In force since July 2018 among large firms, the government plans to extend them to medium-sized firms from January 2020 and small firms from July 2021. An implementation mechanism should monitor the enforcement of the reduced hours.

At the same time, Korea needs to foster business dynamism, for example by considering to:

- ***Level the playing field for all businesses and promote a more inclusive GVC strategy.*** To ensure that doing business in the future will bring both growth and inclusiveness, Korea could focus on eliminating the inequalities that have accumulated in the economy, focusing on creating a level playing field for the service sector vis-à-vis the manufacturing sector and addressing the productivity gaps between SMEs and large conglomerates.
- ***Rebalance productivity growth towards services.*** A strong signal is needed that services matter to the economy as much as manufacturing industries. In July 2019, the Ministry of Economy and Finance announced a plan to provide the service sector with the same level of fiscal and financial support as the manufacturing sector, in order to promote R&D, service standardisation and service-manufacturing convergence (MOEF, 2019[63]). The plan should look at providing the same level of support, operating under the same tax rules and addressing the regulatory barriers faced by service industries to allow young firms and start-ups to emerge (see Chapter 3 for prioritisation of reforms). For example, the support policies announced for strategic industries selected by the government (future cars, bio health, smart industry industrial complex, fin-tech, new energy industry, smart cities, smart farms and drones) should look at the balance between support to manufacturing and

services, but also at how the support relates to broader inclusiveness objectives for the society (e.g. labour market and skill policies). Government support policies could ensure that innovation and activity in emerging sectors is not discouraged or displaced.

- ***Enable SMEs to work with large firms and be more productive***. The government may need to better address oligopolies and monopsonies in the intermediate markets through competition policy and trade reforms. In particular, the Korea Fair Trade Commission's (KFTC) monitoring role could be strengthened. Lowering barriers to trade and FDI would support the entry of foreign firms (both as suppliers and buyers), potentially reducing the market power of incumbent domestic firms. Policies that encourage large firms to cooperate with SMEs could be reinforced. For example, the Ministry of SMEs and Startups is recognizing the efforts of large firms that willingly share their internal resources such as technology, know-how, and infrastructure with SMEs as a "caring" Company (in Korean, 'Ja-Sang-Han' Company).
- ***Support the diffusion of technology between frontier firms and other firms.*** Policies could continue strengthening incentives for large companies, business associations and universities to set up consortia for sharing know-how, equipment and facilities with SMEs (see Box 1.5 for a selection of successful programmes in OECD countries). Existing initiatives such as the Leaders in Industry-University Co-operation Plus (LINC+) and Industry-Academia Co-operation platform should be scaled up. Korea could also reconsider funding models for universities and research institutes, rewarding collaboration with the industry.

Box 1.5. Fostering collaboration between education institutions and businesses: country practices

In the United States, Rhodes College has successfully embedded work-based learning into curricula. Its career service centre, responsible for matching employers and students, delivers various programmes such as third-party internship programmes or alumni-supported, work-based learning opportunities. In the former, Rhodes College partners with third parties to provide access to established internship programmes. The latter draws on financial support from alumni to fund specific work-based learning opportunities.

In Canada, most provincial governments have passed legislation requiring colleges to establish "programme advisory committees" (PACs) that focus on collaborative development of curricula. PACs generally consist of 5 to 12 members including college staff, students and a selection of external participants with experience in a particular field. Among others, these committees act as a venue for social partners to identify skills that graduates need to find employment in associated occupations or provide suggestions for content to be included in the programme.

In Norway, social partners participate as external members in the governing boards of domestic higher education institutions. The Universities and University Colleges Act stipulates that 4 out of 11 seats on each higher education governance boards must be taken up by an external member (including social partners). In this way, social partners with close links to the labour market are able to contribute to decision-making processes relating to the institution's strategy for education, research or other engagement activities.

Source: (OECD, 2019[64]), *OECD Economic Survey: Malaysia 2019*, OECD Publishing, Paris, https://doi.org/10.1787/eaaa4190-en; Adapted from (OECD, 2018[65]), *Higher Education in Norway: Labour Market Relevance and Outcomes,* OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264301757-en.

- ***Boost the productivity and growth of SMEs***. Korea could look into streamlining the more than 800 programmes that already exist for SMEs, managed by various institutions, as well as assessing their alignment with new support measures implemented and planned for 2019-20 (see Chapter 3). For example, creating a "one-stop-shop" for SMEs would make it easier for businesses to get the help they need and match their needs with available support. There are also a range of SME support policies that help SMEs to overcome their disadvantage in accessing credit, in dealing with red tape and bearing fixed operation costs. Some of these, however, are size contingent and act as a disincentive to grow. Korea has looked into this phenomenon and introduced a series of policy responses. Monitoring and evaluating these could help arrive at a graduation system that would encourage SME expansion. To unleash the potential of SMEs and support experimentation and innovation, the costs of experimentation and failure would need to be reduced and de-stigmatised. This could be achieved through better insolvency regimes and regulatory reforms that promote competition and innovation, such as the recently implemented Regulation-Free Special Zones, the negative approach to regulation and initiatives that promote the digitalisation of SMEs.[13]
- ***Enhance the importance of the service sector in GVCs***. The productivity gap between manufacturing and service firms leads to a lower insertion in service GVCs. This is a concern not only for inclusiveness but also for the future of manufacturing GVCs. In the digital era, manufacturing firms rely more and more on services to generate income (*servitisation*, mass customisation and importance of knowledge-based services for innovation). And while Korea has a strong comparative advantage in the ICT & electronics sector, there are already signs of a declining centrality[14] in this industry. In an uncertain international environment with rising protectionism, the dependence of Korea on manufacturing GVCs can become a risk. Creating a more inclusive GVC strategy rebalancing exports towards services could help as services are more resilient to trade shocks and less targeted by short-term protectionist measures. Another way to mitigate the impact of current trade tensions would be using mega-regional agreements to lock in trade preferences.

Governing a complex and multi-dimensional inclusive growth policy agenda

The implementation of the vision for Inclusive and Innovative nation in Korea, in a way that delivers to all, touches upon a wide range of areas: from education, health, labour market, trade, to gender policy and social security. Achieving the objectives of an inclusive growth strategy is therefore a complex undertaking, requiring a carefully planned and steered institutional mechanism for its delivery. OECD research on governance of complex agendas, such as the Sustainable Development Goals (SDGs), highlights a number of challenges that governments face (OECD, 2019[66]). A set of these relate to the complexities of the substance of a comprehensive policy agenda, as it requires setting priorities and sequencing, ensuring policy coherence and managing trade-offs across economic, social and environmental objectives. Key dynamics to be considered:

- ***Embedding inclusiveness in policy-making and making governance participatory.*** Coordinated action may be needed to strengthen institutional frameworks for mainstreaming and budgeting of gender and diversity, including through open government. Korean administration needs to continue the efforts to encourage a culture of collaboration and iteration between ministries and departments; work with institutions at the sub-national and local levels; integrate the inclusive growth agenda within the budgeting cycle; and engage with different stakeholders - citizens, academia, private sector, social partners and non-profit organisations. The collectively defined vision needs to be shared by all institutional actors to sustain beyond the political cycle (OECD/KDI, 2018[67]). For example, when designing and implementing policies on promoting the acquisition of digital skills across all groups of the society, a comprehensive approach would involve Korean ministries of Education, Employment and Labour and Science & ICT as well as social partners.

- ***Beyond anti-corruption measures, the policy-making process needs to be protected from undue influence to avoid the capture of public policy by narrow interest groups.*** Greater stakeholder engagement could contribute to strengthening policies in Korea, standards and projects in areas of broader public interest, following the Recommendation of the Council on Open Government [C(2017)140] [C/M(2017)22] .
- ***Strengthening the redistributive power of taxes and transfers***. There is scope to improve the targeting of support, while avoiding excessive administrative burden, as Korea has one of the lowest redistribution rates in the OECD. Merely 23% of total transfers are targeted towards the bottom quintile; and the bottom 40% households pay more in taxes than they receive in transfers in Korea (Causa and Hermansen, 2017[68]). Since 2009, social expenditure increased by 2 percentage points in Korea (alongside Finland and Norway) reaching 11.1% of GDP in 2018, compared to the OECD average of 20.1%. Public social expenditure-to-GDP ratio in Korea has more than tripled since 1990 (OECD, 2019[69]), but remains one of the lowest ratios in the OECD (Causa and Hermansen, 2017[68]), reflecting the relatively undeveloped stage of the welfare state, as well as the current demographic situation of a young population, as compared to some other OECD members.
- ***Affording further expansion of the coverage of the social protection system and the NBS.*** Achieving more redistribution would imply raising more revenue out of general taxation (Causa and Hermansen, 2017[68]), for example from taxes that have less effect on growth, such as the VAT and environment-related taxation (OECD, 2019[45]), while considering inclusiveness aspects in the design of the tax reforms. International comparison suggests space to do so, as the tax-to-GDP ratio in Korea was 28.4% in 2018, substantially lower than the OECD average of 34.3% and ranking as 30th out of the 36 OECD countries. Since 2000, the tax-to-GDP ratio has already increased by 6.9 percentage points. (OECD, 2019[70]). However, there is a need to pay close attention to the political feasibility in light of citizens' perceptions towards the acceptability of tax increases.
- ***Using data and smart technologies in screening policies for inclusiveness and accountability.*** This may require more efforts to improve budget transparency and ensure sound public financial management, ex-post evaluation of regulatory policies, government reliability and the reaction capacity to adverse shocks, as well as greater responsiveness and openness to citizen input.
- ***Addressing intergenerational divides and erosion of social ties***. In the context of low public spending, ineffective redistribution, and electoral dynamics of an ageing society, there is a growing intergenerational divide between the young and the elderly. The young feel discontentment with the welfare system, which requires them to take responsibility for the elderly, while simultaneously having to compete with older people for jobs. In an ageing society, with a growing elderly voting population, election periods tend to go hand-in-hand with increases in welfare commitments, adding to the anxieties of young workers (Rhyu, 2017[71]). The intergenerational tension is representative of a broader societal trend, namely a lack of social cohesion and the erosion of societal ties. These have not traditionally been areas targeted by public policy, and present a missed opportunity. A strong social network, or community, can provide emotional support during both good and bad times as well as provide access to jobs, services and other material opportunities. In Korea, 79% of people believe that they know someone they could rely on in a time of need, the second lowest rate in the OECD, where the average is 90% (OECD, 2020[72]).
- ***Innovative policy solutions are emerging to address exclusion and isolation***. Recent local level policies in Korea have looked at some aspects of the isolation and exclusion of the elderly who live alone. For example, the Seoul Metropolitan Government has established a Comprehensive Plan for 50+ Assistance, which provides life training, emotional support, cultural experiences and retraining for continued social opportunities among the newly retired (OECD, 2018[1]). To promote social interaction, the government has also encouraged projects that promote

the sharing of cars, bikes, toys, food, homes, skills and more. A range of private initiatives and social ventures have also emerged, such as SHAREUS, where the elderly are empowered to teach classes on diverse subjects in their area of expertise. Successful initiatives of this kind, which foster vibrant, inclusive communities, could be scaled up at the national level, tying into related policy areas such as education, skills, housing, gender or connectivity policies.

Effective engagement with citizens

Citizens and society could have a stronger role to play with regard to informing and steering policy decisions. This can happen once they feel their voice is being taken into account and their contributions are being translated into concrete improvements. Effective administrative justice can help to ensure public accountability, transparency, participation and openness. It constitutes an interface between public administration and society to protect the public interest and individuals' rights, while improving democratic accountability. Involving under-served or excluded populations in decision-making could help to build trust between citizens, businesses and governments. Accessing government and corporate information and secure exchanges of data is one step forward Korea is exploring to make engagement of citizens easier through open governance initiatives.

The *OECD Framework for Policy Action on Inclusive Growth* suggests four key areas for policy attention to restore citizens' confidence in government that are relevant to the Korean context:

- ***First, better governance and delivery of services can enhance trust and improve citizens' perceptions of institutional and representative performance*** (Murtin et al., 2018[73]). This includes improving government integrity and demonstrating government reliability for instance when dealing with adverse events. Active communication on quality service delivery could help shift people's perceptions.
- ***Second, trust can be restored by making policy-making more responsive, by building a framework for comprehensive citizen participation in the policy cycle.*** Korea should continue moving from stakeholder information and consultation to meaningful engagement (Box 1.6), where stakeholders are given the opportunity and the necessary resources (e.g. information, data and digital tools) to collaborate during all phases of the policy-cycle and in service design and delivery, as defined by the OECD Recommendation of the Council on Open Government (OECD, 2018[1]). In addition to direct engagement with civil society, policy makers could more actively involve stakeholders in the process of developing policies and regulations at an early stage, including through innovative digital tools such as the e-people platform[15] (Kim, 2018[36]). Korea could also empower citizens with data and information to enable them to make informed decisions about their personal and professional development and public participation. This would provide citizens with a sense that their voices are being heard and instil greater ownership over policy choices (OECD/KDI, 2018[67]).
- ***Third, trust in government can also be improved though mainstreaming diversity and gender equality into public life to better reflect the spectrum of needs of all citizens.*** Diversity and gender equality in public life is an indicator of commitment to the vision of inclusive growth. As already discussed, despite recent improvements, Korea is still struggling with the representation of women in public life. Indeed, women comprised a mere 17% of the MPs in the National Assembly (OECD, 2018[1]) and 45% of public sector employees in 2017 (the OECD average was 60% in 2017) (OECD, 2019[74]). Policies towards gender parity can help attract women and help them advance to more senior levels, as discussed in the section on policy insights for investing in people and places. Hiring targets for women are in place in 10 OECD countries, and 6 OECD countries have promotion targets for women.

Box 1.6. Improving trust through citizen engagement: the case of the Netherlands

To improve trust in policy making, the government of the Netherlands began a move to reorganise, professionalise and measure citizen engagement in 2006. Along with improving trust in the process, the government's intention was to make engagement more effective and to support good decision making. "The professionalization" consists of a Code of Conduct with "principles of good consultation" and an interdepartmental organisation (Inspraakpunt) that can assist public officials through a platform for knowledge exchange and a regular benchmark for the quality and effectiveness of citizen engagement.

In 2008, the government of the Netherlands conducted an empirical evaluation of the impact of professionalism on citizen engagement. It drew upon 36 examples of citizen engagement, and the results demonstrated that the more the standards for professionalism are met, the higher the scores of subjective and objective effects. This is particularly true where preconditions are favourable. If policy options are limited, or commitment from the political level is low, the effect of professionalism is considerably lower. Good communication leads to greater impact. Participants are more satisfied with the process and the results if there is clear communication about the influence of participants and if the results are clearly demonstrated. Support from the community for final decisions will, in general, be greater.

If project leaders ensure that the process is made-to-measure for the problem at hand, all those involved are more satisfied with the results. Support from society for solutions will be greater…if the process is made-to-measure for the issue at hand.

Of all preconditions, political commitment in particular stands out. Impact is generally greater in processes where responsible politicians are supportive of citizen engagement. This is equally true if they are visible to participants during the process and perceived by the outside world as an operating unit.

Source: Van der Wal, H., I. Propper and J. de Jong (2009), "Developing professional standards for citizen engagement: The Netherlands"; (OECD, 2017[75]), *Trust and Public Policy: How Better Governance Can Help Rebuild Public Trust*, Public Governance Reviews, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264268920-en.

- ***Fourth, preventing and tackling perceptions of policy capture is essential for promoting trust in government***. This factor is especially important for Korea, where the previous growth model contributed to a rise in inequalities and a legacy of vested interests and divisions. Koreans' concerns about integrity seem particularly related to the risk of policy capture and potential conflict of interest between the public and the private sectors (OECD/KDI, 2018[67]). The concentration of economic power among the four or five largest conglomerates is intensifying (e.g. through subcontracting arrangements that do not share profits equitably), while the benefits they bring to the wider economy seem to further dissipate. For example, the proportion of employment accounted for by large conglomerates is only 10%, and the figure is gradually falling (Rhyu, 2017[71]). New policies in support of the innovation pillar of President Moon Jae-in government's vision for Korea, such as large subsidies to conglomerates operating in sectors that the government has identified as priorities (bio-tech, automated cars and semiconductors) need to be mindful of the lessons of the previous export-led growth model and deliver to the rest of the economy to avoid potential negative effects of trust. Therefore, the innovation pillar therefore could be closely integrated and aligned with the inclusiveness pillar of the government's vision for Korea as an Inclusive and Innovative Nation. This means conducting a rigorous and transparent impact assessment of the distributional effects of the innovation pillar; while ensuring that the organisation of industrial relations is not unduly influenced by powerful industrial groups.

Monitoring progress with a dashboard of inclusive growth indicators and tracking the impacts of policies on distributional outcomes

A long-term strategy for an Inclusive and Innovative Korea also needs to be underpinned by a monitoring mechanism that would enable Korea to track progress over time and inform necessary adjustments in policy and budget allocations in a comprehensive manner on the national scale (see Box 1.7 for an example of the New Zealand Well-Being Budgeting). No policy strategy can be sustained if data and appropriate indicators are not available to monitor progress and identify policy targeting and prioritisation.

The OECD Dashboard of Inclusive Growth indicators (Table 1.3) can be a starting point for Korea in developing a monitoring mechanism that captures how well the economy is performing for all of its citizens. It would also measure progress towards the achievement of Korea's priorities. The measurement framework could build on existing frameworks in Korea, such as the key performance indicators (KPI) used in the budgeting process and the indicator framework used by the Special Committee on Income-led Growth. In addition, this measurement framework could be used to identify priorities of action as well as for evaluating the impact of policies, as done in some OECD countries that are moving towards a multidimensional evaluation of policies (Durand and Exton, 2018[76]).

Table 1.3. OECD Dashboard of Inclusive Growth Indicators

Category	Core indicator	
1. Growth and ensuring equitable sharing of benefits from growth	1.1	GDP per capita growth (%)
	1.2	Median income growth and level (%; USD PPP)
	1.3	S80/20 share of income (ratio)
	1.4	Bottom 40% wealth share and top 10% wealth share (% of household net wealth)
	1.5	Life expectancy (number of years)
	1.6	Mortality from outdoor air pollution (deaths per million inhabitants)
	1.7	Relative poverty rate (%)
2. Inclusive and well-functioning markets	2.1	Annual labour productivity growth and level (%; USD PPP)
	2.2	Employment-to-population ratio (%)
	2.3	Earnings dispersion (inter-decile ratio)
	2.4	Female wage gap (%)
	2.5	Involuntary part-time employment (%)
	2.6	Digital access (businesses using cloud computing services) (%)
	2.7	Share of SME loans in total business loans (%)
3. Equal opportunities and foundations of future prosperity	3.1	Variation in science performance explained by students' socio-economic status (%)
	3.2	Correlation of earnings outcomes across generations (coefficient)
	3.3	Childcare enrolment rate (children aged 0-2) (%)
	3.4	Young people neither in employment nor in education & training (18-24) (%)
	3.5	Share of adults who score below Level 1 in both literacy and numeracy (%)
	3.6	Regional life expectancy gap (% difference)
	3.7	Resilient students (%)
4. Governance	4.1	Confidence in government (%)
	4.2	Voter turnout (%)
	4.3	Female political participation (%)

Notes: Core indicators can be supplemented by secondary indicators, which for category 1 could be: "Top 10% wealth share (% of total household net wealth)", "Regional median income gap (% difference)" and "Life expectancy gap by educational attainment (number of years)"; and for category 2: "Skills mismatch (%)", "Unemployment gap, by education (% points)", "Average employment gap, disadvantaged people (% points)" and "Employment rate of prime age workers (%)".
Source: OECD Secretariat.

For steady implementation of inclusive growth policies, it is essential that a measurement framework continuously checks whether each policy is operating properly. This process should be complemented by reinforcing fairness and transparency in the policy-making process in order to reach a social consensus on the necessity of inclusive growth policies and to increase public trust.

Box 1.7. From well-being measurement and evidence-building to a well-being budget and mainstreaming in policy-making in New Zealand

Well-being measurement in New Zealand has a long history and spans multiple ministries and public bodies. As early as 2001, the Ministry of Social Development published its first Social Report (Ministry of Social Development, 2001[77]), with very similar domains to those included in both the OECD approach and the Living Standards Framework Dashboard, which are compatible with the Dashboard on Inclusive Growth.

Data availability expanded significantly in subsequent years, particularly in the social and environmental domains. In 2008 and 2010, Stats NZ produced two iterations of Measuring New Zealand's Progress using a Sustainable Development Approach, building on the earlier Monitoring Progress Towards a Sustainable New Zealand Reports from 2002 and 2003 (Stats NZ, 2011[78]). In 2011, a paper by the Treasury provided a snapshot of New Zealand's Living Standards (New Zealand Treasury, 2011[79]) Also in 2011, Stats NZ released the first prototype of its Integrated Data Infrastructure, a large database containing microdata about people and households from a wide range of government agencies, Stats NZ surveys and Census, as well as non-government organisations (Stats NZ, 2018[80]) This infrastructure provides a rich source of information for the Social Investment Agency, which strategically advises the government on improving outcomes for New Zealanders.

Since its establishment in 2015, the Agency has produced various case studies on using a well-being approach to public policy, including on the well-being impacts of social housing (SIA, 2018[81]). The Ministry for the Environment and Stats NZ launched their Environmental Reporting series the same year (Ministry for the Environment and Stats NZ, 2015[82]) The Treasury's 2018 Living Standards Framework Dashboard is a natural extension and consolidation of this previous work. Stats NZ's Indicators Aotearoa New Zealand, is a further large-scale well-being and sustainability dataset launched in mid-2019.

In 2019, New Zealand adopted its first well-being budget which focuses on the outcomes that meet the needs of present generations, while considering the long-term impacts for future generations. It also tracks progress with broad measures of success, including healthy finances, natural resources, people and communities. The five priorities for 2019 are: supporting mental wellbeing for all New Zealanders; reducing child poverty and improving child well-being; lifting Māori and Pacific incomes, skills and opportunities; supporting a thriving nation in the digital age through innovation, social and economic opportunities; creating opportunities for productive businesses, regions, and communities to transition to a sustainable and low-emissions economy.

Going forward, the ambition is to continue with a well-being budget in 2020 and beyond, and to mainstream the well-being approach into policy-making at large well beyond the fiscal process.

Source: Adapted from (OECD, 2019[83]), *OECD Economic Surveys: New Zealand 2019*, OECD Publishing, Paris, https://doi.org/10.1787/b0b94dbd-en; (New Zealand Treasury, 2019[84]), *The Wellbeing Budget*, https://treasury.govt.nz/publications/wellbeing-budget/wellbeing-budget-2019-html.

Conclusion: Making inclusiveness happen in Korea

It is high time for Korea to address the inequalities that have built up in society – from the disparities between workers and the productivity gaps between *chaebols* and the rest, to intergenerational divides to social isolation to perceptions of policy capture. In the context of an ageing society, the digital transformation and the changing nature of globalisation, in the next two years, the administration should concentrate on measures that address inequalities and support the acquisition of skills for the future, while boosting economic dynamism, innovation and entrepreneurship in a cohesive approach.

Low and no-cost measures that can be implemented without delay include campaigns that address attitudes and stereotypes regarding women's career opportunities (e.g. boosting girl's and women's participation in STEM), their participation in the labour market and in public life. Collaborative efforts across the responsible Ministries and institutions should be stepped up to continuously equip people with the skills needed to harness the potential of the digital transformation. In particular, investments in the skills for older workers, in combination with other dedicated measures to prolong their working lives (e.g. wage peak system and combatting stereotypes that hamper the retention of older workers) will boost their contribution to public budgets, as well as delay and reduce the pressures of an aging society on public spending. Policies should also aim to broaden the opportunities for young people, for example quality vocational education with placements and apprenticeships in industries

Korea should also use the available fiscal space to continue expanding the social safety net, notably the coverage of child support, of the Employment Insurance (EI) system, and the coverage and level of the Basic Livelihood Security Programme (BLSP), while also targeting the measures to those in need. Korea should also remain a leader in the promotion of R&D through investment in innovation; however, support to key industries should be designed in a way that supports the wider economy (e.g. by engaging SMEs and encouraging regularisation of workers and diversity hire) and does not impede the innovation potential in other industries (i.e. those that have not been selected by the government).

With respect to the *labour market* (discussed in detail in Chapter 2), without immediate policy action, emerging forms of work can deepen the income and well-being disparities that stem from the dualism of the labour market between regular and non-regular workers, which is a pre-existing structural challenge.

Against this backdrop, the following key policies are key for fostering the development of an inclusive labour market in Korea: (i) Reduce differences in employment practices and make employment protection for regular workers more predictable, while increasing social insurance coverage for non-regular workers and improving their access to active labour market policies; (ii) Build an effective system of lifelong learning based on National Competency Standards (NCS) to ensure that workers can use and upgrade their competences throughout their working lives; and (iii) Facilitate inclusive dialogue with social partners and other relevant stakeholders and, where necessary, adapt today's labour market, skills and social policies to emerging needs. It is also important to set up an effective evaluation framework to assess progress in implementing the policies to support more inclusive labour markets in Korea.

With respect to *productivity and business dynamism* (discussed in detail in Chapter 3), the main three priorities for Korea in the next two years are: (i) to create a level playing field between manufacturing and services for tax policy and government support; (ii) to address size contingencies in schemes supporting firms and in labour laws; and (iii) to promote competition through trade and investment liberalisation and by addressing unfair business practices faced by small firms.

The first priority can be seen as a first step towards more ambitious regulatory reforms for the service sector, while starting with a reasonable objective that could send the signal that services matter as much as manufacturing activities for the government. This process was already initiated in July 2019 with the announcement of such a reform.

The second priority requires looking at some of the laws already discussed in the context of labour market reforms, such as support for young workers, limits on temporary employment or working hours. Since these laws are already under review, the additional action would limited to taking into account the role of size thresholds and how they sometimes discourage small firms from growing and graduating from the SME category.

Finally, the third priority is more challenging in terms of a short-term policy agenda but is essential to improve business dynamism and to have a significant impact on productivity. Foreign competition not only helps to boost the productivity of domestic firms but also allows small firms to find a new market (unlike the domestic one where only dominant Korean firms operate). This can be achieved by adopting measures addressing directly unfair business practices involving large firms, which are also necessary to discipline foreign companies that will enter the Korean market.

In the area of *governance*, the current administration can take steps to step up and formalise coordination mechanisms across ministries, other institutions and stakeholders to ensure a whole-of-society buy-in for the growth model that puts people at the centre of policies for inclusiveness and innovation. This should include the development of a comprehensive measurement framework for tracking progress and evaluating policy effectiveness, which is also embedded in the budgeting cycle. While the building of trust will be a continuous, long-term process, a first crucial step is for the administration to demonstrate that it acknowledges the inequalities that have been nurtured by the previous export-led growth model and is adamant to address them.

References

Babkin, A., B. Glover and O. Levine (2017), *Are Corporate Inversions Good for Shareholders?*, http://dx.doi.org/10.2139/ssrn.2700987. [52]

Balestra, C. and R. Tonkin (2018), *Inequalities in household wealth across OECD countries: Evidence from the OECD Wealth Distribution Database*, OECD Publishing, Paris, https://doi.org/10.1787/7e1bf673-en. [17]

Calonge, D. (2015), *South Korean education ranks high, but it's the kids who pay*, https://theconversation.com/south-korean-education-ranks-high-but-its-the-kids-who-pay-34430 (accessed on 14 August 2019). [53]

Causa, O. and M. Hermansen (2017), *Income redistribution through taxes and transfers across OECD countries*, OECD Publishing, Paris, https://doi.org/10.1787/bc7569c6-en. [68]

CNEFOP (2018), *Rapport faisant synthèse des démarches Qualité menées dans le champ de la formation professionnelle, en liaison avec les financeurs*, http://www.cnefop.gouv.fr/rapports-139/rapport-qualite-du-cnefop.html. [60]

Criscuolo, C. and J. Timmis (2018), "GVCS and centrality: Mapping key hubs, spokes and the periphery", *OECD Productivity Working Papers*, No. 12, OECD Publishing, Paris, https://dx.doi.org/10.1787/d4a9bd6f-en. [43]

Durand, M. and C. Exton (2018), *Adopting a Well-Being Approach in Central Government: Policy Mechanisms and Practical Tools*, https://s3.amazonaws.com/ghwbpr-2019/UAE/GH19_Ch8.pdf. [76]

Eccles, R., I. Ioannou and G. Serafeim (2014), *The Impact of Corporate Sustainability on Organizational Processes and Performance*, http://dx.doi.org/10.2139/ssrn.1964011. [51]

Edmans, A., V. Fang and K. Lewellen (2017), "Equity vesting and investment", *The Review of Financial Studies*, Vol. 30/7, pp. 2229–2271, https://doi.org/10.1093/rfs/hhx018. [50]

Hunt, V., D. Layton and S. Prince (2015), "Why diversity matters", *McKinsey & Company*, https://www.mckinsey.com/business-functions/organization/our-insights/why-diversity-matters. [49]

Islam, S. (2015), *Inequality and Environmental Sustainability*, https://www.un.org/esa/desa/papers/2015/wp145_2015.pdf. [15]

Kim, S. (2019), *Social Equity and Public Sector Employment in the Republic of Korea*, Palgrave Macmillan. [57]

Kim, S. (2018), "Citizen participation and public trust in local government: The Republic", *OECD Journal on Budgeting*, Vol. 18/2, pp. 73-92, https://doi.org/10.1787/16812336. [36]

Llena-Nozal, A., N. Martin and F. Murtin (2019), *The economy of well-being: Creating opportunities for people's well-being and economic growth*, OECD Publishing, Paris, https://doi.org/10.1787/498e9bc7-en. [8]

Ministry for the Environment and Stats NZ (2015), *Environment Aotearora 2015*, https://www.mfe.govt.nz/more/environmental-reporting. [82]

Ministry of Social Development (2001), *The Social Report 2011*, Ministry of Social Development, http://socialreport.msd.govt.nz/2001/introduction/introduction.shtml. [77]

MOEF (2019), *18th Ministerial Meeting on Boosting the Economy*. [63]

MOEF (2019), *Economic Policies, H2 2019*, http://english.moef.go.kr/pc/selectTbPressCenterDtl.do?boardCd=N0001&seq=4710 (accessed on 21 August 2019). [48]

MOEF (2019), "Government to Promote AI Across Industries and the Society", *Press releases*, https://english.moef.go.kr/pc/selectTbPressCenterDtl.do?boardCd=N0001&seq=4800 (accessed on 18 December 2019). [46]

MSS (2019), *To Expand Support for More StartUps and Solid Enterprises led by Women*, https://www.mss.go.kr/site/eng/ex/bbs/View.do?cbIdx=244&bcIdx=1013127 (accessed on 7 August 2019). [55]

Murtin, F. et al. (2018), *Trust and its determinants: Evidence from the Trustlab experiment*, OECD Publishing, Paris, https://doi.org/10.1787/869ef2ec-en. [73]

New Zealand Treasury (2019), *The Wellbeing Budget*, https://treasury.govt.nz/publications/wellbeing-budget/wellbeing-budget-2019-html. [84]

New Zealand Treasury (2011), *Working Towards Higher Living Standards for New Zealanders - May 2011*, https://treasury.govt.nz/publications/tp/working-towards-higher-living-standards-newzealanders-tp11-02. [79]

OECD (2020), *How's Life 2020: Measuring Well-being*, OECD Publishing, Paris, https://doi.org/10.1787/9870c393-en. [72]

OECD (2020), *OECD Economic Outlook*, OECD Publishing, Paris, https://doi.org/10.1787/0166339c-en. [12]

OECD (2020), *OECD Economic Outlook, Volume 2020 Issue 2*, OECD Publishing, Paris, https://dx.doi.org/10.1787/39a88ab1-en. [44]

OECD (2019), *Economic Policy Reforms 2019: Going for Growth*, OECD Publishing, Paris, https://doi.org/10.1787/aec5b059-en. [45]

OECD (2019), *Education at a Glance 2019: OECD Indicators*, OECD Publishing, Paris, https://dx.doi.org/10.1787/f8d7880d-en. [23]

OECD (2019), *Employment Outlook 2019 - The Future of Work*, OECD Publishing, Paris, https://doi.org/10.1787/9ee00155-en. [33]

OECD (2019), *Governance as an SDG Accelerator: Country Experiences and Tools*, OECD Publishing, Paris, https://doi.org/10.1787/0666b085-en. [66]

OECD (2019), *Government at a Glance 2019*, OECD Publishing, Paris, https://doi.org/10.1787/8ccf5c38-en. [74]

OECD (2019), *Investing in Youth: Korea*, OECD Publishing, Paris, https://doi.org/10.1787/4bf4a6d2-en. [21]

OECD (2019), *Investing in Youth: Korea*, OECD Publishing, Paris, https://doi.org/10.1787/4bf4a6d2-en. [22]

OECD (2019), *OECD Compendium of Productivity Indicators 2019*, OECD Publishing, Paris, https://doi.org/10.1787/b2774f97-en. [29]

OECD (2019), "Labour productivity, 2017: GDP per hour worked, total economy, US dollars, current prices and current PPPs", in *OECD Compendium of Productivity Indicators 2019*, OECD Publishing, Paris, https://dx.doi.org/10.1787/b2774f97-en. [30]

OECD (2019), *OECD Economic Outlook, Interim Report September 2019*, OECD Publishing, Paris, https://doi.org/10.1787/37e06864-en. [13]

OECD (2019), *OECD Economic Surveys: France 2019*, OECD Publishing, Paris, https://dx.doi.org/10.1787/a0eee144-en. [61]

OECD (2019), *OECD Economic Surveys: Malaysia 2019*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eaaa4190-en. [64]

OECD (2019), *OECD Economic Surveys: New Zealand 2019*, OECD Publishing, Paris, https://dx.doi.org/10.1787/b0b94dbd-en. [83]

OECD (2019), *OECD Employment Outlook 2019: The Future of Work*, OECD Publishing, Paris, https://doi.org/10.1787/9ee00155-en. [39]

OECD (2019), *OECD National Accounts Database*, http://dotstat.oecd.org/Index.aspx?DataSetCode=SNA_TABLE1. [10]

OECD (2019), *OECD Social Expenditure Database*. [69]

OECD (2019), *OECD.Stat, Employment dataset*, https://stats.oecd.org/Index.aspx?DataSetCode=GENDER_EMP. [32]

OECD (2019), *PISA 2018 Results (Volume I): What Students know and can do, PISA*, OECD Publishing, Paris, https://doi.org/10.1787/5f07c754-en. [20]

OECD (2019), *PISA 2018 Results (Volume II): Where All Students Can Succeed, PISA*, OECD Publishing, Paris, https://doi.org/10.1787/b5fd1b8f-en. [19]

OECD (2019), "Revenue Statistics 2019 - Korea", http://www.oecd.org/tax/revenue-statistics-korea.pdf. [70]

OECD (2019), *SIGI 2019 Global Report: Transforming Challenges into Opportunities*, OECD Publishing, Paris, https://doi.org/10.1787/bc56d212-en. [56]

OECD (2019), *Society at a glance*, OECD Publishing, Paris. [40]

OECD (2018), *A broken social elevator? How to promote social mobility*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264301085-en. [18]

OECD (2018), *Financing SMEs and Entrepreneurs 2018: An OECD Scoreboard*, OECD Publishing, Paris, https://dx.doi.org/10.1787/fin_sme_ent-2018-en. [35]

OECD (2018), *Higher Education in Norway: Labour Market Relevance and Outcomes*, Higher Education, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264301757-en. [65]

OECD (2018), *Innovation, Agricultural Productivity and Sustainability in Korea*, OECD Publishing, Paris, https://doi.org/10.1787/9789264307773-en. [42]

OECD (2018), *OECD Economic Outlook, Volume 2018 Issue 2*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_outlook-v2018-2-en. [27]

OECD (2018), *OECD Economic Surveys Korea*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-kor-2018-en. [16]

OECD (2018), *OECD Employment Outlook 2018*, OECD Publishing, Paris, https://dx.doi.org/10.1787/empl_outlook-2018-en. [34]

OECD (2018), *Opportunities for All: A Framework for Policy Action on Inclusive Growth*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264301665-en. [1]

OECD (2018), *Opportunities for All: A Framework for Policy Action on Inclusive Growth*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264301665-en. [9]

OECD (2018), *The Productivity-Inclusiveness Nexus*, OECD Publishing, Paris, https://doi.org/10.1787/9789264292932-en. [26]

OECD (2018), *Working Better with Age: Korea*, OECD Publishing, Paris, https://doi.org/10.1787/9789264208261-en. [62]

OECD (2017), *Government at a Glance 2017*, OECD Publishing, Paris, https://doi.org/10.1787/gov_glance-2017-76-en. [38]

OECD (2017), *Health at a Glance 2017: OECD Indicators*, OECD Publishing, 2017, https://doi.org/10.1787/health_glance-2017-en. [11]

OECD (2017), *How does Korea compare?*, OECD Publishing, France, https://www.oecd.org/korea/Gender2017-KOR-en.pdf. [54]

OECD (2017), *How's Life? 2017: Measuring Well-being*, OECD Publishing, Paris, https://doi.org/10.1787/how_life-2017-en. [5]

OECD (2017), *OECD Economic Surveys: Iceland 2017*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_surveys-isl-2017-en. [59]

OECD (2017), *OECD Environmental Performance Reviews: Korea 2017*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264268265-en. [14]

OECD (2017), *The Productivity-Inclusiveness Nexus, C/MIN(2016)3*. [7]

OECD (2017), *Trust and Public Policy: How Better Governance Can Help Rebuild Public Trust*, OECD Public Governance Reviews, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264268920-en. [75]

OECD (2016), *OECD Economic Surveys: Korea 2016*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_surveys-kor-2016-en. [41]

OECD (2016), "Percentage of resilient students", in *PISA 2015 Results (Volume I): Excellence and Equity in Education*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264266490-en. [25]

OECD (2016), *Skills Matter: Further Results from the Survey of Adult Skills*, OECD Skills Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264258051-en. [24]

OECD (2015), *All on Board: Making Inclusive Growth Happen*, OECD Publishing, Paris, https://doi.org/10.1787/9789264218512-en. [2]

OECD (2015), *How's Life? 2015: Measuring Well-being*, OECD Publishing, Paris, https://doi.org/10.1787/how_life-2015-en. [6]

OECD (2015), *In It Together: Why Less Inequality Benefits All*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264235120-en. [3]

OECD (2015), *OECD Regulatory Policy Outlook 2015*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264238770-30-en. [37]

OECD (2011), *How's Life? 2011: Measuring Well-being*, OECD Publishing, Paris, https://doi.org/10.1787/9789264121164-en. [4]

OECD/KDI (2018), *Understanding the Drivers of Trust in Government Institutions in Korea*, OECD Publishing, Paris, https://doi.org/10.1787/9789264308992-en. [67]

Pak, M., P. Pionnier and C. Schwellnus (2019), *Labour Share Developments in OECD Countries Over the Past Two Decades*, https://persee.fr/doc/estat_0336-1454_2019_num_510_1_10898. [28]

Rhyu, S. (2017), "The Challenge of Social Integration in South Korea", *Global Asia*, http://www.globalasia.org/v12no2/cover/the-challenge-of-social-integration-in-south-korea_sang-young-rhyu. [71]

SIA (2018), *Measuring the Well-being Impacts of Public Policy: Social Housing*, https://sia.govt.nz/assets/Uploads/Measuring-thewellbeing-impacts-of-public-policy-social-housing.pdf. [81]

Snævarr, S. (2015), *The pay of men and women, Report commissioned by the Action group of the government and the social partners to work for equal pay equality*. [58]

Statistics Korea (2020), *Korean Statistical Information Service (KOSIS)*, http://kosis.kr/eng/. [47]

Statistics Korea (2018), *Economically Active Population Survey – Supplementary results by employment type*, http://kostat.go.kr/portal/eng/pressReleases/5/5/index.board (accessed on 14 January 2020). [31]

Stats NZ (2018), *Integrated Data Infrastructure*, https://www.stats.govt.nz/integrateddata/integrated-data-infrastructure/. [80]

Stats NZ (2011), *Measuring New Zealand's Progress Using a Sustainable Development Approach*, http://archive.stats.govt.nz/browse_for_stats/snapshots-of-nz/Measuring-NZprogress-sustainable-dev-%20approach.aspx. [78]

Annex 1.A.

Annex Table 1.A.1. Dashboard on Inclusive Growth in Korea

Category		Core indicator	Korea	OECD Average	G7	Australia	Spain	Sweden	The Netherlands
1. Growth and equitable sharing of benefits from growth	1.1	GDP per capita growth (%) from 2012 to 2018	2.52%	1.67%	1.18%	0.87%	2.01%	1.41%	1.35%
	1.2	Median income level (USD PPP) in 2017	26 755	23 563	26 669	31 671	21 980	30 259	29 397
	1.3	S80/20 share of income (ratio) in 2017 or latest	7	5	6	6	6	4	..
	1.4	Bottom 40% wealth share (% of household net wealth) in 2016 or latest	6%	2.5%	2.7%	4.9%	6.9%	..	6.9%
	1.5	Life expectancy (number of years) in 2017 or latest	82.7	80.8	81.8	82.6	83.4	82.5	81.8
	1.6	Mortality from outdoor air pollution (deaths per million inhabitants) in 2017	347	378	373	200	370	226	401
	1.7	Relative poverty rate (%) in 2017	**17.0%**	12.0%	12.0%	12.0%	15.0%	9.0%	..
2. Inclusive and well-functioning markets	2.1	Annual labour productivity growth from 2012 to 2018 (%)	2.78%	1.28%	0.89%	0.95%	0.62%	0.98%	0.59%
	2.2	Employment-to-population ratio (%) in 2018	60.7%	58.7%	56.8%	62.2%	49.7%	68.5%	61.8%
	2.3	Earnings dispersion (inter-decile ratio) in 2017	**4.3**	3.5	3.7	3.1	3.1	2.1	3.0
	2.4	Female wage gap (%) in 2018 (2019 in Korea)	**32.5%**	13.0%	16.4%	11.7%	11.5%	7.3%	14.1%
	2.5	Involuntary part-time employment (%) in 2018	..	3.4%	4.2%	9.0%	8.3%	2.0%	3.1%
	2.6	Digital access (Businesses using cloud computing services) (%) in 2018	**17.2%**	32.1%	36.0%	44.5%	22.0%	57.2%	48.2%
	2.7	Share of SME loans in total business loans (%) in 2017	80.2%	46.3%	24.8%	30.9%	50.1%	39.6%	38.3%
3. Equal opportunities and foundations of future prosperity	3.1	Variation in science performance explained by students' socio-economic status (%) in 2018	8.0%	12.8%	12.0%	10.0%	10.0%	12.7%	13.0%
	3.2	Correlation of earnings outcomes across generations (coefficient) (late 2000s)	**40%**	38.4%	43%	35.0%	28.0%	25.8%	39.0%
	3.3	Childcare enrolment rate (children aged 0-2) (%) in 2017	53.4%	26.9%	34.0%	39.6%	36.4%	46.6%	59.3%
	3.4	Young people neither in employment nor in education & training (18-24) (%) 2018 (2017 for Korea)	**18.4%1**	12.8%	14.4%	10.8%	19.1%	8.9%	7.%
	3.5	Share of adults who score below Level 1 in both literacy and numeracy (%) in 2015	20.6%	26.6%	..	21.5%	35.7%	17.5%	15.6%
	3.6	Regional life expectancy gap (% difference) in 2015 or latest (2014 in Korea)	2.5%	2.9%	4.6%	6.1%	2.6%	1.6%	2.1%
	3.7	Resilient students (%) in 2015	13.5%	11.3%	11.8%	13.1%	0.4%	11.4%	12.6%
4. Governance	4.1	Confidence in government (%) in 2018	**24.0%**	45%	43%	47.0%	29.0%	49.0%	66.0%
	4.2	Voter turnout (%) 2018 or latest (2017 Presidential election in Korea)	77%	68.4%	67.5%	92.9%	71.8%	87%	81.9%
	4.3	Female political participation (%) in 2018	**17%**	29.3%	25.5%	28.7%	39.1%	43.6%	38.0%

Annex Table 1.A.2. Sustaining growth and equitably sharing the benefits from growth in Korea

Indicators	Key results in Korea
1.1 GDP per capita growth	GDP per capita increased by 2.52% p.a. over 2012-18 (OECD average 1.61%) and 2.18% p.a. over 2017-18 (OECD average 1.76%).
1.2 Median income growth and level (USD PPP)	Median income reached USD 26 755 in 2017, above the OECD average of USD 23 563.
1.3 S80/20 share of income	The ratio between the top 20% and lowest 80% income earners was 7.0 in 2017, compared to the OECD average of 4.8.
1.4 Bottom 40% wealth share and top 10% wealth share	The bottom 40% held on average 6.0% of total wealth, compared to 2.4% on average across the OECD (2016 or latest).
1.5 Life Expectancy	Life expectancy increased to 82.7 years in 2017 (OECD average 80.8 years).
1.6 Mortality from outdoor air pollution	Outdoor air pollution contributed to 347 deaths per million inhabitants in 2017, up from 328 in 2011, but remains below the OECD average of 378 in 2017.
1.7 Relative poverty rate	About 17% of the population was experiencing relative poverty, with income below 50% of the median income in 2017, compared to 12% on average in the OECD.

Annex Table 1.A.3. Supporting business dynamism and inclusive labour markets

Indicators	Key results in Korea
2.1 Annual labour productivity growth and level	Annual labour productivity increased on average by 2.78% over 2012-18, compared to the OECD average of 1.32%.
2.2 Employment-to-population ratio	Employment-to-population increased from 59.8% in 2013 to 60.7% in 2018, compared to the OECD average of 58.7% in 2018.
2.3 Earnings dispersion	The top 10% earned 4.3 times more than the bottom 10% in 2017, compared to the OECD average of 3.5 times.
2.4 Gender pay gap	Women earn significantly less than men, with a 32.5% gender pay gap in 2019, compared to the OECD average of 13.0%.
2.5 Involuntary part-time employment	*N/A; missing data.*
2.6 Digital access	Digital opportunities are not fully seized: 17.2 of companies used CCS in 2018, compared to the OECD average of 32.1%.
2.7 Share of SME loans in total business loans	80.2% of total business loans are allocated to SMEs in 2017, compared to the OECD average of 47.4%.

Annex Table 1.A.4. Investing in people and places left behind, providing equal opportunities

Indicators	Key results in Korea
3.1 Variation in science performance explained by students' socio-economic status	8% of the variation in students' science performance was due to their socio-economic status in 2018 (OECD average was 13%).
3.2 Correlation of earnings outcomes across generations	Limited intergenerational mobility: 40.0% of earnings were explained by parents' situation in 2014, similar to the OECD average of 38.4%.
3.3 Childcare enrolment rate	56.2% of children (age 0-2) were enrolled in childcare in 2017, significantly above the OECD average of 26.9%.
3.4 Young people neither in employment nor in education & training (NEET)	In 2017, 18.4% of the Korean population 18-24 years old were NEET; compared to the average OECD NEET of 12.8%.
3.5 Share of adults who score below Level 1 in both literacy and numeracy	20.6% of adults performed poorly in literacy and/or numeracy in 2015, compared to the OECD average of 27.1%.
3.6 Regional life expectancy gap	Regional life expectancy gap was 2.5% in Korea (in 2014), compared to 2.9% in the OECD on average (in 2015).
3.7 Resilient students	13.5% of resilient students among disadvantaged students in 2018, above the OECD average of 11.3%.

Annex Table 1.A.5. Building efficient and responsive governments

Indicators	Key results in OECD countries
4.1 Confidence in government	24% trusted the government in 2018, compared to the OECD average of 45%.
4.2 Voter turnout	About 77% cast their ballots in the latest election, above the OECD average of 68%.
4.3 Female participation in politics	No gender parity in politics and institutions, the proportion of female MPs in the National Assembly was 17% in 2018, compared to the OECD average of 29%.

Notes

[1] The ratio between the top 20% and lowest 80% income earners. Income is defined as disposable income in a particular year (earnings, self-employment, capital income and public cash transfers minus income tax and social security contributions).

[2] For Korea, the NEET rate of 18.4% is for the age group 15 to 29 years. The statistic does not capture the share of youth engaged in unofficial education.

[3] Earnings dispersion refers to the ratio of the earnings top and bottom deciles.

[4] GVC participation is defined as the use of foreign intermediates and integration into international production networks.

[5] Servitisation is defined as a trend to increasingly export services together or bundled with manufactured goods to add value and better serve customer needs.

[6] The quality of life in Korea, measured by housing, occupation, community, environment, health, safety, work-life- balance, was lower than the OECD average, except for education and citizen participation in 2017 (OECD, 2017[5]).

[7] As a long-term national growth plan, “Vision 2030” increased the welfare budget and conducted regulatory reforms to overcome social bipolarization and strengthen social safety nets. The model emphasized innovation and openness while stressing a quality human resource base and social capital as the foundation of the policies.

[8] The Lee Myung-Bak administration (2008-13) pursued a green growth strategy to expand future growth engines through the harmonious development of the environment and the economy. The Park Geun-Hye administration (2013-17) focused on the “Creative Economy” initiative, along with a three-year economic innovation plan intended to create new industries and markets. These policies were by and large pro-growth.

[9] A KOR 12 trillion fund was created to support business scale-ups, and a special guarantee program for potential unicorn companies was introduced.

[10] The thematic areas are finance, environment, culture/media, transportation, healthcare, logistics/distribution, IT, SMEs, forestry, and regional economy.

[11] BIG3 industries are system semiconductors, bio-health, and future cars.

[12] Hiring based on merit with special care taken to ensure procedures are free from biases related to a candidate's age, race, gender, religion, sexual orientation, and other personal characteristics.

[13] For example, in 2020 the Ministry of SME's and Start-ups is introducing a programme that aims to encourage SMEs in every sector to adopt and utilize new technologies.

[14] Central sectors reflect those that are highly connected (both directly and indirectly) and influential within global production networks, whereas peripheral sectors exhibit weak linkages and are less influential.

[15] E-people is an online portal system that integrates petition, proposal and policy discussion services operated by about 900 governmental organisations, including central and local bodies and institutions.

2 The future of work and skills

The future of work will create unparalleled opportunities in Korea. Leading-edge technologies and markets will generate new and more productive jobs. While the unbundling of jobs into smaller tasks will allow work to be carried out more efficiently, it will also pose challenges. Significant employment and skills upheaval is likely as jobs are destroyed in some areas, even as others emerge elsewhere. This chapter provides a review of challenges arising from three mega-trends: technological progress, globalisation and demographic change, by placing Korea in the international context. It argues that effective policy strategies can address the complex interactions between new and pre-existing challenges, particularly the dualism of the Korean labour market and the lack of opportunities for up- and re-skilling of the working-age population. Finally, it provides an analysis of four under-represented groups in the Korean labour market: women, youth, older workers and immigrant workers.

Introduction and key findings

This chapter discusses how labour markets are changing in Korea and policies to make them more inclusive. It does so from the perspective of two ongoing international mega-trends with the potential to significantly alter the nature of work in OECD countries and in Korea: technological progress and demographic change. Together, these trends are likely to affect the quantity and quality of available jobs, as well as how and by whom they will be carried out.[1]

On the positive side, the chapter finds that, as in other OECD countries, the future of work will create unparalleled opportunities in Korea. New technologies and markets will generate new and more productive jobs. The ability to unbundle jobs into smaller tasks will allow work to be carried out more efficiently on a truly global, digital assembly line. Increased flexibility for workers will provide greater opportunities for under-represented groups such as women, youth and older workers to participate in the labour market.

However, rapid technological progress, increased globalisation and demographic change may also pose threats. Significant upheaval is likely as jobs are destroyed in some areas, even as others emerge elsewhere. Adjustment costs may be heavy and are more likely to be borne by the least skilled and most disadvantaged. Combined with increased globalisation and a general increase in the demand for skills, these trends may further exacerbate inequality.

Moreover, emerging forms of work are raising concerns about the quality of jobs being created. Without immediate policy action they can deepen the income and well-being disparities that stem from the dualism of the labour market between regular and non-regular workers, which is a pre-existing structural challenge. The parallel increase in demand for skilled labour will be even more difficult to address without comprehensive policy changes to tackle labour market segmentation.

The chapter begins with an overview of the mega-trends affecting labour markets in Korea. It then examines the interactions of the mega-trends with other labour market concerns that are not new to Korean policy-makers: the dualism of the Korean labour market and the lack of opportunities for up- and re-skilling of the Korean working population. This is followed by a detailed look at four groups that are under-represented in the Korean labour market: women, youth, older workers and immigrant workers.

Policy recommendations for fostering the development of an inclusive labour market in Korea are elaborated throughout the chapter and are focussed on four areas:

Breaking down labour market duality

- Breaking down dualism requires a comprehensive strategy that should encompass relaxing employment protection for regular workers and making it more transparent while increasing social insurance coverage and training for non-regular workers.
- Strengthen enforcement of the remedial process to redress discrimination in terms of wages and working conditions against non-regular workers who perform tasks similar to regular workers in the same firm.
- Use the statutory minimum wage as a tool to raise wages at the bottom of the wage ladder without pricing low-skilled workers out of jobs, while ensuring the coordination with the Earned Income Tax Credit (EITC).
- Strengthen the density and coverage of collective bargaining and the inclusiveness of social protection systems by promoting higher coverage and establishing the protection system of fundamental labour rights for specific groups of workers in emerging “grey zones” of labour laws (e.g., dependent self-employed and platform workers).

Helping workers to successfully navigate a rapidly changing labour market

- Build an effective system of lifelong learning based on National Competency Standards (NCS) to ensure that workers can use and upgrade their competences throughout their working lives.
- Strengthen the existing system of financial incentives for large companies, business associations and universities to set up consortia for sharing know-how, equipment and training facilities with SMEs.
- Remove time-related obstacles to the take-up of training programmes, including through enforcing adjustments in working hours, to ensure that the lowest skilled are as likely as the highest skilled to participate.
- Consider the development of an individualised training account to enable workers to transfer their training rights when they change jobs, in a context where career paths are increasingly non-linear.

Adopting specific policies for under-represented and disadvantaged groups

- Women
  - Strengthen and encourage the uptake of maternity and parental leaves and continue efforts to cover parents who are not eligible under the current Employment Insurance (EI) system.
  - Monitor closely the quality of early childhood education and care, which has developed rapidly in the recent past, by establishing national standards.
  - Facilitate women's return to work after an absence from the labour market without devaluation of their skills, through well-tailored job counselling and vocational training.
  - Prevent women's career breaks during child-bearing and child-raising periods by enhancing workplace and work time flexibility for both mothers and fathers. For example, opportunities to work part-time with remuneration proportional to that of workers on full-time regular contracts could be expanded.
- Youth
  - Increase the effectiveness of career guidance to help youth make good choices about their education by better training counsellors and incorporating career-relevant material in all subjects in secondary curricula.
  - Continue efforts to diversify vocational education options to attract more young people, while taking stock of the experience of the most successful Meister schools to create a template for the promotion of quality improvements in secondary vocational education.
  - Encourage initiatives to improve and deepen the connections between VET institutes and the business sector and to expand apprenticeship programmes.
- Older workers
  - Accelerate the adoption of the wage peak system whereby the employer commits to maintaining older workers in their jobs in exchange for a wage cut that is partly compensated by government subsidies granted to the employee.
  - Expand training opportunities for low-skilled older workers.
  - Continue efforts to broaden the coverage of the Basic Livelihood Security Programme (BLSP) by phasing out the family support obligation, and increasing the value of the programme, while keeping focus on the elderly with the lowest incomes.
  - Expand company pension schemes and strengthen pension scheme coverage for self-employed and non-regular workers.

- Immigrant workers
  - Continue efforts to strengthen incentives for companies to improve working conditions of migrant workers, particularly by enforcing incentive mechanisms of the Points-Based System.
  - Adapt migration programmes to ensure that they better match labour migration to skill needs.

Preparing for future opportunities and challenges in a rapidly changing labour market

- Enable displaced workers to move quickly into jobs, using a mix of general and targeted income support and re-employment assistance combined with prevention and early intervention measures.
- Accompany innovation in new forms of employment with policies to safeguard job quality by avoiding abuse, creating a level-playing field between firms, and providing adequate protection for all workers regardless of employment contract.
- Facilitate inclusive dialogue with social partners and other relevant stakeholders and, where necessary, adapt today's labour market, skills and social policies to emerging needs.

Implementing the above comprehensive policies to meet work and skills challenges

- Put in place an evaluation framework to assess progress with implementing a comprehensive policy package to support more equal labour markets in Korea.
- Strengthen efforts to ensure the collection of reliable data by national statistics agencies, for example introducing an ad-hoc module of "platform workers" under the national labour force survey.
- Undertake peer learning, peer reviews and experience-sharing initiatives to support the dissemination of good practices with the participation of all relevant actors.

Korea's future of work challenges: What does the international comparison suggest?

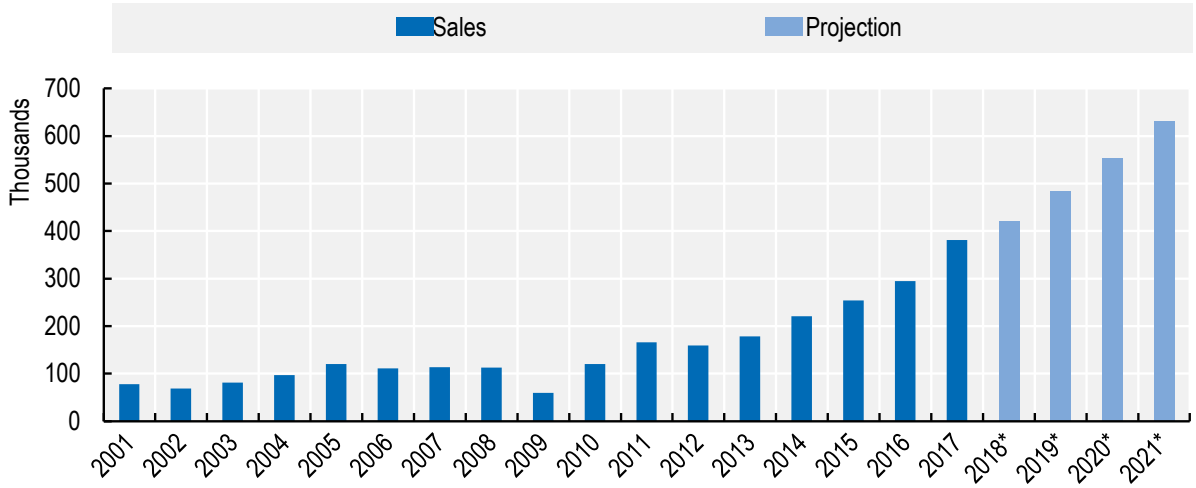
New technologies

Technological advances are automating an increasing number of tasks traditionally performed by humans. Initially, automation focused primarily on routine tasks (e.g. clerical work, bookkeeping, basic paralegal work and reporting), but with the advent of Big Data, artificial intelligence (AI), the Internet of Things and everincreasing- computing power (i.e. the digital revolution), non-routine tasks are increasingly likely to become automated.

The diffusion of industrial robots perhaps best epitomises technological penetration and fears of job automation in the workplace. Robots have been used for decades, but their diffusion has recently accelerated and spread beyond the manufacturing sector. For example, supermarkets have started to employ robots as shop assistants, and Amazon and others retailers are piloting cashier-less stores. Data from the International Federation of Robotics show that orders of industrial robots increased threefold between 2003 and 2015, and the trend is projected to accelerate further (Figure 2.1).[2]

Figure 2.1. The march of the robots

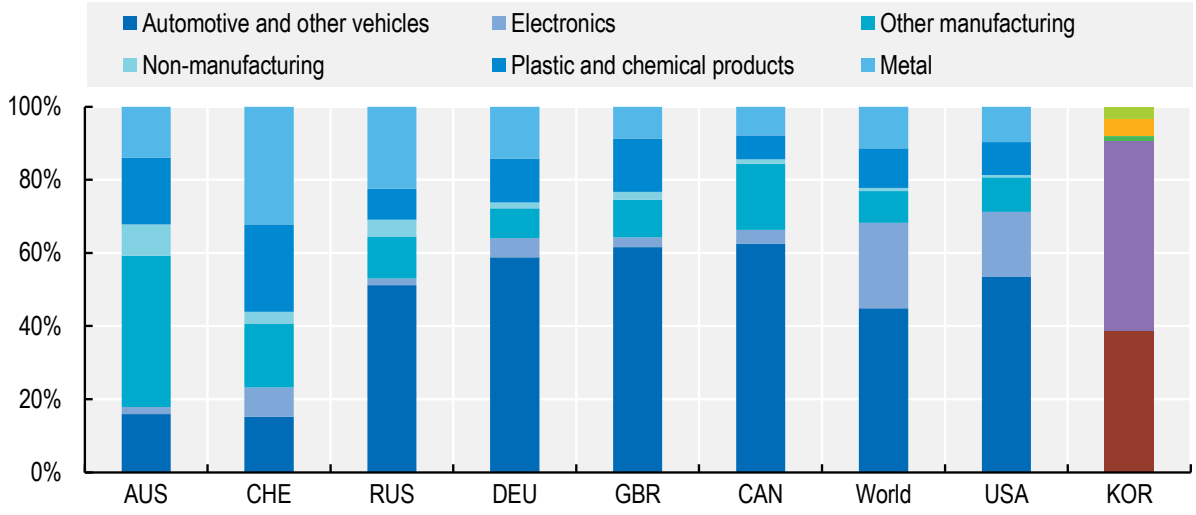
Estimated worldwide annual supply of industrial robots, thousands of units



Note: * = forecast.
Source: International Federation of Robotics (IFR), https://ifr.org.

Among the countries that account for the bulk of robot use worldwide (those shown in Figure 2.2 make up about three-quarters of the world total), industrial dissemination of robots is relatively skewed towards the automotive sector. International comparison shows that Korea stands out for very strong dissemination of robots in both the automotive sector and (particularly) in electronics. Use of robots in these two sectors picked up in 2009 and has remained very strong. As of today, more than four-fifths of the approximately 260 000 robots currently used in Korea are in the automotive and electronic sectors.

Figure 2.2. Robot use in Korea is strongly concentrated by sector



Source: OECD calculations based on figures from the International Federation of Robotics (IFR), https://ifr.org.

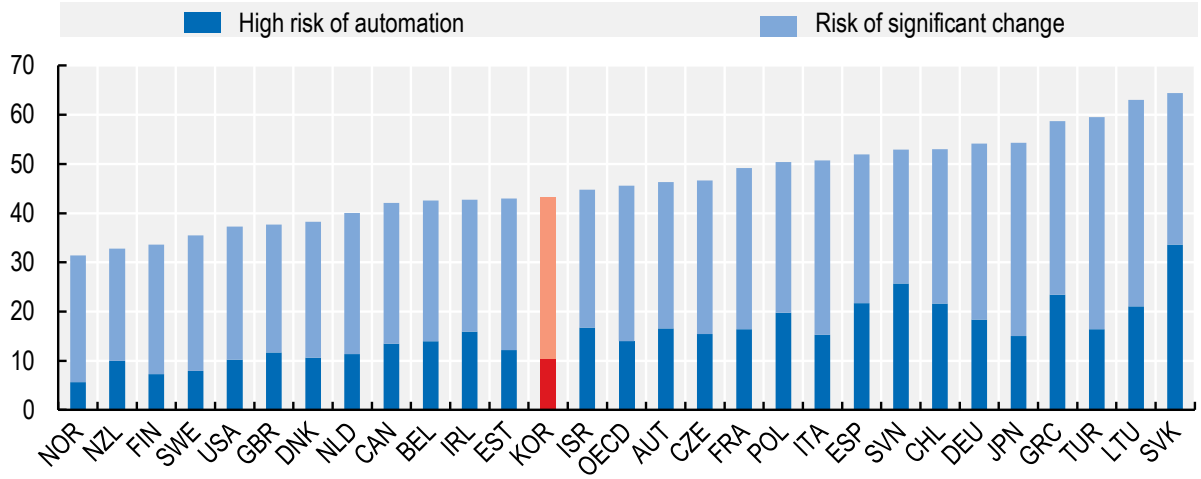
Analysing the task content of individual jobs, the OECD estimates that the share of jobs at high risk of automation (i.e. those with at least a 70% probability of being automated) is only around 14% on average across the OECD (Figure 2.3). Figures for individual countries range widely from 6% in Norway to 34% in

the Slovak Republic. At 10%, Korea's share is not significantly lower than the OECD average. These figures only capture potential job destruction and do not account for the (possibly larger) number of jobs that technology will generate (OECD, 2019[1]). While certain jobs may disappear, others will emerge and a sharp decline in overall employment is unlikely in the OECD. Korea appears to be following a similar pattern.

Nevertheless, a large share of existing jobs may change substantially in the way they are carried out. An estimated 32% of jobs on average across the OECD may see a large share of their tasks automated, while entirely new tasks may arise (Figure 2.3). For Korea this share is 33%. The analysis also highlights that the risk of automation is higher among low-skilled workers, which may further widen disparities in the labour market (Nedelkoska and Quintini, 2018[2]).

Figure 2.3. Jobs at risk of automation in Korea and other OECD countries

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



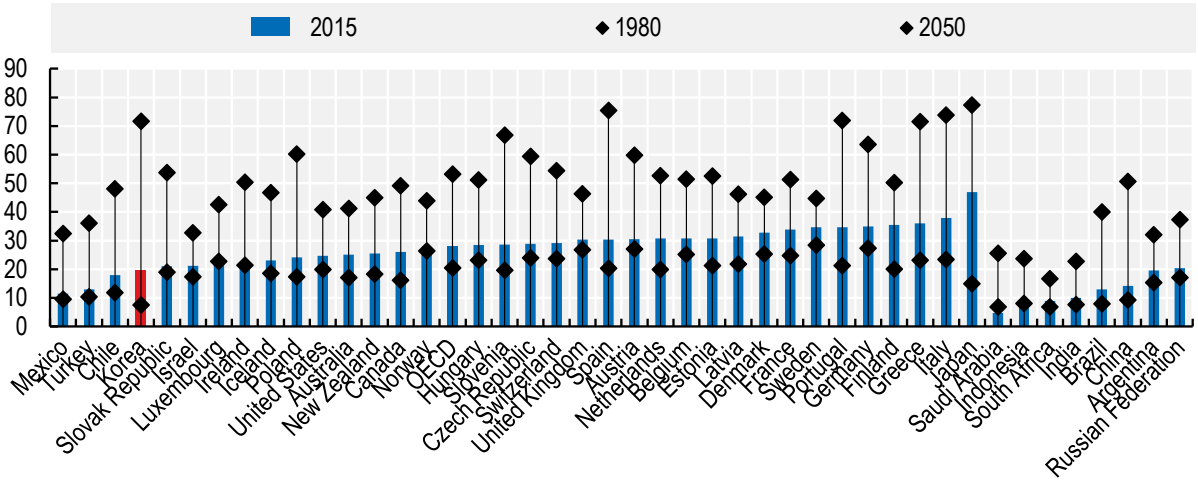
Note: Jobs are at a high risk of automation if the likelihood of their being automated is at least 70%. Jobs at risk of significant change are those with the likelihood of being automated estimated at between 50 and 70%. Data for Belgium correspond to Flanders and data for the United Kingdom to England and Northern Ireland. More detailed information can be found in (OECD, 2014[3]), *Survey of Adult Skills Technical Report*, https://oecd.org/skills/piaac/publications/.
Source: OECD calculations based on (OECD, 2013[4]), *The Survey of Adult Skills: Reader's Companion*, OECD Publishing, Paris, https://doi.org/10.1787/9789264204027-en and (Nedelkoska and Quintini, 2018[2]), "Automation, skills use and training", *OECD Social, Employment and Migration Working Papers*, No. 202, OECD Publishing, Paris, http://dx.doi.org/10.1787/2e2f4eea-en.

Population ageing

Technology-related job changes are occurring against the backdrop of rapid population ageing, which is particularly fast in Korea (Figure 2.4). In 1980, there were seven persons aged 65 and over for every 100 people of working age (20-64) in Korea, but this number had more than doubled by 2015. Between 2015 and 2050, the dependency ratio is projected to more than triple, implying that Korea will be the most aged population in the OECD region (with Greece, Italy, Japan, Portugal and Spain).

Figure 2.4. Korea is one of the fastest ageing countries

Projected change in the old-age dependency ratio, 1980-2050



Note: The old-age dependency ratio is defined as the number of people aged 65 and over per 100 people of working-age (20-64).
Source: (United Nations, 2015[5]), "World Population Prospects: The 2015 Revision, Key Findings and Advance Tables", *Working Paper No. ESA/P/WP.241*, Department of Economic and Social Affairs, Population Division, https://population.un.org/wpp/Publications/Files/Key_Findings_WPP_2015.pdf.

Largely as a result of technological advances that increase productivity and living standards and raise the quality and availability of healthcare, average life expectancy at birth in Korea increased from 62 years in 1970 to 83 years half a century later, which is above the OECD average level of 80 years. Going forward, scientists anticipate that new gene-editing technologies could lead to further improvements in the diagnosis and treatment of diseases, leading to even longer life expectancies (Broad Institute, 2018[6]; Sanders, 2016[7]). Stronger global research networks and the diffusion of knowledge will likely allow these advances to reach an ever greater share of the global population as incomes and access to healthcare increase in emerging economies.[3]

These demographic trends affect the labour market in terms of technology adoption and consumption patterns. In countries with ageing populations, shortages of qualified labour may arise as the number of retiring older workers outpaces the number of young people entering the labour market. In turn, this could possibly fuel demand for automation or stronger pressure to attract immigrant workers. Acemoglu and Restrepo (2017[8]), show that countries with the most rapidly ageing populations have also adopted industrial robots particularly fast, suggesting that an ageing population may not necessarily be a harbinger of slower economic growth. Ageing will also have a direct impact on consumption: demand is likely to shift from durable goods (such as cars) towards services (such as healthcare). As preferences adjust, so too will trade and the relative importance of different industries.[4] All of these factors will have an impact on skill demands and the types of jobs that will be created.

The global population will increase and migration pressures are likely to grow

As people live longer across the world, and fertility rates remain high in a number of developing countries, the global population is expected to increase. According to the United Nations' *2019 World Population Prospects*, the expected global population will be 9.7 billion in 2050, a 26% increase from 7.7 billion today. Whereas developing countries will account for the bulk of this increase, the population of OECD countries is expected to increase by less than 10%, from 1.3 billion to 1.4 billion people.

Thus, depending on infrastructure, economic opportunity, and policy choices, migration flows may radically change the makeup of the population in Korea as in other advanced economies. For example, over half of college-educated STEM workers in the Silicon Valley are foreign born (Melville, Kaiser and Brown, 2017[9]). In 2017, about 258 million people around the world were living outside their country of birth. About half of these migrants were living in OECD countries (OECD, 2018[10]), and more than 5 million people settled in those countries permanently. In addition, more than 4 million temporary foreign workers were recorded in OECD countries in 2016, in order to fill skills shortages, and more than 3 million international students are enrolled in a higher education establishment in an OECD country.

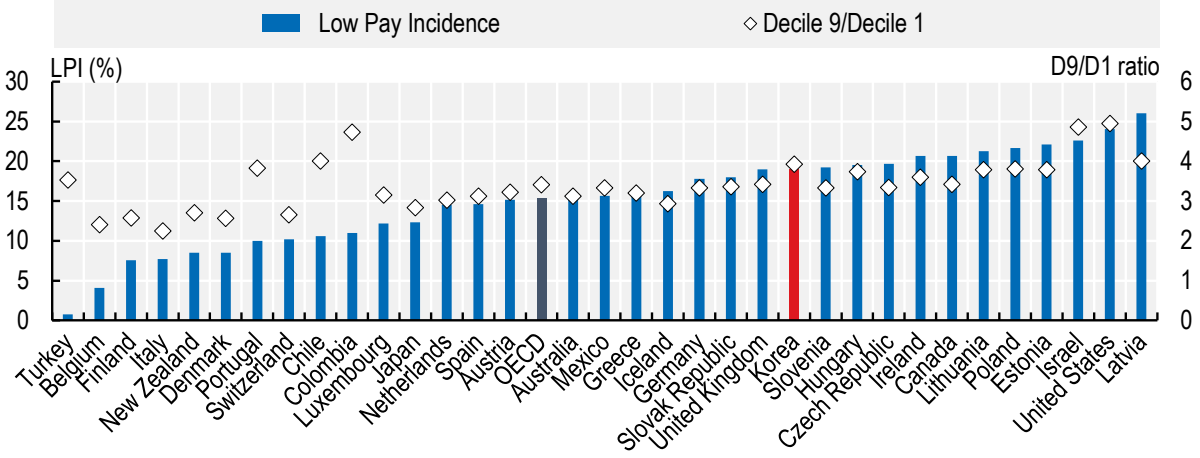
Given the context of widening demographic imbalances, migration flows may further intensify in the coming decades, posing fundamental policy challenges. With respect to the issues addressed in this chapter, while migrants may help countries with ageing societies to overcome skill shortages, they may also be exposed to some risks, notably as they are often employed in automatable jobs (OECD, 2017[11]) or in low-skilled occupations, despite their relatively high educational level (OECD, 2018[10]).

Policy requirements for a more inclusive and productive future of work in Korea

As discussed in Chapter 1, the Korean economy faces several challenges to achieve inclusive growth. From a labour market perspective, this situation is captured by the presence of very high wage inequalities. One in five full-time workers in 2018 earned less than twothirds- of the median wage, belonging to the upper half in the OECD, and wage dispersion was one of the highest (Figure 2.5). One important source of concern regards the quality of jobs. Indeed, coping with the dualism of the labour – as depicted by large differences in employment conditions between regular and non-regular workers – stands out as a key policy priority in Korea. Important concerns also stem from the need to improve the learning system as a way of equipping the most vulnerable to navigate a changing labour market. The emergence of new jobs could compound these challenges even further if they are not addressed through immediate actions.

Figure 2.5. Korea has wide wage dispersion and a relatively high share of low-wage workers

The incidence of low-paid work and earnings dispersion, 2018 or latest year available.



Note: The incidence of low pay refers to the share of workers earning less than two-thirds of median earnings. Earnings dispersion is measured by the ratio of 9th to 1st deciles limits of earnings. Data refer to 2014 for Estonia, Ireland, Latvia, Lithuania, Luxembourg, the Netherlands, Slovenia, Spain and Turkey; to 2016 for Belgium, Hungary, Iceland, Italy, Poland and Switzerland; and to 2017 for Austria, Chile, Denmark, Finland, Germany, Greece, Israel, Japan and Portugal. Unweighted average of the 34 countries shown above.
Source: *OECD Earnings Distribution Database*, www.oecd.org/employment/emp/employmentdatabase-earningsandwages.htm.

Tackling labour market dualism

Segmentation of the Korean labour market dates back to the aftermath of the 1997 economic crisis (Korea Development Institute, 2010[12]; Yoo, 2009[13]; Keum, 2018[14]). Over time, it has fed broader policy concerns about rising income inequality and unacceptably high risks of poverty and social exclusion (Koh, 2018[15]). In the context of new technologies rapidly permeating the world of work and population ageing, policies to tackle labour market duality are an integral component of a comprehensive strategy to make Korean economic growth more inclusive.

Challenges

The clearest manifestation of labour market dualism in Korea is non-regular workers, who account for about one-third of all employees and whose pay and other terms of employment are considerably less attractive than those of regular workers (Table 2.1). Based on the definition adopted by the Economic and Social Development Commission (formerly the Tripartite Commission) in 2002, non-regular work takes a number of different forms, involving one or more of the following characteristics:

- *Temporary or contingent workers* who accounted for 64% of non-regular employment in 2019 and the large majority of which have fixed-term contracts;
- *Parttime- workers* who account for 42% of non-regular employment in 2019;[5]
- *Atypical workers* who have a number of different employment statuses (e.g. independent contractors, dispatched workers, daily and oncall- workers) and accounted for 28% of non-regular employment in 2019.

The share of employees who are non-regular workers rose sharply in the years following the 1997 economic crisis, reaching a peak of 37% in 2004. Since then it has declined modestly to 33% in 2016 but rebounded to 36% in 2019. Temporary forms of employment have accounted for most of the overall evolution in non-regular employment, suggesting that one of the main reasons for the secular increase has been employers' demand for greater flexibility in adjusting the size and composition of their workforces. The modest decline in temporary forms of employment since the second half of the 2000s may reflect regulatory changes intended to discourage overuse of these types of jobs by employers.[6]

Table 2.1. The incidence and relative pay of different types of non regular employment, 2007-2019

Panel A. Employed persons by status[a]

Year	Total wage workers	Non-regular workers		Of which non-regular workers[b]					
				Temporary workers, with		Part-time workers	Atypical workers		
				Fixed-term contract	Open-ended contract, expect job to continue[c]		Dispatched	Daily	Others[d]
	Thousand	Thousand	%	%	%	%	%	%	%
2007	16 006	5 732	35.8	44.6	17.9	20.9	3.1	14.7	23.5
2010	17 189	5 715	33.2	43.7	14.0	28.4	3.6	15.3	23.4
2013	18 403	5 977	32.5	46.3	11.3	31.5	3.4	13.9	21.4
2016	19 743	6 481	32.8	45.3	11.3	38.4	3.1	13.5	19.1
2019	20 559	7 481	36.4	50.8	13.2	42.2	2.4	10.0	15.9

Panel B. Hourly average wages of non-regular workers relative to regular workers
Index "Regular worker" = 100

Year	Regular workers	Non-regular workers	Of which non-regular workers					
			Temporary workers, with		Part-time workers	Atypical workers		
			Fixed-term contract	Open-ended contract[c]		Dispatched	Daily	Others[d]
2007	100	71.1	76.5	75.5	66.8	70.8	52.0	62.2
2010	100	62.5	65.9	67.6	55.6	64.9	49.0	61.8
2013	100	64.8	69.4	68.4	55.5	62.8	51.5	61.4
2016	100	65.4	69.7	65.9	59.2	67.3	55.3	63.7
2019	100	68.9	68.9	71.3	64.3	69.4	62.2	66.0

Note: a) Thousands of workers and percentages (shown in italics). b) The sum of the categories of non-regular workers exceeds 100% due to double counting. c) Temporary workers with open-ended contracts are workers whose term is not fixed and can be renewed regularly and workers who can be dismissed, for example, due to seasonal factors, completion of a project or the return of an employee that they were replacing. d) "Others" corresponds to three underlying types of atypical employment: independent contractors, daily/on call workers and in house workers. The hourly wage index for "Others" in panel B is an employment weighted average for these three employment types.
Source: For panel A, Kosis (2019), Economically Active Population Survey (EAPS), Supplementary results of the EAPS by employment type (August), https://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1DE7106S&conn_path=I2; and for panel B, Korea Labor Institute (2019), "2019 KLI Labor Statistics of Non-regular workers" for relative earnings, (2019년 KLI 비정규직 노동통계 - 비정규직의 임금, 근로시간, 근속기간), https://www.kli.re.kr/kli/selectBbsNttList.do?bbsNo=10&key=44.

Hourly wages of non-regular workers are far lower than those of regular workers. On average, the hourly wage penalty for non-regular workers peaked at close to 38% in 2010, but has significantly decreased to 31% in 2019, likely reflecting the increases in the minimum wage in 2018 and 2019 (Table 2.1, panel B). While all types of non-regular employment pay less well than regular employment, the penalty varies, with daily workers or those exposed to seasonal factors receiving a particularly low hourly wage. Non-regular workers are also much less likely than regular workers to receive other forms of compensation such as bonuses and allowances.

Beginning with Ahn (2006[16]), a number of researchers have argued that a significant part of the overall wage gap in Korea for non-regular workers can be attributed to differences in the quality of the employee. However, a considerable share of the total pay difference remains even after taking into account individual characteristics such as education and work experience, confirming that non-regular workers are subject to discriminatory treatment (Shin, 2009[17]; Kim, 2006[18]). Jones and Fukawa (2016[19]) show that lower wages result in lower income in households headed by a non-regular worker.

Certain workforce groups are particularly likely to hold non-regular jobs, while other groups have a low incidence of non-regular work (Table 2.2). Older workers, for example, are strongly over-represented among non-regular workers. The share of non-regular workers who are 60 or older is more than four times as high as the corresponding share for regular workers (26% versus 5.9%). This reflects a common pattern of regular workers retiring at relatively young ages from their career jobs and later commencing "second

careers" in non-regular jobs. Workers under age 30 are also somewhat over-represented among non-regular workers in Korea, although youth account for an even larger share of temporary workers in many European countries. Korean women are more likely than men to hold non-regular jobs, as is also the case in most other OECD countries. Another common pattern that is also present in Korea is that the least-educated workers have the highest incidence of non-regular employment.

The prevalence of non-regular employment varies across occupations, sectors and firm size. Assembly, machine operators and elementary workers, along with service workers, have an above-average incidence of non-regular employment, while the opposite is true of administrators and managers. Non-regular employment is relatively rare in manufacturing, while it is common in the construction sector as well as a number of key services such as wholesale, hotel and restaurants.

Unsurprisingly, non-regular jobs are much less stable than standard jobs. The average job tenure for non-regular workers is only about one-third that for regular workers (two years and seven months versus seven years and nine months). Short tenure discourages employee training, thus slowing the accumulation of human capital and productivity growth (Ban et al., 2018[20]).

Table 2.2. Comparison of regular and non regular workers, 2019

Regular and non-regular workers in Korea by individual and firm characteristics, percentages

		Total (all employees)	Regular workers	Non-regular workers
Age	Less than 30-year old	18.2	17.1	20.2
	30-59-year old	68.6	77.0	53.9
	More than 60-year old	13.2	5.9	25.9
Gender	Male	55.4	61.5	44.9
	Female	44.6	38.5	55.1
Education	Middle school or less	11.7	5.7	22.3
	High school	36.7	32.7	43.7
	Tertiary	51.6	61.6	43.0
Occupation	Assembly, machine operative and elementary workers	35.2	29.1	45.9
	Administrators and managers	24.1	28.6	16.1
	Sales and service workers	18.4	14.1	26.0
	Other	22.3	28.2	11.9
Sector	Manufacturing	19.2	25.1	8.9
	Wholesale, hotel and restaurants	18.0	17.0	19.6
	Construction	7.9	5.9	11.4
	Other	54.9	52.0	60.0
Tenure	Average tenure	5 years and 11 months	7 years and 10 months	2 years and 5 months
Coverage by social insurance	National pension scheme	69.5	87.5	37.9
	National health insurance	75.7	91.5	48.0
	Employment insurance	70.9	87.2	44.9

Source: Kosis (2019), Economically Active Population Survey (EAPS), Supplementary results of the EAPS by employment type (August), https://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1DE7106S&conn_path=I2.

Employees cite varying reasons for accepting non-regular employment. Some workers even declare that they benefit from certain characteristics of nonregular jobs, particularly greater -workinghours- flexibility and lower stress associated with some of these jobs (Table 2.3). For example, parttime- working arrangements can help to balance work with other activities, such as family responsibilities. However, nearly half of all part-time workers (49%) say that they have to accept a non-regular employment because

they lack alternatives. The share of atypical workers who feel they must accept a non-regular contract on an involuntary basis is higher and reaches nearly 60%.

Table 2.3. Why non-regular workers accept non-regular employment

In 2019, percentages

	Total	Temporary workers	Part-time workers	Atypical workers
Voluntary non-regular workers	**55.2**	**58.6**	**51.3**	**43.7**
Satisfied with working condition	55.6	57.8	56.1	53.2
To obtain job security	21.0	25.7	8.7	17.7
To balance with other activities[a]	15.2	11.9	26.4	9.1
Performance-based pay and flexible working hours[b]	8.1	4.5	8.8	20.0
Involuntary non-regular workers	**44.8**	**41.4**	**48.7**	**56.3**
Immediate need for income	75.4	75.5	69.4	83.0
Cannot find a desirable job	13.4	14.4	14.4	10.5
To balance with other activities[a]	8.3	7.6	12.4	3.8
Performance-based pay and flexible working hours[b]	2.9	2.5	3.8	2.7

Note: a) Includes balancing work with family responsibilities and educational and vocational training, as well as to accumulate job experience. b) This category includes obtaining performance-based pay.
Source: Kosis (2019), Economically Active Population Survey (EAPS), Supplementary results of the EAPS by employment type (August), https://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1DE7106S&conn_path=I2.

Importantly, the high level of labour market dualism in Korea also reflects the relative underdevelopment of the service sector and of small and medium-sized enterprises (SMEs), which are far less productive than large manufacturing firms. Since non-regular work is more prevalent in smaller and service-sector firms than in large manufacturing firms (Table 2.2), there is considerable overlap between the labour market segmentation associated with non-regular work and that associated with the underdevelopment of SMEs and service sector firms. Figure 2.6 illustrates this point by showing how firm size and employment type interact to influence pay levels:

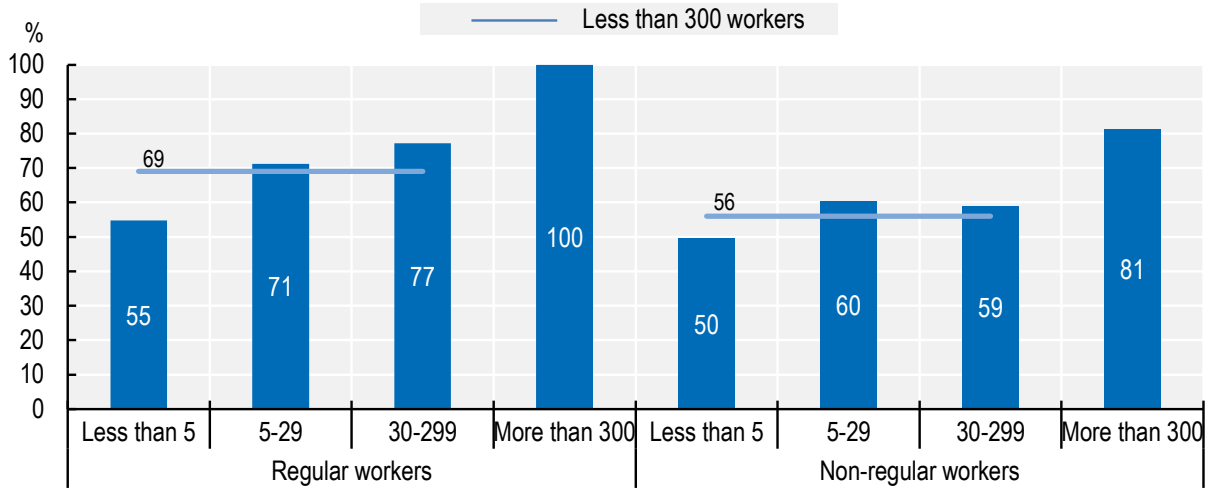
- Average wage levels rise sharply with firm size for both regular workers and non-regular workers, with the firm size effect being somewhat stronger for non-regular workers.
- Non-regular workers on average earn less than regular workers within the same size class.
- Non-regular workers in the largest firms, employing 300 or more workers, earn on average more than regular workers in firms employing fewer than 300 workers (81% of the average regular worker wage in the largest firms, versus 69%).

The large differences in pay and other employment conditions across different types of firms have important implications for policies to reduce dualism. Most obviously, they mean that the labour market policy measures need to be supplemented by other measures to promote productivity improvements in the service sector and SMEs. Reviving productivity growth is the issue topic of Chapter 3 of this report.

Another implication is that a large share of the earnings inequality associated with duality cannot be redressed by antidiscrimination laws that prevent employers from discriminating unfairly in setting pay levels for different groups in their workforce. These regulations are very important for improving the relative employment conditions of non-regular workers in large firms, as for equity reasons in the labour market more generally. However, antidiscrimination regulations cannot be expected to address the large share of overall earnings inequality that is attributable to low earnings in SMEs.

Figure 2.6. Pay is significantly higher for regular workers and workers employed by large firms

In 2019, index of relative pay (Regular worker in firms with 300 or more workers = 100)



Source: OECD calculations using the published results of 2019 Survey on Labour Conditions by Type of Employment on the Employment and Labour Statistics Portal (http://laborstat.moel.go.kr) of the Ministry of Employment and Labour.

Policy insights

The broad challenge of reducing labour market duality in Korea in the long-term requires a multi-pronged approach, including the need to address lagging productivity in the service sector and SMEs (Chapter 3). With regard to the specific role that labour market policies can play, the key objective of the reform initiatives undertaken by Korea since the end of the 1990s has been the achievement of a stronger degree of harmonisation between the regulatory regimes governing three types of non-regular employment: workers hired under a fixed-term contract, part-time workers and temporary agency workers. The main features of today's regulatory framework for these three groups of non-regular workers are discussed below.

Provisions governing the duration of contracts for fixed-term workers

Despite the 2007 reform that limits fixed-term contracts to two years (with some exceptions) to encourage conversion to regular worker status over the recent past (2016-18), around six out of ten employees on fixed-term contracts who had worked at least 18 months left their firm when their contract expired according to the Survey on the Status of Fixed-Term Workers in Establishments. The proportion was 69% at firms with more than 300 employees. Meanwhile, only less than one-third of workers were converted to regular status. The government has proposed to extend the limit on fixed-term contracts to four years for employees above age 35 to reduce the risk of layoffs upon reaching the second year limit.

Many countries have attempted to limit the use of fixed-term contracts by placing restrictions on when and for how long firms can use them:

- In Japan, following the Action Plan for the Realization of Work Style Reform adopted in March 2017, the government amended the law to entitle fixed-term workers (including fixed-term workers as well as part-time and dispatched workers) to equal treatment with regular workers that have the same duties and same "scope of shift in duties and personnel positioning" (including opportunities for advancement/promotion).

- Germany's 2018 Coalition Deal included an agreement to limit the number of fixed-term contracts concluded without an objective reason per firm, and to reduce the maximum duration from 24 to 18 months (if an objective reason is provided, the maximum is five years).
- The *Decreto Dignità* (Dignity Decree) in Italy, issued in July 2018, introduced a rule that after 12 months it is only possible to renew the fixed-term contract if the firm provides specific justification. At the same time, the maximum overall duration of successive fixed-term contracts has been reduced to 24 months (from 36) and the maximum number of renewals has been reduced from five to four.
- Recent legal decisions by the Swiss Federal Supreme Court (in 2017) and the Swiss Federal Administrative Court (in 2016) have made it more difficult for firms to use multiple extensions of fixed-term contracts to avoid dismissal protection clauses.
- In 2018, the Portuguese government negotiated new measures with social partners in the aim of decreasing excessive use of non-permanent contracts and increasing protection for fixed-term workers.
- The new Labour Code that came into force in Lithuania in July 2017 introduces changes to the regulations on fixed-term contracts, among which doubling the rate of unemployment insurance contributions for fixed-term contracts compared to open-ended contracts and imposing a minimum notice period for work relationships of more than a year and providing for severance pay where the relationships extend over two years.

The remedial process to redress discrimination

The 2007 reform also outlawed "unreasonable discrimination", in terms of wages and working conditions, against non-regular workers who perform tasks similar to regular workers in the same firm. However, given that workers may feel hesitant to file complaints, reflecting their worries about a negative reaction from management. The law was revised in 2012 to require labour inspectors to encourage firms to correct any discrimination, even in the absence of complaints. It was revised again in 2014 to make the system more effective by awarding punitive damages. However, only 3 495 discrimination cases were filed over the 2007-18 period. In 2017, 12 000 workplaces were inspected and 585 were found to have discriminatory practices (Ministry of Employment and Labour, 2017[21]). Within EU member states, EU Directive 99/70/EC establishes some general principles and minimum requirements aimed at balancing flexibility in working time and security for workers. The directive applies a principle of non-discrimination, requiring that fixed-term workers be treated in a manner no less favourable than comparable permanent workers are. It also requires member states to take measures to prevent abuse, which can include requiring objective reasons for renewal of a fixed-term contract, imposing a maximum overall duration or imposing a maximum number of renewals. In implementing the EU directive, EU member states have had the freedom to choose which exact measures to take, with the result that there are significant variations across EU countries in regulations for fixed-term contracts (OECD, 2019[22]). In addition, some countries (e.g. Ireland, Spain and Greece) are targeting inspection efforts in particular sectors or geographical areas known to have a greater prevalence of false self-employment.

Generating a shift from protecting jobs to protecting individuals

OECD (2018[23]; 2016[24]; OECD, 2013[25]) has analysed the strong policy emphasis on protecting jobs in the Korean institutional setting stressing that it has failed to deliver employment stability and income security for a large share of the labour force. The broad recommendation resulting from this work is that breaking down dualism requires a comprehensive strategy that should encompass relaxing employment protection for regular workers and making it more transparent while increasing social insurance coverage and training for non-regular workers. Hiring a non-regular worker cuts a firm's social contributions by 8-9% compared to a regular worker covered by the three major social insurance programmes.

Regular workers receive high protection in Korea, particularly in large firms, as a result of labour laws, court decisions, business practices, social customs and labour unions (Korea Development Institute, 2010[12]). Dismissals for economic reasons are heavily regulated, with many procedural hurdles for firms: consultations with workers, implementation of measures to avoid or minimise layoffs, and strict selection criteria for employees to be dismissed (Lee, 2015[26]). In addition, there must be "urgent managerial reasons", a criterion that is not well-defined and difficult to prove in court. Courts take into account the company's financial situation, market conditions and competitiveness. Therefore, layoff costs of regular workers, which are difficult to predict, can be very high due to long and complex court rulings, thus increasing the incentives to hire non-regular workers who can be easily dismissed after the termination of contract (OECD, 2016[24]).

Reforms that make employment protection more predictable have long been known to support the efficient allocation of workers contributing in turn to higher productivity (Cournède et al., 2016[27]; OECD, 2018[28]). Many OECD countries apply legal limits on the level of compensation that can be granted by judges in case of unfair dismissals (Carcillo et al., 2019[29]). For example, several countries impose restrictions on the level of compensation in the case of unfair dismissal and have also ratified ILO Convention no. 158 and the European Social Charter on termination of employment (France, Spain, Portugal, Finland, and Sweden). There are also countries that have implemented binding compensation schedules and have ratified the European Social Charter, but not ILO Convention 158 (Italy, Belgium, Denmark, Netherlands, and the UK). Finally there are countries that make use of an indicative schedule (Germany).

The shift from protecting jobs to protecting individuals requires strengthening the social safety net. A recent OECD report, *Connecting People with Jobs, Towards Better Social and Employment Security in Korea* (OECD, 2018[30]), has reviewed the many incremental welfare reforms introduced, especially in the past decade, to reach workers and jobseekers. Important reforms include the possibility for self-employed people to opt into Employment Insurance; an effort to customise Basic Livelihood Security Programme payments to claimants' needs; the introduction and expansion of the Employment Success Package Programme, which provides targeted employment support and training as well as some income support to people not entitled to other benefits; and the introduction of an Earned Income Tax Credit to benefit the working poor with a recent expansion to self-employed people. These were important steps although the share of low-income jobseekers and low-wage workers not covered or supported by any measure remains high, for example:

- *Employment insurance*: Only about one-third of the unemployed receive benefits. In 2018, among those entitled to employment insurance 70.8% were covered, which is equivalent to 43.6% of all non-regular workers. The lower coverage of non-regular workers is problematic, given their precarious jobs;
- *The earned income tax credit*: Coverage is limited to around 8% of households, in part due to eligibility criteria, and spending was 0.3% of GDP in 2018.
- *Basic Livelihood Security Programme*: This programme, the primary public assistance policy, targets the extremely poor. The maximum livelihood benefit support is equivalent to 30% of the median income in 2018, while coverage is limited to around 3% of the population by strict eligibility criteria.

Accordingly, *Connecting People with Jobs* (OECD, 2018[30]) recommends that Korea continue and accelerate the reforms of its labour market and social protection institutions to expand the reach of its social and employment support. Building upon recent changes, future reforms should strengthen the enforcement of existing legislation, further expand existing measures, and take new measures as necessary. However, these efforts should also ensure in all cases that strong activation and positive employment outcomes remain a key focus. These include specific measures intended to: boost Employment Insurance coverage, while also better enforce rules; maximise the impact of the effective Employment Success Package Programme by increasing the number of participants and improving the

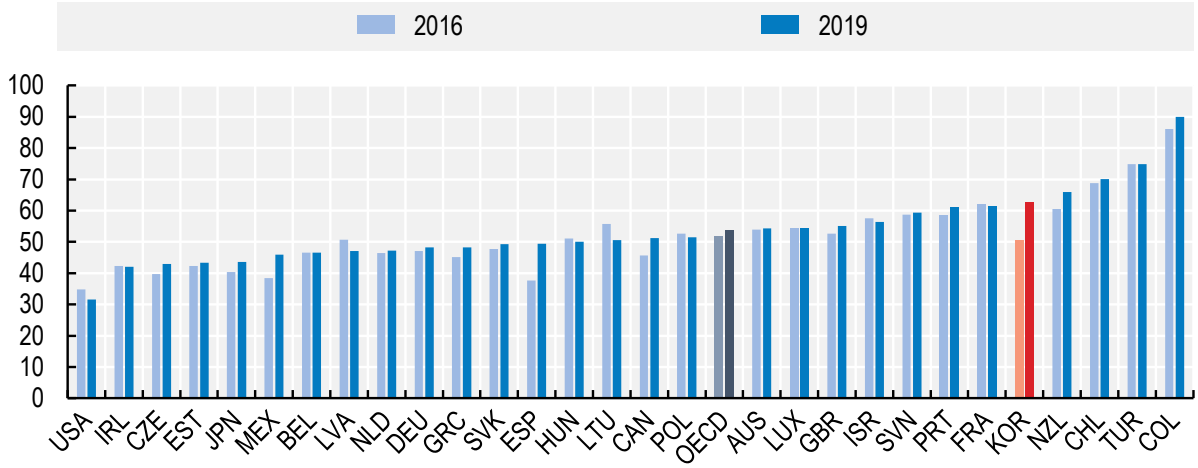
quality of services; ease access to the Basic Livelihood Security Programme; and boost support for the working poor through the Earned Income Tax Credit, in harmony with other measures, including the minimum wage.

Using the minimum wage as a tool to smooth the wage differential between non regular and regular workers

Action has recently been taken to raise the minimum wage as part of the "income-led growth" that the government aims to achieve. The minimum wage is set each year by the Minimum Wage Council composed of representatives of workers, employers and the public interest. Korea raised its minimum wage from 29% of the median wage in 2000 to 63% in 2019 (Figure 2.7) above the OECD average of 52%. The hourly minimum wage was increased by 16.4% and by 10.9% in 2018 and 2019 respectively. As a result, the increase by 12 percentage points of the minimum wage relative to the median wage since 2016 was spectacular in comparison with the increase observed for the average of OECD countries (less than 2%, Figure 2.7). Following a recent decision made by the Council, in 2020, the minimum wage will increase at a slower pace (2.9%). New criteria for the assessment of the compliance with the statutory minimum were introduced at the end of 2018, which required a revision of the Minimum Wage Act (see Box 2.1). The Minimum Wage Council estimates that 18% of workers were influenced by the minimum wage hike in 2018, of which about 80% were low-paid youth, women and elderly workers (Ministry of Employment and Labour, 2018[31]). The increase in the minimum wage is aimed at addressing worsening income inequality and guaranteeing a decent living for low-income workers. This goes along with the increase of the Earned Income Tax Credit and Child Tax Credit, which more than doubled in terms of target population and expenditure in 2019.

Figure 2.7. Minimum wage as a percentage of the median wage in 2016 and 2019

% of gross median wage



Source: OECD.Stat, https://stats.oecd.org/Index.aspx?DataSetCode=MIN2AVE#.

Box 2.1. The revised Minimum Wage Act

The government of Korea revised the Minimum Wage Act at the end of 2018 – the first revision since the Act came into force in 1988. The revised legislation became effective in early 2019 and applies to all workplaces. The main changes concern the number of working hours and the level of the wage that are used as a basis to assess compliance with the statutory minimum.

Changes in the working hour base

Legal compliance with the minimum wage regulation is assessed in Korea by dividing the monthly salary by the number of working hours. At the same time, the Korean labour law foresees that an employer must give a paid rest of eight hours per week if the employee works more than 40 hours or more a week (employees who work between 15 to 39 hours a week receive a paid rest proportional to their working hours).

When the Minimum Wage Act came into force, the interpretation of the Ministry of Labour was that the hours of paid rest should be included in the overall working hours used as a basis to calculate the hourly minimum wage. However, a 2007 ruling by the Supreme Court refused to recognize rest hours as working hours. The new decision to include paid rest hours in the total number of working hours aims to clarify the confusion that was created by the different juridical interpretations between the Supreme Court and the Ministry of labour.

Changes in the wage base

Prior to 2019, the Supreme Court used to convert a monthly wage into an hourly wage by dividing the basic pay by the number of legally prescribed working hours to assess how a salary compares to the level of the statutory minimum. The new decree stipulates that bonuses that are regularly paid at least once a month and certain welfare benefits should also be included in the definition of the wage base. The aim of this change is to ensure that future minimum wage increases target low-wage workers, rather than benefitting workers who receive high bonuses and welfare benefits on top of the minimum wage. In addition, by including regular bonuses and welfare benefits in the calculation of the minimum wage, the change will ease the burden of the recent minimum wage increases on companies.

Source: The Ministry of Employment and Labour (2018[31]; 2019[32]).

There is concern that the combined effects of the hike in the minimum wage and the revised Minimum Wage Act will be detrimental to low-productive and financially unstable SMEs, where vulnerable workers are highly concentrated. In response, the government introduced a “Job Stability Fund” for SMEs in 2018 (still being implemented in 2020). This measure mainly targets firms with less than 30 employees, which can receive monthly KRW 130 000 (USD 107) for each worker whose monthly wage equals less than KRW 2.1 million (USD 1 724). In addition, social insurance contributions are also subsidised (up to 90% of the premium). Furthermore, the policy package contains measures to reduce credit card commissions and tax credits for small businesses and self-employed (Ministry of Employment and Labour, 2018[33]).

According to a recent study by the Korea Development Institute (Choi, 2018[34]), the government’s measure is cushioning the employment effects of the minimum wage hike in 2018. The study finds that although employment growth in the first quarter of 2018 was smaller than the same period 2017, in part this may reflect industrial restructuring and slowing population growth. Analysis from the Korea Labour Institute, using a dynamic model (Hong, 2018[35]), shows that the minimum wage hike in 2018 did not have significant impact on employment until March 2018. However, working hours decreased significantly in January and began to recover afterwards.

The OECD Jobs Strategy (OECD, 2018[28]) emphasises that accurate and impartial advice and the views of social partners are particularly important to monitor the impact of regulatory changes and give objective recommendations, based on a wide range of economic and social factors. Independent commissions are particularly well placed to play this role. The operation of these bodies varies from country to country in terms of the advisory (e.g. France) or legally-binding (e.g. Australia) nature of their recommendations, the extent to which the view of the social partners are taken into account and their independence (see Box 2.2).

Box 2.2. International experience with minimum wage commissions

In **France**, a commission composed only by experts has just an advisory role on the discretionary increase that the government can add to the automatic increase due to price and productivity increases. In **Ireland** and the **United Kingdom**, the commissions are composed of experts and representatives of the social partners and the government has to justify in parliament the decision not to follow their advice. In **Germany**, the government can refuse the recommendation of the minimum wage commission, which is composed of social partners and two experts without voting rights, but cannot change it. Finally, in **Australia**, the *Fair Work Commission* is entirely independent and its decisions are legally binding.

Source: (OECD, 2015[36]), *Recent labour market developments with a focus on minimum wages*, OECD Publishing, Paris, http://dx.doi.org/10.1787/empl_outlook-2015-5-en.

International experience suggests that one way to minimise possible side effects of the minimum wage on employment is to apply different rates across regions, economic activities or workforce groups to reflect differences in economic conditions and productivity. While in most countries, minimum wages are set at the national level, in Canada, Japan, Mexico, the United States and several emerging economies, they are set at sub-national level, while in Costa Rica, Japan and Mexico rates differ by sector or occupation. Around half of OECD countries with a statutory minimum set lower rates for youth. Lower rates are also set in some cases for workers hired under training/apprenticeship contracts, as well as for the long-term unemployed. For more detail see (OECD, 2015[36]).

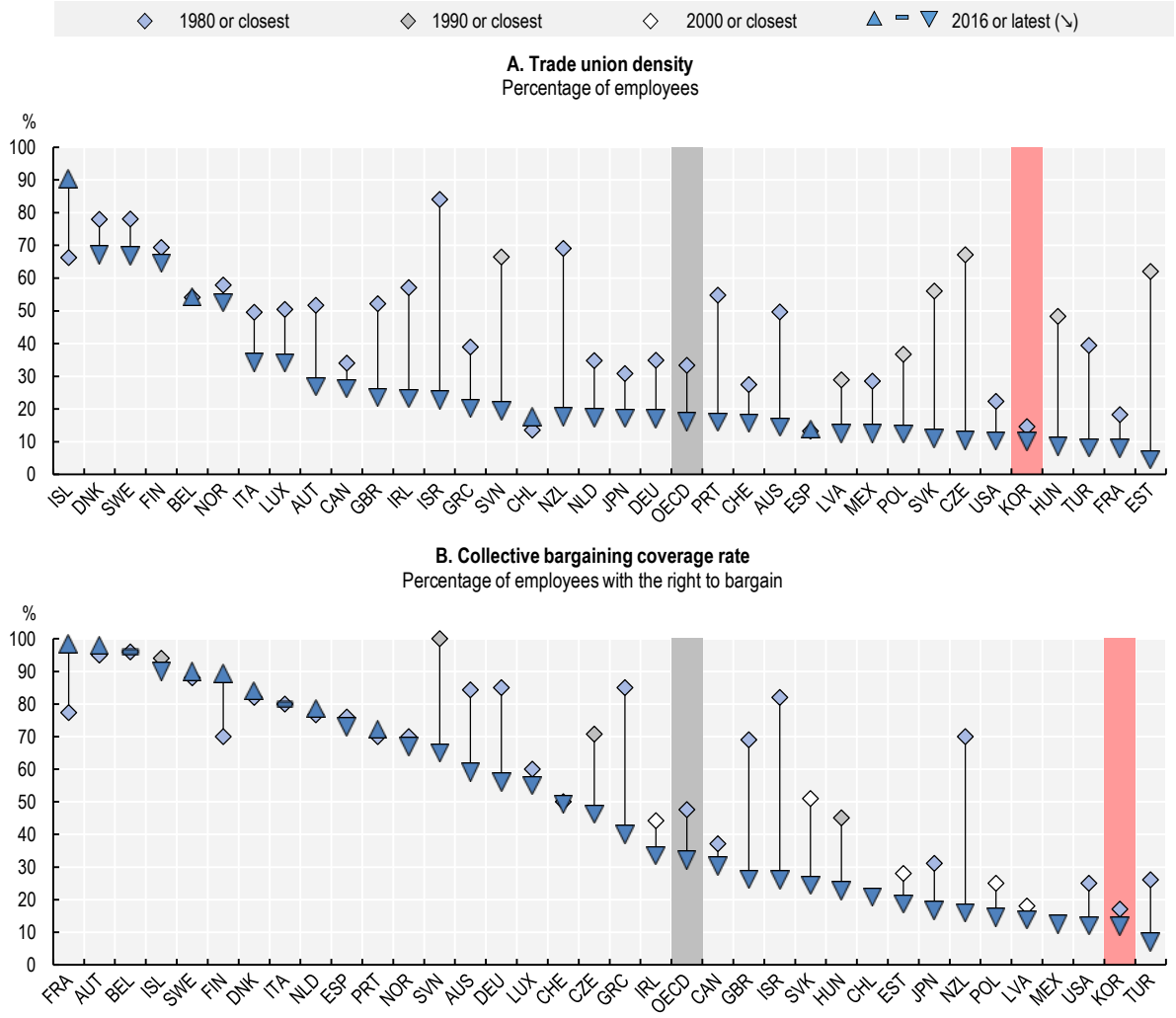
Making the most of collective bargaining…

Collective bargaining and social dialogue can further help governments promote a broad sharing of productivity gains, provided that coverage is high. On average across OECD countries, the number of workers covered by collective bargaining decreased from 45% in 1985 to 32% in 2016 (Figure 2.8). Collective bargaining coverage is around 12% in Korea, the second lowest level in the OECD. Collective bargaining coverage tends to be highest in manufacturing and construction as well as in larger firms.

According to the *OECD Job Strategy* (OECD, 2018[28]), the main challenge for social partners and governments is to make collective bargaining work better in terms of employment, job quality and inclusiveness, while avoiding that it becomes a straitjacket for firms. The best way of ensuring this is by having well-organised social partners based on broad memberships. This allows social dialogue to be widespread at the firm-level among worker organisations and employers and to be based on representative social partners at higher levels (e.g. sector, country). Governments, including possibly Korea, should therefore promote social dialogue in large and small firms alike and allow labour relations to adapt to emerging challenges, including in connection to non-standard forms of work.

Figure 2.8. Korea's trade union density and collective bargaining coverage is well below the OECD average

Trade union density, employer organisation density, and collective bargaining coverage by country and year, 1980-2016



Note: OECD are employee-weighted averages across countries.
Source: (OECD, 2018[28]), *Good Jobs for All in a Changing World of Work: The OECD Jobs Strategy*, https://doi.org/10.1787/9789264308817-en.

Regarding the challenge in connection to non-standard workers more specifically, it is worth noting that Korea is already giving considerable thought to the status of dependent contractors, who are mentioned a few times in the response provided by the Korean authorities for the recent OECD survey of *Policy Responses to New Forms of Work* (OECD, 2019[22]) in relation to ongoing policy discussion/development (e.g. discussions around expanding employment insurance, a taskforce said to be working on this topic). This probably reflects the substantial attention paid to measure and track the number of non-regular workers. Additionally, Korea is noted by the ILO as an example of a country that measures the prevalence of dependent contractors, although defined as a subset of employees (ILO, 2018[37]). From the questionnaire for the survey of *Policy Responses to New Forms of Work*, it appears that Korea has been doing this since 2002, which suggests that the country has had its eye on the issue for quite some time.

Some OECD countries have made tailored extensions of collective bargaining rights to some non-standard workers. In Sweden and Canada, for example, dependent self-employed workers have had the right to bargain collectively since the mid-1900s (OECD, 2019[22]). In both cases, there is some evidence that the application of the dependent self-employment status is relatively limited today, potentially because such workers have obtained employee rights in other ways. There has been discussion in Canada about extending employment rights to certain contractors whose status lies in between employee and independent contractor.

Employers' organisations are being put to the test by the emergence of new forms of business. This is particularly the case following the rise of digital platforms, which has brought the issue of classification to the forefront. In the United Kingdom, for instance, the union GMB represents private hire drivers and took the case of Uber drivers to an Employment Tribunal. The court reclassified self-employed Uber drivers into workers covered by minimum wage legislation, and granted them legal provisions for holiday pay and breaks. Tribunals in Italy, France and the Netherlands recently took similar decisions. Moreover, even before these recent rulings, the risk of re-classification had led platforms in France and Italy to accept to open discussions or negotiations with recognised unions or workers.

In Korea, established trade unions are developing strategies to reach non-standard workers. This is done through lobbying for public policy interventions restricting the use of non-standard forms of employment or enhancing the quality of these jobs at either national or local level. For instance, trade unions and civil society organisations created the "Alliance for Nonstandard Workers" in 2000, which in 2006 succeeded in pushing the Government to limit the use of fixed-term contracts and outlaw discrimination based on employment status (Fleckenstein and Lee, 2018[38]). The Korean Confederation of Trade Unions has also changed bargaining practices to ensure better outcomes for non-standard workers. For instance, it launched its "solidarity wage" initiative in 2013, which promoted lump-sum pay increases rather than percentage increases with the explicit aim of "closing the wage gap between standard and nonstandard workers" (Durazzi, Fleckenstein and Lee, 2018[39]).

…and of social protection

Social protection systems play a key stabilising role in the current context of heightened uncertainties about the pace and extent of labour market changes. But accessing social protection can be especially difficult for workers in less secure forms of employment. More volatile career patterns or a growing diversity of employment forms pose potential challenges for support provisions that link benefit entitlements to past or present employment. In Portugal, changes in 2012 and 2018 have gradually extended unemployment protection to the economically dependent self-employed, in cases where there was termination of professional activity. In Spain, the *trabajador autónomo económicamente dependiente* (economically dependent self-employed, or "TRADE") category has enhanced access not just to social protection (health and accident insurance, pensions and unemployment benefits), but also to a wide range of rights and protections, including the right to breaks and work/life balance, non-discrimination, and the right to be collectively represented through the Independent Work Council (*Consejo del Trabajo Autónomo*). Italy's *collaboratori* category was created with the purpose of improving access to social protection for those in between independent contractor and employee status. Unemployment benefits for *collaboratori* were established in 2017, along with new protections (for both *collaboratori* and freelance professionals) in case of maternity, illness or accident, including the possibility to postpone/suspend or find a suitable replacement for an activity for a client, subject to agreement with them. As a step in the right direction, the Korean government plans to allow workers who fall into the grey area between the employed and the self-employed to enrol in employment insurance, specifically those directed and supervised by and strongly dependent on their employers. The government has also been considering setting up an employment insurance scheme for "artists", which is one such dependent worker group.

Providing opportunities for up- and re-skilling during working life

In a rapidly changing world of work, skill demands have been gradually, but consistently, shifting towards a more intensive use of cognitive and interpersonal skills under the combined forces of technology and globalisation. Accordingly, many OECD countries face a need to scale up and strengthen training opportunities for adults to keep their skills up to date or acquire new ones over longer working lives. Low-skilled adults are likely to bear the brunt of changes in skill needs unless they can engage in high-quality reskilling and upskilling programmes. Similarly, as new forms of work emerge at the intersection between self-employment and employee status, it is important to ensure that this does not translate into growing inequality in access to training based on employment status.

Longitudinal data, which follow the same workers over time, put these considerations in the Korean context. Specifically, Table 2.4 provides an overview of mobility from non-regular to regular work for different groups of Korean workers. The share of all non-regular workers in one year who have moved into regular jobs the following year is about 18%, based on the most recent figures available (2011-17), suggesting a low mobility for non-regular workers. Although the corresponding three-year transition probability is higher than the one-year rate, it nevertheless concerns less than one-fourth of all non-regular workers (23%), suggesting that most non-regular workers remain trapped in poor jobs. At the same time, one key piece of evidence is that the mobility into regular jobs (both one- and three-year) appears to be lower for low skilled workers than it is for medium and high skilled workers. Furthermore, mobility tends to decrease with the age of workers.

Table 2.4. One-year and three-year mobility from non-regular to regular work

Average percentages, 2011-17

		Transition rates from non-regular[a] to regular work:	
		Within one year	Within three years
Total workers		18	23
by skill level[b]	Low skill	14	18
	Middle skill	21	25
	High skill	23	30
by age	15-24	19	29
	25-34	25	33
	35-44	21	25
	45-54	16	20
	55-64	13	15

Note: Skill level and age refer to values in the initial year. a) Definition of non-regular workers in this chapter follows the definition adopted by the Tripartite Commission in 2002 as advised by the Ministry of Employment and Labour. Accordingly, non-regular workers in this table refer to temporary, part-time and atypical workers; b) High-skill occupations are managers, professionals and associated occupations (KSCO 6th codes: 1 and 2). Middle skill occupations are clerks, skilled agricultural, forestry and fishery occupations, craft and related trades, and equipment, machine operating and assembling occupations (codes: 3, 6, 7 and 8). Low-skill occupations are sales, service and elementary occupations (codes: 4, 5 and 9).
Source: OECD calculations using microdata from the Korean Labor and Income Panel Study (KLIPS), wave 14-20 (2011-17).

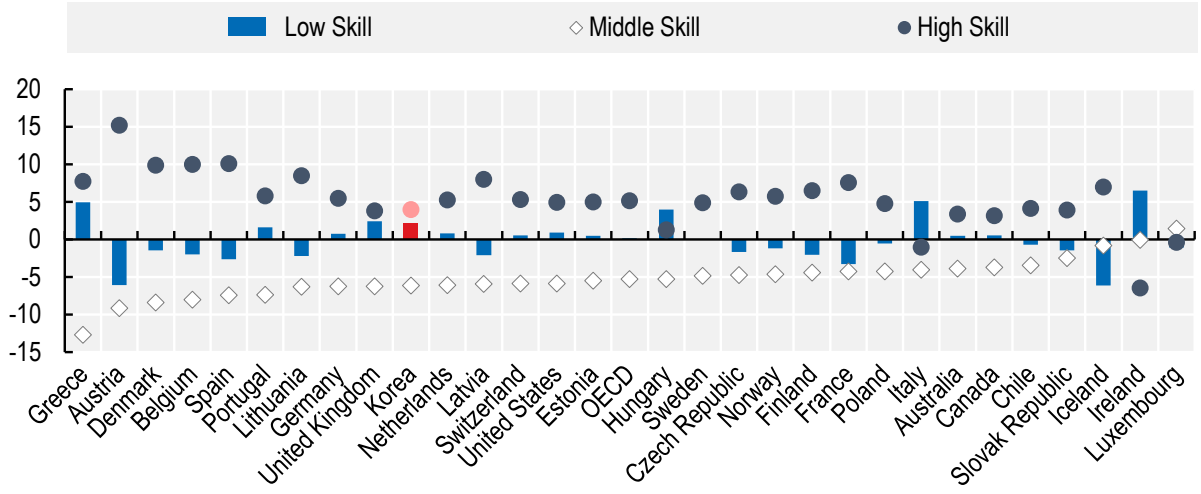
Challenges

Over the past decade, Korea's labour market, mirroring a pattern in most OECD countries, has experienced a significant change in occupational structure (OECD, 2019[1]). Figure 2.9 shows that one of the most evident transformations concerns the increased polarisation of employment into high-skill jobs, on the one hand, and low-skill jobs on the other, with a hollowing out of middle-skill jobs (Autor, Katz and Kearney, 2006[40]; Goos and Manning, 2007[41]; Goos, Manning and Salomons, 2009[42]; OECD, 2017[43]). Much like

almost all countries for which data are available, in Korea the process has resulted in an overall shift of employment towards high-skilled occupations.

Figure 2.9. The labour markets are polarizing

Percentage point change in share of total employment, 2006 to 2016



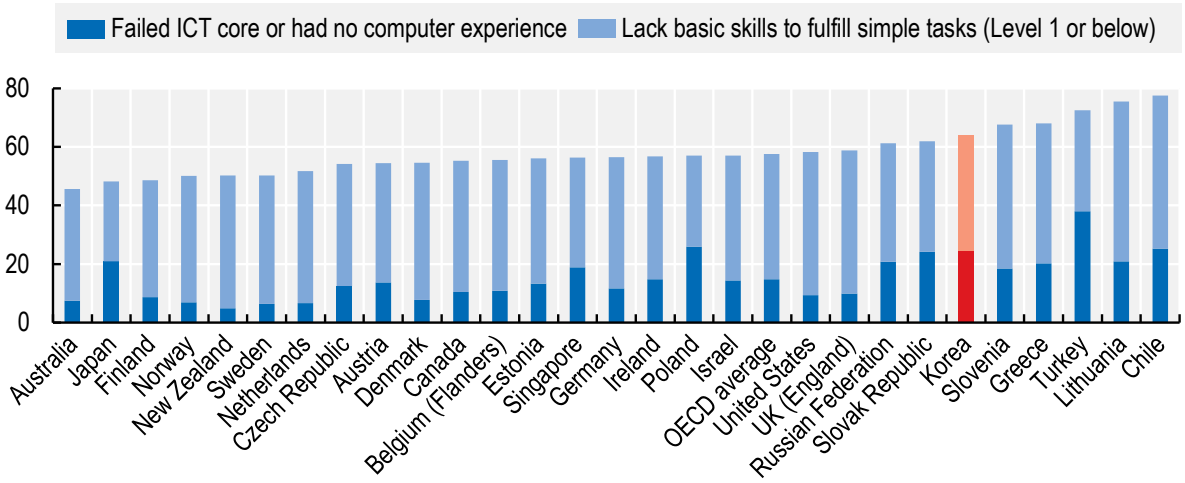
Note: High-skill occupations are managers, professionals and technicians (ISCO88 codes: 1, 2 and 3). Middle skill occupations are clerks, machine operatives and crafts (codes: 4, 7 and 8). Low-skill occupations are sales and service occupations and elementary occupations (codes: 5 and 9). The OECD average is the unweighted average of all displayed countries. The time period covered is 2006-16, except for: Korea (2006-14), Australia (2006-15). Greece, Portugal and Latvia (2007-16), Italy (2007-15), Switzerland (2008-15). Chile, Canada, Ireland, Luxembourg (2006-15) and Iceland (2006-13).
Source: (OECD, 2019[44]), "The future of work: What do we know?", in *OECD Employment Outlook 2019: The Future of Work*, OECD Publishing, Paris, https://doi.org/10.1787/ef00d169-en.

The relative importance of technological progress and globalisation in driving job polarisation is the subject of lively debate. Recent OECD work to identify the drivers of job polarisation suggests that the penetration of Information and Communication Technology (ICT) in a given industry bears the strongest correlation with its polarisation (OECD, 2017[43]; Breemersch, Damijan and Konings, 2017[45]). ICT is seen as complementing high-skill workers who perform the types of complex cognitive tasks typically found in managerial and professional occupations. On the other hand, middleskill clerical and production jobs are typically characterised by “routine” tasks that can be executed following a precise set of instructions and are therefore more prone to automation. Low-skill jobs (such as those in catering, cleaning, and other services) tend to involve non-routine manual tasks that require more manual dexterity and hand-eye coordination, and have so far proven more difficult to automate on a large scale. This -socalled- routine biased technological change, therefore, results in lower demand for middle-skill jobs relative to both high-skill and low-skill jobs, giving rise to the polarisation of occupation structures in advanced countries (OECD, 2017[43]).

The OECD Survey of Adult Skills (PIAAC) assesses the readiness of adults to cope with ongoing technological transformations. Specifically, Figure 2.10 provides an international comparison of proficiency levels in using digital and communication technology tools to perform practical tasks. Although levels of familiarity with ICT vary widely across countries, Korea stands out as one of the countries with the lowest share of adults with communication and technology application skills.

Figure 2.10. Proficiency in problem-solving in technology-rich environments among adults

Percentage of the working-age population (16-65)

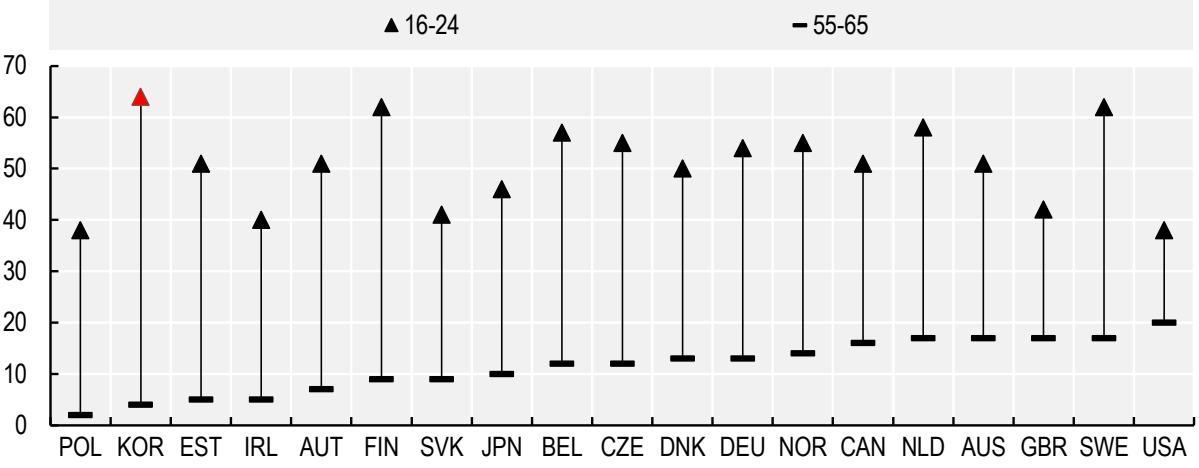


Note: Cyprus, France, Italy and Spain did not participate in the problem-solving in technology-rich environments assessment.
Source: OECD (2012, 2015), Survey of Adult Skills (PIAAC), Table A2.6, https://www.oecd.org/skills/piaac/publications/.

Intergenerational gaps in ICT skills are also wide in Korea. Labour market entrants and older workers show very different profiles with regard to their abilities to solve problems and find solutions using ICT technologies (Figure 2.11). Approximately 65% of Korean youth (16-24) have the digital problem-solving skills needed in today's labour market, corresponding to one of the highest among the OECD countries (OECD, 2013[46]). This compares with less than 10% among older workers (55-64), which is among the lowest in the OECD. Accordingly, the relatively high share of adults with low ICT proficiency in Korea is mainly ascribable to the older generations.

Figure 2.11. The skill gap between younger and older workers in Korea is large

Share of adults with good computer and problem-solving skills, 2012



Source: *OECD Education Statistics (database)*; (OECD, 2013[46]), *First Results from the Survey of Adult Skills*, OECD Publishing, Paris, https://doi.org/10.1787/9789264204256-en.

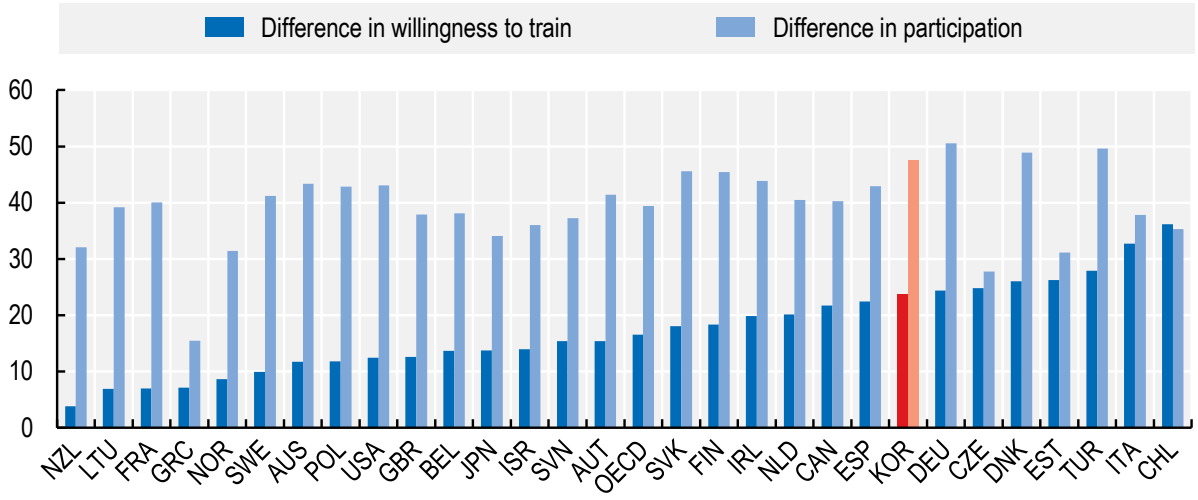
The low skill level of older workers is often identified as one of the factors holding back productivity in services and SMEs, given that once workers leave their careers at a relatively young age (around 50 years

old, see section below on older workers), a large share ends up working in SMEs or in self-employment in the service sector. Indeed, 28% of those employed in 2011 were self-employed, one of the highest rates in the OECD and well above the average of 16% (OECD, 2018[23]).

Effective adult learning can help prevent skills depreciation and facilitate transitions from declining jobs and sectors to industries that are growing fast (OECD, 2019[1]). A phenomenon common to all OECD countries is that the level of training participation is lowest for those who in principle need training most, including low-skilled and older adults (Figure 2.12). For the average of the OECD countries, adults with a high level of skills are 40% more likely than low-skilled adults to actually participate in training, although the gap varies significantly across OECD countries. Low-skilled workers are also less willing to participate in training, by around 17% than the highly skilled. For Korea the size of both gaps between low-skilled and the high-skilled workers is one of the biggest in OECD countries.

Figure 2.12. Differences in training participation and willingness to train between low- and high-skilled adults, by country, 2012, 2015

Percentage point difference in training participation and willingness to train, high-skilled minus low-skilled adults



Note: The difference in willingness to train is the percentage point difference in the share of adults who did not participate in training but would have liked to (positive values indicate that this share is higher for high-skilled adults than for low-skilled adults). The difference in participation is the percentage point difference in the share of adults who participated in training over the previous 12 months (positive values indicate that this share is higher for high-skilled adults than for low-skilled adults).
Source: OECD (2012, 2015), Survey of Adult Skills (PIAAC), Table A2.6, https://www.oecd.org/skills/piaac/publications/.

Policy insights

In a changing world of work, maintaining the employability of workers throughout their working lives is essential to ensure that they can stay longer in their main jobs and are not left behind during transition periods. From a longer-term perspective, building an effective system of lifelong learning is critical to ensure that workers can use and upgrade their core competencies and skills. The low participation rate in education and learning of adults with the lowest skill levels and whose jobs are at particularly high risks of automation suggests that Korea could reap significant gains by expanding such opportunities (OECD, 2019[1]).

Strengthening training and know-how agreements

The National Human Resources Development Consortium (the CHAMP programme, introduced in 2001) provides financial incentives for large companies, business associations and universities to set up consortia for sharing know-how, equipment and training facilities with SMEs. In 2014, 180 organisations were operating a training consortium under the CHAMP programme, which benefited more than 200 000 SME employees and accounted for 25% of total government expenditure on VET for incumbent workers. One important strength of the CHAMP programme is the provision of training that is relevant to the labour market, with a clear focus on practical and relevant work problems, since in essence this programme is based on a win-win strategy between training providers – most often a large firm – and beneficiaries (OECD, 2020[47]).

According to the recent OECD report *Working Better with Age: Korea* (OECD, 2018[48]), steps could be taken to further extend the CHAMP programme through specific measures, in close collaboration with the PES or Job Hope Centres for middle-aged and elderly people. For instance, the CHAMP programme could be backed by support and assistance measures for SMEs to recruit a replacement worker for an employee in training, including public subsidies for hiring an unemployed person.

Measurement and recognition of acquired skills

Another key policy challenge to promoting the employability of workers throughout their working life is to develop effective tools for measuring and recognising skills and competencies that workers acquire throughout their careers. For too long, the national qualification system has remained excessively focused on technical skills, which over time has undermined its function as a screening mechanism for employers and as a policy tool that public authorities can use to evaluate skill developments and anticipate skill needs. The development of new National Competency Standards (NCS) is an important step forward. They will enable Korea to address these concerns by providing a better picture of the skills and abilities required for various jobs and occupations at the industry level. The main objective is to ensure all initiatives reflect the skills currently used or needed in the labour market. For example, there is encouraging evidence that the national technical qualification system's role as a signalling device has strengthened since it was reformed based on the NCS. Furthermore, the adoption of a Course Based Qualification in 2015 has encouraged training institutes to provide training in skills required in the workplace and people to acquire qualifications in such skills. More could be done to mobilise all relevant stakeholders, including training providers, employers' organisations and trade unions, who will ultimately be responsible for the successful implementation of the NCS (OECD, 2020[49]).

Removing obstacles to the take-up of training

Time-related constraints are a major obstacle to training participation in Korea, for all age groups (OECD, 2020[47]). For example, being too busy at work is the most prevalent reason reported by workers to explain why they did not participate in any VET programmes although they would have wanted to do so. This reason represents almost 46% of all answers of Korean adults (age 25-64), the highest proportion among the OECD countries for which information is available and nearly twice the OECD average (OECD, 2018[48]).

In an attempt to stop chronic overwork, Korea has introduced new measures to lower the maximum hours people can work from 68 to 52 hours – split between 40 statutory work hours and 12 hours of allowed overtime. The new rules are being enforced gradually. Already in force since July 2018 in large firms and since January 2020 in medium-sized firms, the government plans to extend them to small firms from July 2021. A number of accompanying support measures are introduced to limit the impact of the reduction on the monthly wages of low-waged workers, who are paid hourly, and the emergence of possible labour shortages. Among the latter, flexible working hours arrangement and Smart Factory Manpower initiatives are foreseen, aiming to provide training to 60 000 SME workers.

Portability of training right and skills

A number of OECD countries are taking action to implement systems of lifelong learning that deal with increasingly non-linear career paths and support individuals as they move between jobs, careers, training and other absences from the labour market throughout their lives (e.g. France, Portugal and Spain). One important element of this is portability of training rights and the portability of skills themselves. Individual learning accounts (ILAs) are schemes that provide individuals with resources they can use to take up further training on their own initiative. One feature of such an approach is that they link training rights to individuals rather than to specific jobs, with the intention that they be used throughout individuals' entire careers. Depending on the set-up of the ILA, they may also be used to expand access to public funding for training to a wider group of individuals, particularly the low skilled. The French Individualised Learning Account (*Compte Personnel de Formation* – CPF), set up in January 2015, provides an interesting example of such an initiative. As of January 2018, the CPF covers the selfemployed-. It now allows any active person, from first entry into the labour market until retirement, to acquire training rights that can be used throughout their professional life. Importantly, training rights are maintained across different forms of employment, through periods of non-employment (such as unemployment, parental leave or long absence due to illness) and are transferrable between employers. In Korea, financial support has been provided using a voucher system[7], taking the form of a "Learning for Tomorrow Card" to encourage up-skilling of vulnerable groups and encompassing workers in SMEs, non-regular workers and jobseekers. From 2020, this scheme, now renamed "People's Learning for Tomorrow Card", covers the dependent self-employed, offering KRW 3 to 5 million (USD 2 400 to 4 000) to cover training costs for 5 years.

Policy options for strengthening the inclusion of under-represented groups

As discussed above, labour market reforms to improve conditions for non-regular workers and the move towards learning systems that are future-ready for all are essential to promote social cohesion. In addition, the specific challenges and pressures faced by under-represented groups require tailored policy actions. This is particularly the case for women, youth, older workers and migrants. This section takes a closer look at these groups. Beyond direct employment effects, addressing uncertainties about the future of under-represented groups can have important implications for social integration, childcare and elderly care responsibilities, fertility, marriage and family formation.

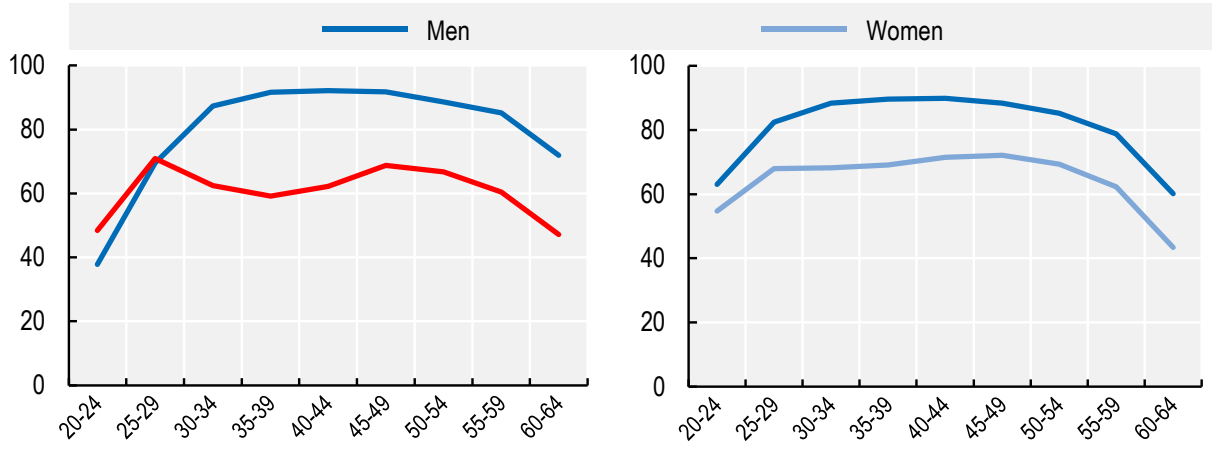
Women

Improving employment and career opportunities for Korean women is a key focus of the OECD's *Rejuvenating Korea: Policies for a Changing Society* (OECD, 2020[47]). Although women's employment rate is increasing, the report stresses that women are particularly affected by the duality of the Korean labour market. It is difficult to obtain a regular employment contract in occupations and industries that support career progression and the fulfilment of individual labour market aspirations. Those who attain such employment have little time to devote to family life, implying that women in regular employment often postpone parenthood, sometimes indefinitely. At the same time, rather than being employed as non-regular workers with potentially unsatisfactory employment conditions and career prospects, many highly educated women choose to stay at home and care for their families if their household income is sufficient.

Compared to the OECD average, women tend to leave the labour force following childbirth at very high rates in Korea. Figure 2.13 shows that the female employment rates dip around childbearing years. Women who do go back to work often settle for jobs with low pay and poor career prospects. According to KLIPS data, women who interrupted labour force participation after the birth of their first child stopped working for an average of three years over the period 2006 to 2015. However, these figures are down from historical numbers: over the period 1996-2005, new mothers left the labour force for on average of almost six years.

Figure 2.13. Motherhood has a strong effect on women's employment in Korea

Employment rates by gender and five-year age group, Korea and average across OECD countries, 2018



Note: "OECD countries" refers to the weighted average across all OECD member countries.
Source: (OECD, 2019[50]), *Rejuvenating Korea: Policies for a Changing Society*, OECD Publishing, Paris, https://doi.org/10.1787/c5eed747-en, based on *OECD Employment Database*, http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm.

Moreover, women are substantially more likely than men to be in non-regular employment, whether on a temporary or part-time basis (41% compared to 26% as of 2017). Men are unlikely to withdraw from the labour force for family reasons. Women who have left the labour force for a few years to care for young children find the return to labour market an unattractive proposition. In general, regular employment opportunities are hard to find for “mother returners” to whom often only low paid non-regular job opportunities are available. As a result, mothers are three times more likely to be in non-regular employment than fathers (Figure 2.14).

Although part-time work is on the rise in Korea, its incidence among women (and men) is significantly lower than on average across OECD countries. 18% of employed women in Korea worked part-time (less than 30 hours per week) in 2018, compared to an average of just over 25% in the OECD.

Part-time jobs are often low-paid with limited social protection. Until recently, a person working for less than 60 hours per month or less than 15 hours per week was not entitled to unemployment benefits. Since July 2018, however, employees with a contract of three months or more are eligible. The right to parental leave is not formally guaranteed to individuals working less than 60 hours per month.

Policy insights

Strengthening the use of maternity and parental leaves

Most OECD countries have long provided paid maternal leave. With the exception of the United States, all OECD countries offer mothers a statutory right to paid maternity leave around birth, on average between 15 to 20 weeks. In Korea, women are entitled to 90 days of maternity leave. The first 60 days are paid up to 100% of past earnings, and the remaining 30 days at 100% of earnings up to a ceiling of KRW 2 million (USD 1 622) as of 2020.

An increasing number of countries also offer paid paternity leave – short but usually well-paid periods of leave to be used by fathers within the first few months of birth. Paternity leaves are often one or two weeks, although in some OECD countries (e.g. Greece and Italy) they are only a few days.

In addition, many countries have paid parental leave arrangements that provide for paid leave periods for about one year across the OECD on average. Often the paid leave entitlement is "shareable" among parents, which frequently leads to mothers rather than fathers using the leave if only to limit the loss of household income during leave. For that reason, countries have introduced specific father's entitlements within parental leave systems that are not transferable, or award bonus months if fathers use the leave. In terms of duration, Japanese and Korean paid parental leave systems are the most generous as they provide one year of non-transferable leave for fathers.

Despite the lengthy entitlements offered to parents, Korea's paid leave programmes are generally not well used. For example, only about 24% of mothers who gave birth in 2019 received maternity leave benefits from the national employment insurance fund (Statistics Korea, 2019[51]). In 2019, around 105 000 parents (of which only 21% were fathers) claimed the parental leave benefit – roughly just over 30 claimants per 100 live births (Statistics Korea, 2019[51]). This compares poorly to some other OECD countries. For example, in Germany in 2016, roughly 94 mothers and 35 fathers claimed parental leave benefits for every 100 live births. Portugal has made the use of parental leave by fathers mandatory: Portuguese fathers are entitled to paid parental leave of 25 working days, of which they are obliged to use 15 days within the first month after birth.

A recent OECD report, *Rejuvenating Korea: Policies for a Changing Society* (OECD, 2019[50]), identifies different reasons for the limited use of parental leave entitlements, including:

- Prior to July 2019, one-third of female employees were not covered by the employment insurance (EI) fund, which excluded employees working for less than 60 hours per month, domestic workers and workers in SMEs in the agriculture, construction, forestry, fishery, and hunting sectors with four or less employees. Reform since July 2019 covers these workers with income support up to KRW 1.5 million (USD 1 364) for three months. Government officials and public and private school teachers are covered by separate occupational arrangements that pay at the same rate as the EI but also provide for two years of unpaid leave.
- Relatively tight criteria for eligibility for employment-protected leave: until reform in 2018, employees had to have worked for an employer for the preceding 12 months, which meant that many workers, especially non-regular workers, did not qualify. Reform in 2018 reduced the qualifying period to six months, which is likely to increase future uptake.
- To take paid parental leave, Korean employees must have been insured for at least 180 days prior and take at least 30 days consecutively – which is likely to reduce uptake among fathers. Self-employed workers cannot access paid parental leave.
- Overall, leave payment rates are not high by international comparison. While the first three months of leave are paid at 80% of previous earnings – and 100% of previous earnings for the second parent to take leave – the remainder is paid at just 50%.

The availability of high quality childcare

Rejuvenating Korea (OECD, 2019[50]) acknowledges the rapid development of the Korean Early Childhood Education and Care (ECEC) system, which offers a comprehensive range of services for children under school age. There are three main types of ECEC support: centre-based day-care, kindergarten, and childcare services at home. Support for centre-based day-care services is available to parents of all children aged 0-5, subsidised (all-day) home-based child-care services are available for children aged between 3 months and 3 years old, and support for kindergarten is available to all children aged 3 to 5. Spots in publicly supported facilities are heavily subsidised by the government, and generous cash benefits are available to parents with children in centrebased- day care and kindergarten. As a result, Korea has some of the lowest out-of-pocket childcare costs in the OECD. Parents who do not use any of the three main types of ECEC supports can access a home care allowance that provides financial support to help them care for their children full-time.

Having quickly developed a childcare sector, including with the help of private ECEC providers, policy is increasingly turning to quality issues. The Korean authorities introduced the Nuri curriculum in 2013 with the aim of improving standards, and in June 2019 introduced mandatory accreditation for centrebased- services. The accreditation process considers the care environment, management, childcare programmes, and interaction with children, teaching methods, health, nutrition, and safety.

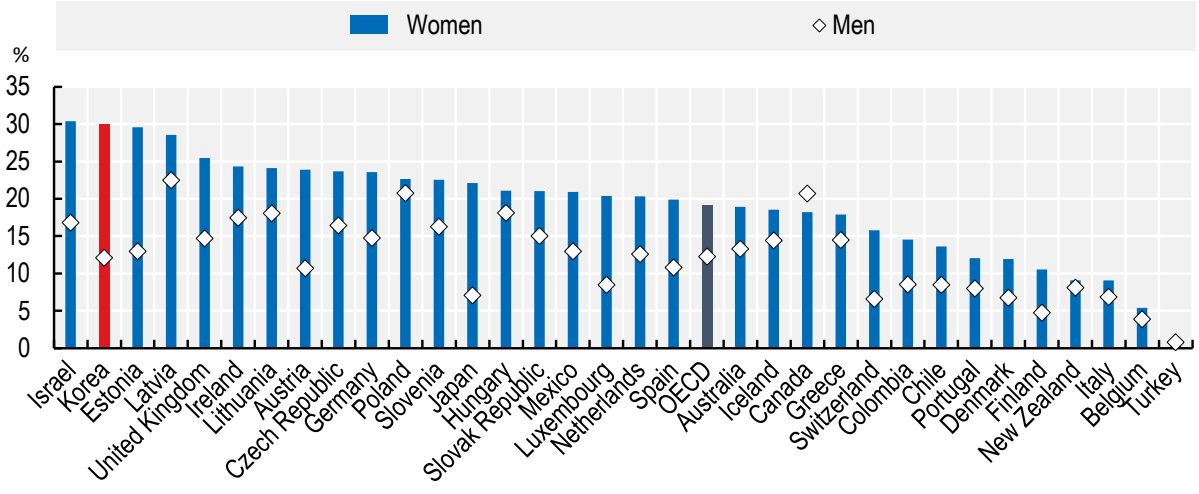
There is also a drive to bring private centres into the public sphere, as Korean parents often prefer using public centres, as they perceive them to be of higher quality. There is an assessment process before childcare centres can obtain the label “Childcare facility of public standard”, and this process uses more stringent criteria than the mandatory assessments introduced earlier in 2019. As for kindergarten, local education offices (supervised by the Ministry of Education), assess the quality of all kindergartens in their jurisdiction once every three years. As part of a continuous effort to improve the quality of childcare, the government plans to raise the share of children attending public kindergartens to 40% by 2021.

Facilitating women’s return to work after an absence from the labour market

Career differences between men and women develop early in working life and lead to a gender wage gap that is the second highest in OECD countries (Figure 2.14). This discourages women, particularly those with higher education, from returning to the labour force. To address this, several programmes have been put in place to help women return to the labour market.

Figure 2.14. Low paid employment is common in Korea, especially for women workers

Incidence of low pay among full-time workers, by sex, OECD partner countries, 2018 or the latest available year



Note: The "Incidence of low pay" is defined as the share of full-time workers earning less than two-thirds of the gross median earnings (including bonuses) of all full-time workers. Definitions may vary slightly from one country to another; see the *OECD Employment Database* and the individual country metadata data available in OECD.Stat. Data for Estonia, Ireland Latvia, Lithuania, Luxembourg, the Netherlands, Slovenia, Spain and Turkey refer to 2014, for Belgium, Hungary, Iceland, Italy, Poland and Switzerland to 2016, and for Austria, Chile, Denmark, Finland, Germany, Greece, Israel, Japan and Portugal to 2017. Unweighted average of the 32 countries shown above.
Source: *OECD Employment Database*, http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm.

In 2009, the Ministry of Employment and Labour and the Ministry of Gender Equality introduced education and employment support services in one-stop-shop centres to help mother returners. *Saeil* (which means *newly working*) centres provide assistance such as job counselling and guidance on training and vocational education opportunities. The number of centres has more than doubled since 2009, and in 2018, there were 158 centres across Korea. About 480 000 women received employment support services from *Saeil*

centres in 2018, and more than one-third of them found jobs or started their own business in that year (Korean Ministry of Gender Equality and Family, 2019[52]). SMEs who hire mother returners can benefit from a reduction in their corporate tax liability worth about 15-30% of the labour costs of these employees (Act on the restriction of special taxation, 2019[53]).

As discussed below, complementary policies to reform the wage system to emphasise performance and reduce the importance of seniority would also help narrow the gender wage gap.

Enhancing workplace flexibility to improve work life balance

The prevailing tendency in Korean to spend long hours in the workplace does not facilitate the reconciliation of work and family life. *Rejuvenating Korea* (OECD, 2019[50]) shows that this imbalance is the main reason for not intending to have a child for about 20% of Korean women. Furthermore, it involves health risks and contributes to low labour productivity overall, so there is ample reason for reform. However, as negotiating employment conditions is the remit of employers and unions, governments around the world are hesitant towards direct intervention in this area.

As discussed above, the Korean government has introduced legislation curtailing working hours to a maximum of 52 per week, and for flexible working practices for parents with young children. However, there is room for improvement, including through:

- Expanding opportunities to work part-time with remuneration being proportional to that of workers on full-time regular contracts, as is common practice in the Netherlands, for example (OECD, 2019[54]). This could help increase the number of “mother returners”. Also, in line with different cross-national and Korean studies, an expansion of part-time work opportunities (30 hours per week or less) can help increase fertility. Some countries, e.g. Germany and Sweden, reserve flexible working time entitlements for employees with care responsibilities for young children. Other countries, such as the Netherlands or the United Kingdom, have opened this possibility to all employees to avoid discrimination against particular groups or employees.
- Promoting greater working time flexibility, i.e. encouraging companies to develop opportunities to work with flexible starting and finishing times, spread working hours across weeks or months, or use home or teleworking options to help workers balance work and family. The government could encourage companies to put this issue on the agenda of company level and sectoral bargaining, and facilitate the sharing of information on best practices.
- Strengthening affirmative measures to promote gender equality in employment. Korea has put in place Affirmative Action plans in 2006 to monitor large companies (initially 1 000 or more employees and extended to firms with 300 or more employees) and public corporations’ progress in this area. Despite the disclosure of the list of the least performing 50 companies since 2014, progress has been slow (27 in 2017, 42 in 2018 and 50 in 2019). As of 2019, across the firms under regular review, around two in five employees were women and women were responsible for only one in five managerial positions, corresponding to an increase of 9% and 11%, respectively, since the implementation of the initiative. Following the example of other countries, e.g. Australia and Iceland, pay transparency measures could be introduced to help reduce gender pay inequalities.
- Tackling discrimination effectively, with other OECD countries having put in place a combination of measures, namely to: increase sanctions on employers to improve financial incentives to comply with non-discriminatory workplace practices, strengthen the labour inspectorate to more effectively enforce anti-discrimination legislation, and make it easier for workers to file complaints on discrimination with labour courts.

Towards an education environment that supports fertility

The school environment is extremely competitive in Korea. The country stands out in the international comparison for the many hours children spend studying, which is seen to affect both their well-being and the household cost of education. According to the Private Education Expenditure Survey, in 2018, on average, more than seven out of ten students participated in supplementary education in private institutions in Korea. Families spent KRW 291 000 (USD 241) per month and per child, on average. Almost one in four Korean students study more than 60 hours per week in and outside of school, while on OECD average, only one in ten students study more than 60 hours per week according to PISA 2015 results.

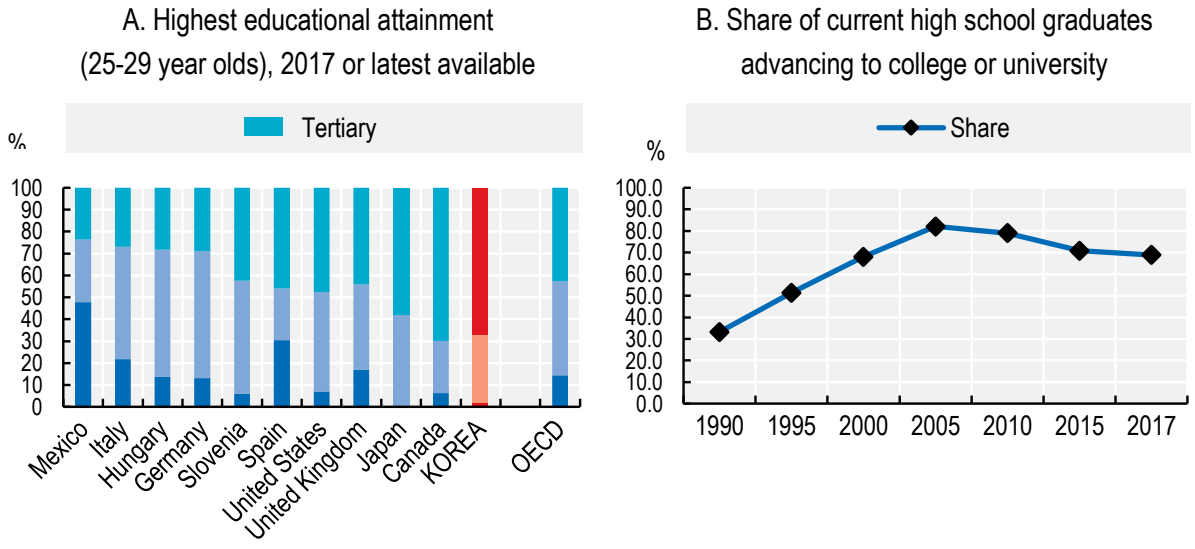
Making child education less stressful and time consuming for children and less costly for their households is a key to improving child and family well-being. This can be expected to generate, in turn, positive and visible effects on fertility rates. Greater public spending on education could increase the number of hours in primary education and thus reduce time in private education. Limiting the opening hours of private academies called *hakwon* (or learning places)[8] to 8 or 9 p.m., while still regarded as late in many OECD countries, would be an improvement on the current situation where they are open until 10 p.m. or midnight.

Care and education policies should focus more on the well-being of children and adolescents from the early years of life, with more attention paid to child development, personal self-esteem, trust and social skills. To this end, ECEC and afterschool services could make more room for play-based learning, sports and arts education, which are shown to have a positive effect on children's cognitive, emotional and social development. This requires qualified staff and establishing partnerships between various groups of practitioners and stakeholders at local level. Guidelines to develop best practices could also help further develop high-quality cost effective family services. Greater investment in and a better organisation of local services as in all-together centres can help improve the delivery of “wraparound care services”, so that children are not left on their own during the day, thus improving child and family well-being.

Youth

Virtually all young Koreans complete upper secondary education and more than two-thirds of Koreans aged 25-29 obtain a college or university degree. As a result, Korea has the most educated youth population in the OECD area (Figure 2.15, panel A). Secondary students spend more hours studying than in any other OECD country that participated in the 2015 PISA programme: 51 hours, compared to the 44-hour average (OECD, 2017[55]). While the quality of colleges and universities varies, young Koreans generally leave school with a high level of skills: among the 24 countries or sub-national regions that participated in the Survey of Adult Skills, the skills of 16-24 year olds were only higher in Japan. By contrast, skills of Korean 55-65 year olds were the third lowest in the OECD for this age group. (OECD, 2013[46]).

Figure 2.15. The majority of Korean young people choose to go to college or university

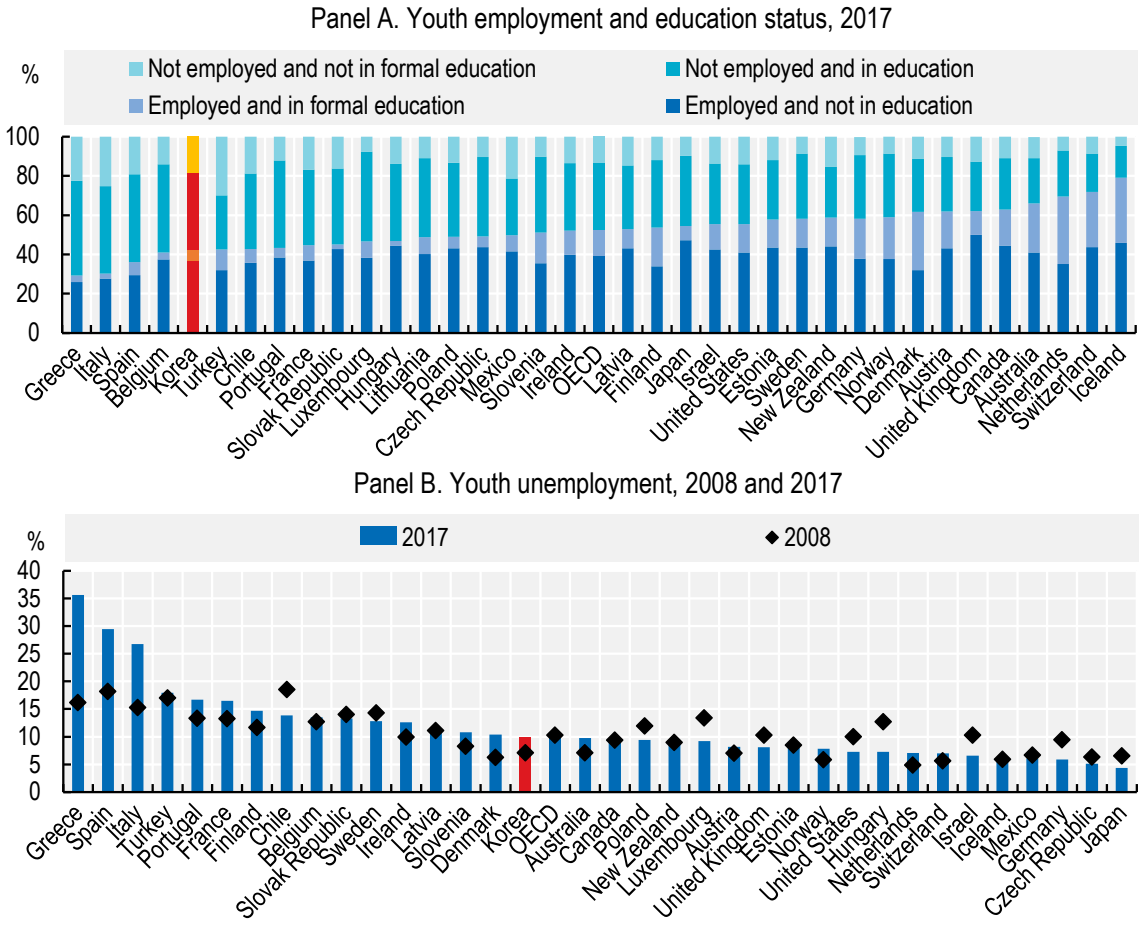


Note: The reference year is 2016. The shares exclude observations with missing educational information.
Source: (OECD, 2019[56]), *Investing in Youth: Korea*, OECD Publishing, Paris, https://doi.org/10.1787/4bf4a6d2-en.

The large skills gap between younger and older groups attests to the extraordinary increases in educational attainment in Korea over the past half century (Cheon, 2014[57]), although there are signs that this pattern of strong educational expansion may have recently plateaued. Indeed, the share of high school graduates who advanced to college or university reached an all-time high of 82% in 2005, before declining to 71% in 2015 (Figure 2.15, panel B).

Despite the outstanding record of Korea's long-term education achievements, the employment rate of young Koreans aged 15 to 29, at 42% in 2017, stands well below the OECD average of 53% (Figure 2.16). From a dynamic perspective, the Korean youth employment rate fell by 4 percentage points between 1997 and 2017 a fall largely explained by the decrease in the employment rate of 20-24 year olds (from 58% to 45%). A considerable share of young Koreans are not in education, employment, or training (NEET). In 2017, the NEET rate reached 18.4% in Korea, compared with the 13.2% cross-country OECD average. The share is lower than the 22.1% recorded in Korea in 2000, but represents an increase from the low point of 17.9% in 2014.

Figure 2.16. Fewer than half of young people in Korea are employed



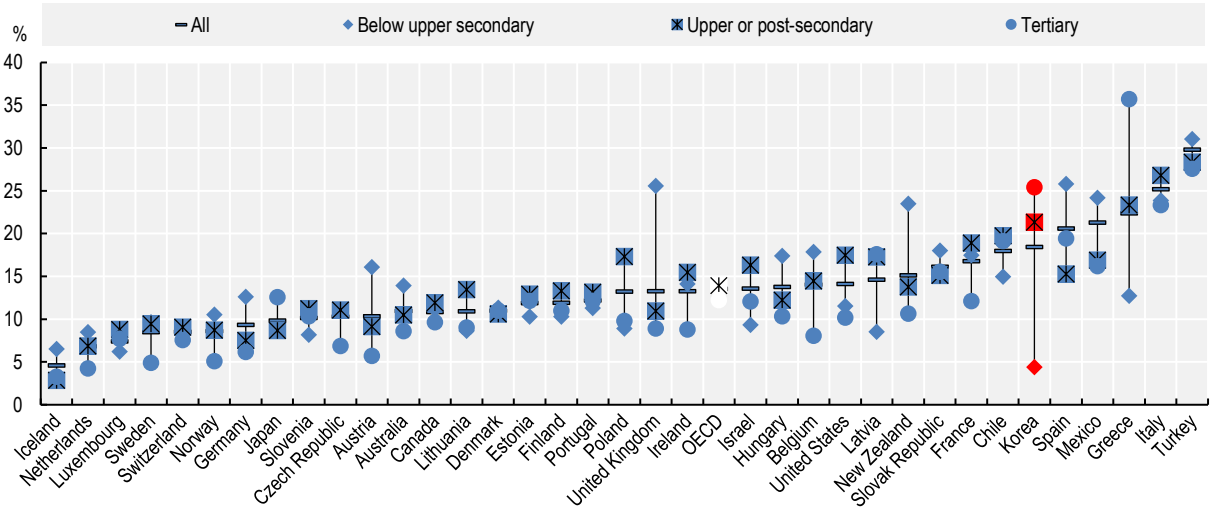
Note: The reference year in panel A is 2017 except 2013 for New Zealand, 2014 for Japan, 2015 for Chile and Turkey and 2016 for the United States. The calculations exclude individuals with missing educational information or who are in military service. Youth are defined as 15-29 year olds.

Source: (OECD, 2019[58]), "Youth employment and education in Korea", in *Investing in Youth: Korea*, OECD Publishing, Paris, https://doi.org/10.1787/63797b4a-en.

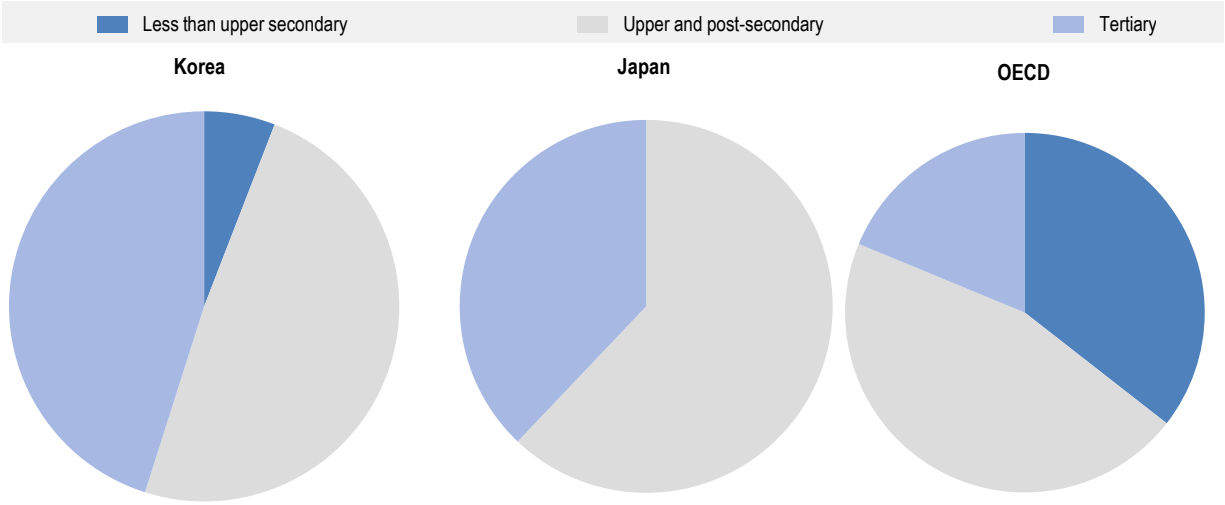
Higher education does not necessarily shield a young person from unemployment or inactivity. College and university graduates are more likely to be NEETs than those with lower educational attainments, whereas the opposite applies in most other OECD countries (Figure 2.17, panel A). About 45% of young Koreans who are neither employed nor attending formal education have a tertiary degree (Figure 2.17, panel B). This share is much higher than the OECD cross-country average of around 18%, but somewhat comparable to the share in Japan. The shares of young Korean men and women who are in this situation are on average similar, but higher for men among under-25 year olds and higher for women among over-25 year olds.

Figure 2.17. Korean college or university graduates are more likely to be NEETs than their lower-educated peers

A. Share of youth neither employed nor attending formal education, by highest educational attainment



B. Distribution of youth neither employed nor attending formal education across educational attainment groups



Note: The reference year is 2017 except 2014 for Japan, 2015 for Chile and Turkey and 2016 for the United States. The calculations exclude individuals with missing educational information or who are in military service. Youth are defined as 15-29 year olds.
Source: (OECD, 2013[25]), Strengthening Social Cohesion in Korea, OECD Publishing, Paris, https://doi.org/10.1787/9789264188945-en.

One of the reasons for the elevated share of college or university graduates who are NEETs is that they may take breaks to attend informal educational institutions (OECD, 2019[56]). Indeed, while these young people are considered as NEETs in Figure 2.17 (in line with the OECD NEETs definition), they are actually preparing for university or company entrance exams or taking informal education courses, such as language courses. Overall, 4.4% of Korean civilian youth aged 15-29 were enrolled in some form of informal education or exam preparation in 2017 as their primary activity. Excluding these youth would imply a drop in the overall NEET rate from 18.4% to 14.1%, which is on par with the OECD average. Among university graduates, the NEET rate would drop from 25.4% to 22.7%, remaining well above the OECD average. These calculations do not include military personnel, although conscription is one of the factors that increases the age at which young Korean men enter the labour force.

The high dependence of youth on informal education reflects Korea's strong societal preference for higher education and the eagerness to obtain a job in a large company or the public sector. These forces strengthen the competition among young Koreans to attend a top university. At the same time, given society's avoidance of vocational education, they push many students to attend sub-par tertiary institutions (Park, 2010[59]) exacerbating the pressure on young Koreans and their families. Furthermore, although informal education may complement formal education, its widespread use indicates a gap between skills supply and demand. Many students think the formal education system does not equip them with the skills they view as prerequisites for success (Jang and Kim, 2004[60]). Employers see formal education degrees as insufficient measures of someone's skill, preferring their own exams to select their employees.

Policy insights

The above challenges have been the focus of a recent OECD report on *Investing in Youth: Korea* (2019[56]), which presents new results from a comprehensive analysis of the employment situation of young people in the country. According to the report, awareness of the skills mismatch is high in Korea and the government has launched a number of important initiatives in recent years to reduce the mismatch. These policies include additional public funding for career guidance and counselling in secondary schools, (re)introduction of apprenticeships and Meister high schools (high school customised to industrial demand)[9] to strengthen vocational education and training, incentives for tertiary institutions to offer more labour-market relevant degrees and advocacy for competency-based recruitment practices. Although these reforms follow international best practices and have the potential to reduce the gap between skill supply and demand, the report concludes that a number of adjustments remain needed to further boost the expected payoffs.

Increasing the effectiveness of career guidance

Career guidance is an important tool to provide information concerning the job market. This helps young people make good choices about their education. According to the *Investing in Youth* report, better quality training for counsellors and the provision of pedagogical material that includes career-relevant information in all subjects could improve the impact and relevance of guidance in Korean secondary schools. Higher budget allocations for more career services staff would allow schools to provide more individualised guidance. Self-assessment exercises based on benchmark performance measures can serve as a tool for the regular improvement of career counselling.

Adapting counselling to the needs of disadvantaged youth is also essential to raise the effectiveness of career guidance. Students from disadvantaged backgrounds typically receive less counselling and are less able to benefit from it. To address these gaps, schools could consider either programmes that are targeted to this group's needs or individual counselling sessions for all students in advance of important education transitions.

Finally, *Investing in Youth* (OECD, 2019[56]) recommends to enhance the involvement of the employer in career counselling. Students tend to be more interested and engaged in career counselling when companies and their employees are directly involved. Schools should better cooperate with employers to offer a mix of different activities, such as information events, workplace visits and job shadowing.

Promoting upper secondary vocational education

Vocational upper secondary schools traditionally educated a large share of Korea's workforce. However, their importance declined when higher education expanded rapidly during the 1990s. The Korean government has adopted measures to diversify vocational education options to attract more young people and train workers to better match the needs of employers.

The Meister schools introduced in 2010 aim to follow the German/Austrian model of upper secondary schools that focus on practical vocational training in close collaboration with employers. In addition, apprenticeship programmes combine theoretical education at an upper secondary level with practical training in the company that hires the apprentices. However, only 18.3% of upper secondary students attend a vocational high school and barely 3% attend a Meister school or participate in apprenticeship programmes despite the fact that they are relatively successful at securing employment for their graduates.

Against this backdrop, the *Investing in Youth* (OECD, 2019[56]) report stresses the importance of disseminating best practices by taking stock of the experience of the most successful Meister schools and the best vocational education and apprenticeship based schools. This could be achieved by creating a template for quality improvements in secondary vocational education. The government could consider increasing the number of these schools, on the one hand, and requiring all vocational schools to create more and deeper connections to industry, on the other hand. Curricula should also be reviewed to reflect National Competency Standards while ensuring sufficiently broad theoretical training.

In addition, apprenticeship programmes could be further expanded. More enterprises and youth could benefit from apprenticeships if they were expanded across a number of dimensions. For instance, longer programmes could prepare apprentices for more complex occupations, while introducing apprenticeship programmes in the service sector could provide employers with a skilled workforce. Enlisting large employers as apprenticeship providers could also boost the prestige of apprenticeships. In turn, this approach could improve the benefits that apprentices and employers of all sizes derive from the apprenticeships.

Finally, reducing the cost of apprenticeships for employers is also important to support access. In some sectors, the cost of offering an apprenticeship exceed its benefits, despite the subsidies offered to SMEs to offset part of the training costs. The negative balance could be reduced or eliminated if employer and employee representatives agree on how training requirements can be redesigned. Employers can also reduce their costs by arranging joint training. Sectoral councils could play a central role in both solutions.

Fostering collaboration with employers

Employer involvement with education, both VET and tertiary education can ensure that curricula are better adapted to labour market needs and that students are better prepared for the labour market. Evidence from European countries suggests that collaborations are more durable when employers are engaged through multiple channels. These can include internship programmes, employer advisory boards, research co-operation and others. Closer collaboration with employers could also help better integrate entrepreneurship-related courses and programmes in education curricula with a view to better equipping students with the skills they need to realise their entrepreneurial ambitions.

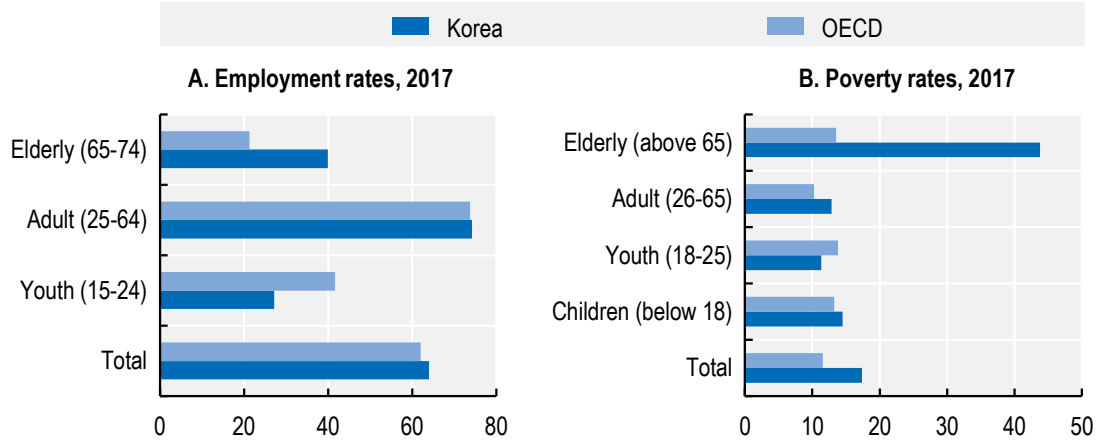
Furthermore, partnering with the employer sector could be important to reduce the strong emphasis of hiring practices in Korea on where a person has studied, rather than on abilities and accomplishments. As a result, recent graduates often invest months, and sometimes even years, preparing for company entry exams. Yet evidence suggests that job descriptions that clearly define the required competencies are a better predictor of job performance and reduce job turnover.

The Korean public sector is experimenting with recruiting more of its candidates based on clearly defined job descriptions. Recourse to training on competency-based hiring to employers could encourage private companies to follow similar practices. At the same time, intermediary matching services could be introduced for small and medium-sized firms. Smaller firms often have high hiring costs. Under certain circumstances, information sharing between enterprises and intermediary matching services can help reduce these costs.

Older workers

At almost 70%, Korea's employment rate of older workers aged 55-64 is high by international standards – 7 percentage points above the OECD average (Figure 2.18, panel A). According to the recent OECD (2018[48]) report on *Working Better with Age: Korea*, this reflects the fact that older workers in Korea effectively retire at an average age of 71-73 years – the oldest of any OECD country (Figure 2.19). More specifically, Korean men effectively withdraw from the labour market at an age of 72 years and women do so at 72.2 years. Both of these ages are higher than in any other OECD country – where the majority of workers effectively retire before they reach 65 years of age.

Figure 2.18. High employment rates for older workers coexist with high poverty rates in Korea



Note: Relative poverty is measured as those with an income below half of the national median, not taking into account household assets and liabilities. OECD average of relative poverty rates refer to 2016 except Finland, Israel, Korea, Norway, Sweden (2017); Chile, Denmark, Germany, Iceland, Ireland, Japan, Switzerland, Turkey (2015); Hungary and New Zealand (2014).
Source: *OECD Income Distribution and Poverty and Employment and Labour Market Statistics (database)*, https://www.oecd.org/social/income-distribution-database.htm.

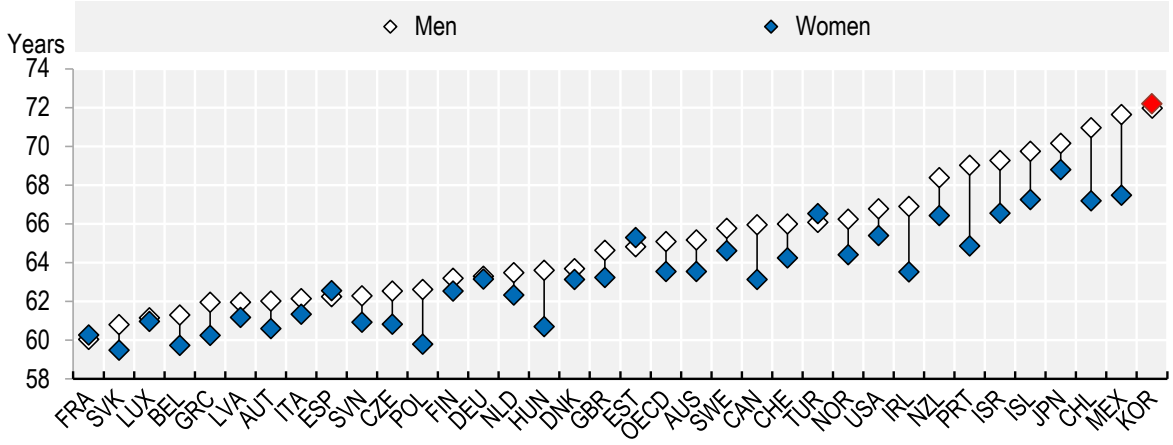
This first glance evidence is reassuring. Indeed, for a country undergoing a rapid trend of population ageing and population decline, high employment rates among older workers can nurture a more sustainable future. While many OECD countries experiencing similar demographic changes are struggling to activate their elderly populations, Korea is already there.

However, it hides an important problem with regard to the low quality of the jobs to which older Koreans have access. Many workers retire early from their main job (most of them before reaching age 55) and find new employment in highly insecure and low-paid jobs or become self-employed. As noted, almost two out of every five workers aged 55-64 in Korea holds a non-permanent job, compared with an OECD average of just one in every ten. Precarious work is even more common among even older workers, with three out of every five of those aged 65-69 in non-permanent positions – roughly three times the OECD average.

For a majority of workers, early retirement from the main job results in lower earnings and potential hardship. Poverty is very high among Korea's elderly population, despite the fact that such a large proportion of them are economically active. Korea has one of the highest rates of relative income poverty among those aged above 65 among all OECD countries – second only to Estonia (Figure 2.18, panel B). Work is therefore not an effective antidote against poverty for many of Korea's elderly.

Figure 2.19. Workers in Korea effectively retire later than in any other OECD country

Average effective age of retirement in OECD countries, average for 2009-16



Note: The average effective age of retirement is calculated as a weighted average of (net) withdrawals from the labour market at different ages over a 5-year period for workers initially aged 40 and over. In order to eliminate compositional effects in the age structure of the population, labour force withdrawals are estimated based on changes in labour force participation rates rather than labour force levels. These changes are calculated for each (synthetic) cohort divided into 5-year age groups. The estimates shown in red are less reliable as they have been derived from interpolations of census data rather than from annual labour force surveys. The estimates for women in Turkey are based on 3-yearly moving averages of participation rates for each 5-year age group.

Source: OECD (2018[48]), "The exceptional labour market situation of older workers in Korea", in *Working Better with Age: Korea, Ageing and Employment Policies*, https://doi.org/10.1787/9789264208261-en.

Policy insights

Previous sections have discussed the policies to reduce labour market duality and to provide good opportunities for workers to upgrade their skills throughout their working careers, which can be expected to affect older workers disproportionally. At the same time, *Working Better with Age: Korea* (OECD, 2018[48]) recommends that policy makers integrate these measures by taking further actions to: i) make work rewarding for older workers; and ii) encourage employers to retain and hire older workers. Taken together these measures can increase the quality of life and work of older workers whilst maintaining their high employment rate.

Making work more rewarding for older workers and tackling old-age poverty

In Korea, in 2017 just under four in ten individuals aged 65-76 had an income lower than 50% of the national mean – the common threshold used for defining relative income poverty in a population. This was significantly higher than the equivalent share of 12% among OECD countries on average. In large part, this reflects the fact that Korea's public pension system is not yet fully mature. More broadly, however, it points towards the need for social protection measures to provide increased support for older people.

More could be done to broaden the coverage and increase the value of benefits under Korea's social assistance scheme, the Basic Livelihood Security Programme (BLSP), while at the same time keeping the focus on the elderly with the lowest incomes. Particularly, *Working Better with Age* stresses that the benefit level itself remains low by OECD standards and eligibility conditions – i.e., the very strict family support obligation whereby people whose close relatives (children, siblings and parents) would in principle be in a position to provide financial support – disproportionately affect older persons. In an effort to reinforce the support provided by the income security net to the elderly, the government is planning to start to gradually relax the family support obligation in 2020.

Building an employment-friendly and cost-effective pension system is a key requirement for ensuring those entering retirement have an adequate standard of living while those who still want to work may be rewarded in doing so. Korea's Basic Pension could be better targeted and the payment value increased in order to provide a more solid safety net. This is all the more important as retirement benefits paid under Korea's National Pension have been significantly reduced to ensure the measure's financial sustainability.

According to *Working Better with Age* (OECD, 2018[48]), measures could also be taken to extend both institutional and effective coverage of the National Pension. For many non-regular workers, employers are still not fulfilling the obligation to document their workers formally and pay into the measure. Moreover, employers are required to insure employees only up until the age of 60, although the pensionable age varies from 61 to 65 (and will be 65 for all workers from 2033 onwards). Past age 60, employees can decide themselves whether they want to continue paying into the National Pension. Those deciding to do are effectively obliged to double their contributions to the measure in order to compensate for the absence of employers' contributions, which puts off many low-wage earners. Many older workers thus work for a decade or more without extending their pension rights. Further measures could also be taken to foster the implementation of retirement pension plans, notably among small and medium-sized enterprises (SMEs).

Addressing wage rigidities and mandatory early retirement

Human resource management practices in Korea rely predominantly on a seniority-based approach to setting wages and granting promotions. This creates a gap between wage and productivity that nurtures, in turn, a culture of forced early retirement before age 60 through "honorary retirement". Coupled with insufficient investment in skills development, such practices also largely explain the precarious employment situation of older workers. However, this system does provide workers with the guarantee that they will receive relatively high earnings at a time when they will have to pay for the education of their children, provide financial support to their parents, and make pension contributions for their own retirement. High education costs coupled with weak social protection currently result in strong support among workers and trade unions for maintaining the status quo.

Various measures have been taken recently to prevent employers from setting mandatory retirement at ages lower than 60 years with a view to encouraging employers to re-employ people between the ages of 50 and 60 who are looking for work, also known as the *new middle-aged*. While this is a big step forward, *Working Better with Age* (OECD, 2018[48]) stresses that more could be done to address problems. In the short run, it recommends the introduction of a wage-peak system whereby the employer commits to maintaining older workers in their jobs in exchange for a wage cut that is partly compensated by government subsidies granted to the employee. To foster the take-up of such systems, these subsidies could be higher for low-wage earners. The redistributive effect of wage-peak systems needs to be evaluated; fine-tuning measures may be necessary to ensure vulnerable workers can benefit from the system.

The roots of the problem may also include a lack of awareness among key stakeholders regarding the market wage that could be applied for a given job that requires certain specific and/or general skills. In this respect, the progressive revamping of the National Qualifications System, based on the National Competency Standards, could provide an effective tool for recognising and validating the skills workers have acquired throughout their careers.

Strengthening public employment services and active labour markets

The Public Employment Service (PES) provides a range of outplacement services and training opportunities to older workers. It mainly focuses on facilitating the matching between jobseekers and job vacancies, with less attention paid to monitoring job-search activities. As in many OECD countries, this matching function relies increasingly on online services, with public portals offering integrated employment services (Work-Net) and guidance for skill development (HRD-Net).

In addition, specialised employment services are offered for vulnerable individuals aged 40 and over. These Job Hope Centres for middle-aged and elderly people provide a wide range of re-employment services tailored to individual needs. Going beyond the matching function, counselling and guidance services are provided to older workers who need (re)training before starting their job search, and often lack the basic ICT skills needed to use online services. In addition, subsidies and counselling services are made available to firms providing outplacement services to their pre-retired employees.

Working Better with Age (OECD, 2018[48]) advocates for steps to reduce spending on direct job-creation programmes in favour of expanding the Employment Success Package Programme (ESPP), which is tailored to individual needs and targets vulnerable groups. Alongside an expansion of ESPP, the income support provided to those ESPP recipients who are not eligible for unemployment or social assistance payments should be increased. Likewise, steps should be taken to strengthen early intervention measures provided to mid-career and older workers by *Job Hope Centres* in order to help them prepare for their second careers after mandatory early retirement. In particular, these measures could include a comprehensive assessment of skills and work experience plus additional training sessions when necessary and, most importantly, a formal recognition and validation of acquired skills and competencies.

Tackling working conditions

While the new actions to reduce maximum weekly working hours to 52 hours are an important step forward, the government should assess their implementation closely to ensure the expected outcomes are achieved, also in SMEs. Reducing working hours of older workers is challenging since, in practice, older people need to work long hours to make ends meet before their retirement. Adequate income support is therefore critical. Employers would also need to be provided with guidance and consulting services.

Beginning in 2016, the Korean government introduced a new allowance system for older workers aged 50 or above, which subsidises 50% of their reduced income if they work 32 hours or less per week. This allowance could be a significant channel to promote the reduction of working hours and to retain older workers longer in their main job. It may also provide more time for older workers to participate in further training to enhance their productivity. In addition, the government should introduce a system to provide older workers with the right to request a reduction in working hours for health reasons if necessary.

In order to reduce occupational accidents and improve the health of older workers, *Working Better with Age* (OECD, 2018[48]) recommends ensuring that older workers are aware of the risk factors they face in their job and know how to deal with or avoid those risks. Employers should take into account the physical and mental health conditions of their older employees to ensure the overall work environment, including machinery, working tools, work methods, support from co-workers and supervisors, and working hours, is well adapted to their health conditions.

Immigrant workers

The combined effect of shrinking youth cohorts and higher educational attainment since the early 2000s has led to a sharp decline in the number of less-than tertiary educated young people, from about 4 million people aged 25-34 in 2000 to 1.4 million in 2015, and this number is expected to shrink below 1 million by 2025. The less-educated workforce also counts many older workers and overall is rapidly aging. At the same time, Korea still has a large number of jobs requiring little education and low skills. The service sector has grown substantially and now accounts for 70% of employment. The agricultural sector has a small share of employment, but the jobs are generally low skilled. In the manufacturing and the construction sector, which accounts for 17% and 8% of employment respectively, many of the jobs are still low-skilled. Accordingly, vacancies for many low skilled jobs have become difficult to fill.

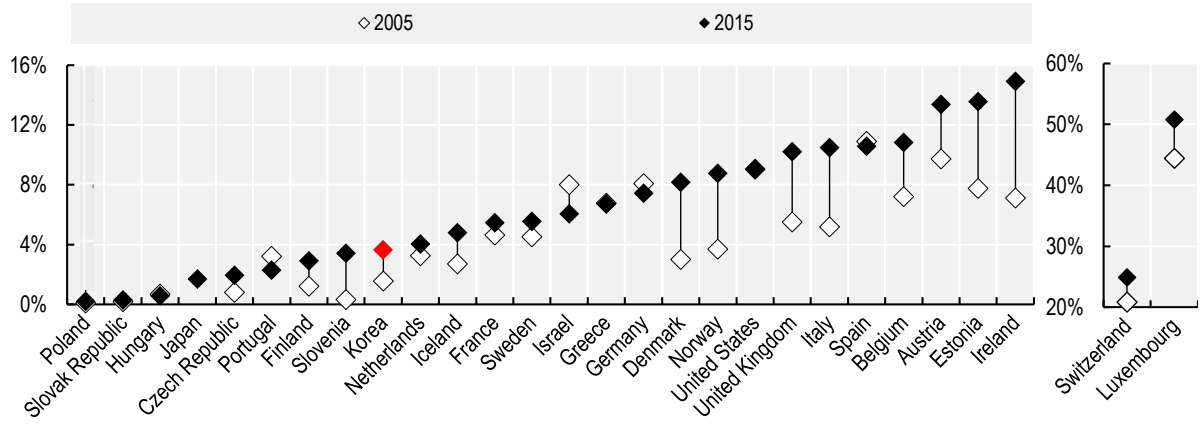
Although the share of immigrants in Korea's employment has more than doubled over the past decade, mostly driven by the development of one of the largest temporary labour migration schemes in the OECD,

at 3.6% in 2015 (Figure 2.20) it is still low by international comparison. About 60% of foreigners in Korea today have come through a Working Visit programme for ethnic Korean Chinese, or as temporary labour migrants under a specific scheme, the Employment Permit Scheme (EPS). This programme uses a government-to-government approach with all phases of employment – from the selection of candidates, to returning to the country of origin – defined through bilateral agreements, which assign workers to employers in a fixed number of sectors using quotas that are set annually. Since the EPS was launched, Korea has signed bilateral agreements with 16 countries of origin.

Together these programmes primarily contribute to alleviating the demand for low qualified foreign workers in SMEs, especially in the manufacturing sector, where foreign workers comprise 10% of employment, up from less than 2% a decade earlier. About one in ten employers with five or more employees rely on filling at least some vacancies with foreign workers.

Figure 2.20. The share of foreigners in employment has increased sharply over the decade

Share of foreign in total employment, 2005 and 2015 or latest year



Source: (OECD, 2019[61]), *Recruiting Immigrant Workers: Korea*, OECD Publishing, Paris, https://doi.org/10.1787/9789264307872-en.

According to a recently published OECD report on *Recruiting Immigrant Workers: Korea* (OECD, 2019[61]), the existing framework for labour migration has been successful in providing substantial labour inputs to the labour market in several sectors of the Korean economy. However, these effects have been essentially confined to low-skilled workers, which form a very specific segment of the work population. Likewise, there is room for further improvements to the existing approach, particularly with a view to ensuring that labour immigrants can access better quality jobs and that their competency profiles become more responsive to changing skills needs.

Reinforcing options to access better quality jobs

The report notes that EPS, which admits about 60 000 workers annually under a quota set by the government, strikes a balance between the employer and the worker. It contains a number of protections to prevent negative effects on local workers and to safeguard the rights of foreign workers. While the labour market test of vacancies is relatively light compared to other OECD countries there is little local competition for these jobs. The bilateral agreements with partner countries and several steps of selection limit the possibility for rent-taking, which plagues such programmes in many other countries. Employers are assigned workers according to how they perform on a points scale considering efforts to recruit locally as well as compliance with programme rules (Table 2.5). Since the introduction of the system, there have been improvements in the attribution of points to give incentive to improve working conditions. For example,

bonus points were introduced to acknowledge quality housing. Reflecting the efforts to reduce working hours since 2018, two bonus points were introduced for firms reducing working hours in anticipation of the official enforcement – from 2020 for firms with 50-299 employees. Penalties for mistreatment, especially sexual violence were weighted to -5 in 2014 and doubled to -10 in 2019.

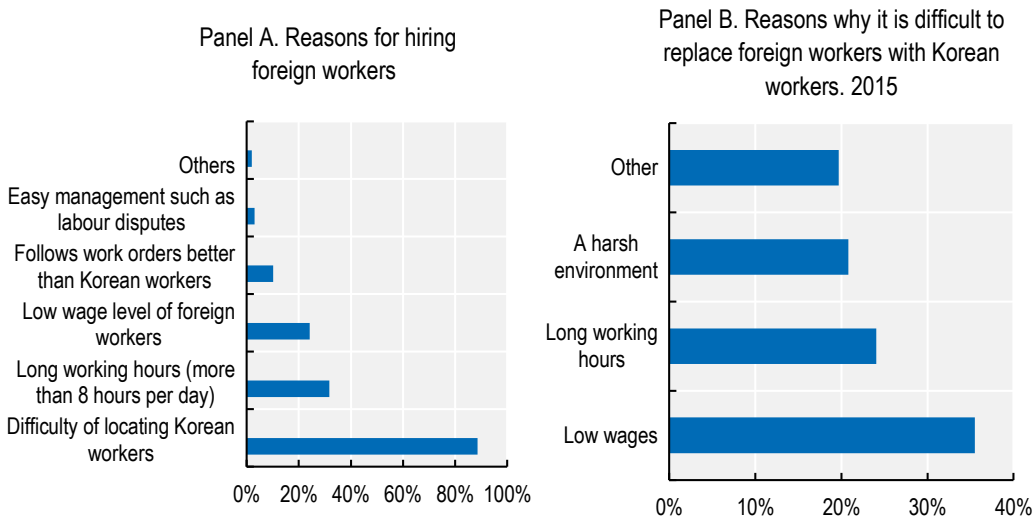
Table 2.5. The points system for attributing EPS workers to employers in manufacturing, April 2019

	Items included	Points
Basic Items (100 points total)	• The lower the ratio of foreign workers employed to the number permitted is	22.4-30
	• The higher the ratio of foreign workers whose re-employment contracts have expired to the total number of foreign employees (during last 6 months) is	22.4-30
	• The lower the number of new foreign workers requested is	19-20
	• The more the number of people (natives) hired from employment centres during the labour market test	14-20
Bonus Points	• Full enrolment/payment of return cost insurance and accident insurance of all foreign employees	1
	• Establishment and operation of quality dormitories	5
	• Employers' completion of training for EPS workers	1
	• Establishment with Korea Occupational Safety and Health Agency certificate	1
	• Working hours reduction prior to the statutory implementation	2
Penalties	• Delayed payment of wages/severance pay, wage less than minimum wage in the inspection results of the previous year	-0.2 to 0.5
	• Other violations of any law	-0.1 to -0.3
	• Delayed payment for departure guarantee insurance more than twice	-5 Max. (-0.5 to -2 per worker)
	• EPS workers have left due to: (any of the following)	
	○ Sexual violence	-10
	○ Verbal / physical abuse, sexual harassment	-5
	○ Violation of working conditions	-3
	• Death of a foreign worker in the previous two years	-2

Source: Ministry of Employment and Labour.

However, foreign workers remain attractive to employers mainly recruiting for low quality jobs where Korean workers have high turnover. According to a survey conducted among employers, the first reason why they hire foreign workers is that they are unable to recruit Korean workers, followed by the availability to work long hours and to accept low wages (Figure 2.21). When it comes to reasons why firms have difficulty replacing foreign workers with Korean workers, wages are again cited along with long working hours and a harsh working environment. In this setting, *Recruiting Immigrant Workers* (OECD, 2019[61]) recommends that continued efforts be made to provide foreign workers to those employers who strive to improve working conditions and recruit more local workers.

Figure 2.21. Employers of foreign workers report difficulty finding Korean workers



Source: KOSBI survey cited in (Noh, 2015[62]), "A Study on Improving Work Permit System (외국인 근로자 활용현황 및 개선방안 연구)", Basic Studies (기본연구), No. 15-08, Korea Small Business Institute, Seoul.

The OECD report also points to the limited wage growth of EPS workers during their stay in Korea and notes that mobility restrictions may make it difficult for workers who have or who develop higher skill levels to bargain for higher wages. The initial programme requirements of language ability – more than 1.7 million candidates have taken the Korean language exam since it was first offered – have expanded. Changes in the programme to select for and prioritise higher-skill workers, and to extend their stay to up to 10 years for higher productivity workers, may turn the programme into more than just an unskilled labour migration scheme.

Strengthening the attractiveness of Korea to qualified foreigners

Despite policy efforts to attract and retain highly qualified foreigners and international talent, Korea has very low flows of highly qualified migrants. Korea has many overlapping visa categories and skilled or highly qualified immigrants in Korea can cycle through many statuses during their stay. A points-based system for accelerated access to permanent residence favours education, but is only open to applicants who are already resident, and has not been evaluated to adjust the weights. *Recruiting Immigrant Workers* (OECD, 2019[61]) recommends to open the Point-Based System to all candidates and monitor it more closely. More broadly, the report recommends reviewing the current visa system to improve clarity and distinguish between occupations which should be labour market tested and those which should be granted more favourable access and residence conditions.

Korea has tripled its share of the international study market in the past decade. Yet only 15% of graduating international students stay on in Korea according to *Recruiting Immigrant Workers*, which is low compared to other countries such as France and Canada where more than three out of ten international students stay after graduation. Many of those students are on a job-search permit which is generous by international comparison, but the challenging job market for international graduates means few find work. This limits the potential of the international study channel to play the role of providing talent which it plays in other countries, even if enrolment is rising.

References

Acemoglu, D. and P. Restrepo (2017), "Secular Stagnation? The Effect of Aging on Economic Growth in the Age of Automation", *American Economic Review*, Vol. 107/5, pp. 174-179, http://dx.doi.org/10.1257/aer.p20171101. [8]

Act on the restriction of special taxation (2019), *Korean Ministry National Law Information Centre*, http://law.go.kr/. [53]

Ahn, J. (2006), *Nonstandard Work in Japan and Korea - The origin of Wage Differentials*, Korea Labor Institute, Seoul. [16]

Autor, D., L. Katz and M. Kearney (2006), "The Polarization of the U.S. Labor Market", *American Economic Review*, Vol. 96/2, pp. 189-194, http://dx.doi.org/10.1257/000282806777212620. [40]

Ban, G. et al. (2018), *Why Korean companies don't invest in human resource development? (한국의 기업은 왜 교육훈련에 투자하지 않는가?)*, Korea Research Institute for Vocational Education and Training, Sejong. [20]

Breemersch, K., J. Damijan and J. Konings (2017), "Labour Market Polarization in Advanced Countries: Impact of Global Value Chains, Technology, Import Competition from China and Labour Market Institutions", *OECD Social, Employment and Migration Working Papers*, No. 197, OECD Publishing, Paris, http://dx.doi.org/10.1787/06804863-en. [45]

Broad Institute (2018), *Questions and Answers about CRISPR*, Broad Institute, https://www.broadinstitute.org/what-broad/areas-focus/project-spotlight/questions-and-answers-about-crispr (accessed on 13 August 2018). [6]

Carcillo, S. et al. (2019), "Assessing recent reforms and policy directions in France", *OECD Social, Employment and Migration Working Papers* No. 227, https://doi.org/10.1787/657a0b54-en. [29]

Choi, K. (2018), *Impact of Minimum Wage Increase on Employment (최저임금 인상이 고용에 미치는 영향)*, Korea Development Institute, https://www.kdi.re.kr/research/subjects_view.jsp?pub_no=15710. [34]

Cournède, B. et al. (2016), "Enhancing Economic Flexibility: What Is in It for Workers?", *OECD Economic Policy Papers*, No. 19, OECD Publishing, Paris, https://dx.doi.org/10.1787/b8558a5b-en. [27]

Durazzi, N., T. Fleckenstein and S. Lee (2018), "Social Solidarity for All? Trade Union Strategies, Labor Market Dualization, and the Welfare State in Italy and South Korea", *Politics & Society*, Vol. 46/2, pp. 205-233, http://dx.doi.org/10.1177/0032329218773712. [39]

Fleckenstein, T. and S. Lee (2018), "Organised Labour, Dualisation and Labour Market Reform: Korean Trade Union Strategies in Economic and Social Crisis", *Journal of Contemporary Asia*, pp. 1-21, http://dx.doi.org/10.1080/00472336.2018.1536762. [38]

Goos, M. and A. Manning (2007), *Lousy and lovely jobs: the rising polarization of work in Britain*, https://www.mitpressjournals.org/doi/pdf/10.1162/rest.89.1.118 (accessed on 21 September 2018). [41]

Goos, M., A. Manning and A. Salomons (2009), "Job Polarization in Europe", *American Economic Review*, Vol. 99/2, pp. 58-63, http://dx.doi.org/10.1257/aer.99.2.58. [42]

Hong, M. (2018), "Employment effects of the minimum wage increase in 2018 (2018년 최저임금 인상의 고용 효과)", *Korea Labor Institute - Labor Review*, Vol. 158, pp. 43-56, https://www.kli.re.kr/kli/downloadPodFile.do?pdicalOrginlDwldNo=4009. [35]

ILO (2018), *Statistical definition and measurement of dependent "self-employed" workers*, https://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/meetingdocument/wcms_636042.pdf. [37]

Jang, S. and N. Kim (2004), "Transition from high school to higher education and work in Korea, from the competency-based education perspective", *International Journal of Educational Development*, Vol. 24/6, pp. 691-703, http://dx.doi.org/10.1016/J.IJEDUDEV.2004.04.002. [60]

Jones, R and Fukawa, K (2016), "Labour market reforms in Korea to promote inclusive growth", *OECD Economics Department Working Papers* 1325, https://doi.org/10.1787/5jlr3cvdf35k-en. [19]

Keum, J. (2018), *Analysis on Major Changes in the Labor Market since the Financial Crisis using KLIPS (한국노동패널을 통해 본 외환위기 이후 노동시장의 주요 변화)*, https://www.kli.re.kr/klips/selectCnfrncWebView.do?key=155&cnfrncNo=28. [14]

Kim, B. (2006), *Wage differentials by employment type of workers (근로자의 고용형태별 임금격차)*, Korea Labor Institute, pp. 64-74, https://www.kli.re.kr/kli/downloadPodFile.do?pdicalOrginlDwldNo=165. [18]

Koh, Y. (2018), *The Evolution of Wage Inequality in Korea*, Korea Development Institute, Sejong, https://doi.org/10.22740/kdi.ps.e.2018.01. [15]

Korea Development Institute (2010), *The Korean Economy: Six Decades of Growth and Development*, Korea Development Institute, Sejong, https://www.kdi.re.kr/kdi_eng/publications/publication_view.jsp?pub_no=11571. [12]

Korean Ministry of Gender Equality and Family (2019), *Women's Re-employment Centre (여성새로일하기센터)*, https://saeil.mogef.go.kr/hom/info/info.do. [52]

Lee, C. (2015), *Wage Structure Reform and Labour Market Flexibility: The Case of South Korea*, Center for Wage and Job Research, Korea Labour Institute, Sejong, http://www.ilera2015.com/dynamic/full/IL131.pdf. [26]

Lee, S. (2012), *Report on non-regular worker discrimination correction system (차별시정제도 운영실태 및 개선방안(비정규직 워킹페이퍼시리즈 2012-03)*, Korea Labour Institute, Seoul. [65]

Melville, J., J. Kaiser and E. Brown (2017), *Silicon Valley Competitiveness and Innovation Project-2017 Report*, Silicon Valley Leadership Group; Silicon Valley Community Foundation, http://www.coecon.com (accessed on 2 August 2018). [9]

Ministry of Employment and Labour (2019), *Explanation of revised Minimum Wage Act (개정 최저임금법령 설명자료)*, https://www.moel.go.kr/common/downloadFile.do?file_seq=20190201288&bbs_seq=20190200711&bbs_id=LOCAL5. [32]

Ministry of Employment and Labour (2018), *2019 Job Stability Fund plan (2019년도 일자리 안정자금 바로 알기)*, http://jobfunds.or.kr/bbs/board.php?bo_table=notice&wr_id=47. [33]

Ministry of Employment and Labour (2018), *Major revision of the Minimum Wage Act (최저임금법 개정 주요내용)*, http://moel.go.kr/common/downloadFile.do?file_seq=20180700171&bbs_seq=20180700071&bbs_id=LOCAL1. [31]

Ministry of Employment and Labour (2017), *Study on the improvement of administrative capacity on labour supervision and discrimination inspection of non-regular workers (비정규직 근로감독 및 차별시정 업무의 행정역량 제고 방안)*, http://www.prism.go.kr/. [21]

Nedelkoska, L. and G. Quintini (2018), "Automation, skills use and training", *OECD Social, Employment and Migration Working Papers*, No. 202, OECD Publishing, Paris, http://dx.doi.org/10.1787/2e2f4eea-en. [2]

Noh, M. (2015), "A Study on Improving Work Permit System (외국인 근로자 활용현황 및 개선방안 연구)", *Basic Studies (기본연구)*, No. 15-08, Korea Small Business Institute, Seoul. [62]

OECD (2020), *OECD Economic Surveys: Korea 2020*, OECD Publishing, Paris, https://dx.doi.org/10.1787/2dde9480-en. [49]

OECD (2020), "Why adult learning is important for Korean SMEs?", in *Enhancing Training Opportunities in SMEs in Korea*, OECD Publishing, Paris, https://dx.doi.org/10.1787/e08bd56c-en. [47]

OECD (2019), *Economic Policy Reforms 2019: Going for Growth*, OECD Publishing, Paris, https://doi.org/10.1787/aec5b059-en. [63]

OECD (2019), *Employment Outlook 2019 - The Future of Work*, OECD Publishing, Paris, https://doi.org/10.1787/9ee00155-en. [1]

OECD (2019), *Investing in Youth: Korea*, OECD Publishing, Paris, https://doi.org/10.1787/4bf4a6d2-en. [56]

OECD (2019), *OECD Economic Outlook, Volume 2019 Issue 1*, OECD Publishing, Paris, https://dx.doi.org/10.1787/b2e897b0-en. [64]

OECD (2019), *Part-time and Partly Equal: Gender and Work in the Netherlands*, OECD Publishing, Paris, https://dx.doi.org/10.1787/204235cf-en. [54]

OECD (2019), *Policy Responses to New Forms of Work*, OECD Publishing, Paris, https://doi.org/10.1787/0763f1b7-en. [22]

OECD (2019), *Recruiting Immigrant Workers: Korea 2019*, Recruiting Immigrant Workers, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264307872-en. [61]

OECD (2019), *Rejuvenating Korea: Policies for a Changing Society*, OECD Publishing, Paris, https://doi.org/10.1787/c5eed747-en. [50]

OECD (2019), "The future of work: What do we know?", in *OECD Employment Outlook 2019: The Future of Work*, OECD Publishing, Paris, https://dx.doi.org/10.1787/ef00d169-en. [44]

OECD (2019), "Youth employment and education in Korea", in *Investing in Youth: Korea*, OECD Publishing, Paris, https://dx.doi.org/10.1787/63797b4a-en. [58]

OECD (2018), *Connecting People with Jobs: Towards Better Social and Employment Security in Korea*, OECD publishing, Paris, https://doi.org/10.1787/9789264288256-en. [30]

OECD (2018), *Good Jobs for All in a Changing World of Work: The OECD Jobs Strategy*, OECD Publishing, Paris, https://doi.org/10.1787/9789264308817-en. [28]

OECD (2018), *International Migration Outlook 2018*, OECD Publishing, Paris, https://dx.doi.org/10.1787/migr_outlook-2018-en. [10]

OECD (2018), *OECD Economics Surveys: Korea 2018*, OECD publishing, Paris, https://doi.org/10.1787/eco_surveys-kor-2018-en. [23]

OECD (2018), *Working Better with Age: Korea*, OECD Publishing, Paris, https://doi.org/10.1787/9789264208261-en. [48]

OECD (2017), *Do students spend enough time studying?*, OECD Publishing, Paris, https://doi.org/10.1787/22260919. [55]

OECD (2017), *International Migration Outlook 2017*, OECD Publishing, Paris, https://dx.doi.org/10.1787/migr_outlook-2017-en. [11]

OECD (2017), *OECD Employment Outlook 2017*, OECD Publishing, Paris, https://dx.doi.org/10.1787/empl_outlook-2017-en. [43]

OECD (2016), *Economic Surveys: Korea 2016*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-kor-2016-en. [24]

OECD (2015), *Recent labour market developments with a focus on minimum wages*, OECD Publishing, Paris, http://dx.doi.org/10.1787/empl_outlook-2015-5-en. [36]

OECD (2014), *Survey of Adult Skills Technical Report*, https://www.oecd.org/skills/piaac/_Technical%20Report_17OCT13.pdf (accessed on 8 January 2020). [3]

OECD (2013), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing, Paris, https://doi.org/10.1787/9789264204256-en. [46]

OECD (2013), *Strengthening Social Cohesion in Korea*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264188945-en. [25]

OECD (2013), *The Survey of Adult Skills: Reader's Companion*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264204027-en. [4]

Park, D. (2010), *The Demand for Vocational High School Graduates and Strategies to Improve Educational Capacity*, Korea Research Institute for Vocational Education and Training, Seoul. [59]

Salazar-Xirinachs, J. (ed.) (2014), *Skills Development Strategies and the High Road to Development in the Republic of Korea*, International Labour Office, Geneva. [57]

Sanders, R. (2016), "Genetic switch could be key to increased health and lifespan", *Berkeley News*, http://news.berkeley.edu/2016/05/03/genetic-switch-could-be-key-to-increased-health-and-lifespan/ (accessed on 13 August 2018). [7]

Shin, S. (2009), "Analysis on the Variation of the Wage Discrimination Effect of Non-regular Workers in the Korean Labor Market (한국 노동시장에서 비정규직 임금차별 영향 변동추이)", *Korean Soceity*, Vol. 10/2, pp. 93-123, https://www.kli.re.kr/klips/downloadCnfrncSjIemFile.do?iemNo=259. [17]

Statistics Korea (2019), *Index.go.kr*, http://www.index.go.kr/potal/main/EachDtlPageDetail.do?idx_cd=1504 (accessed on 16 December 2017). [51]

United Nations (2015), *World Population Prospects: The 2015 Revision, Key Findings and Advance Tables*, https://population.un.org/wpp/Publications/Files/Key_Findings_WPP_2015.pdf. [5]

Yoo, G. (2009), *Study on Non-regular Workers*, Korea Development Institute, Sejong. [13]

Notes

[1]. Recent OECD analysis has identified three mega-trends: technological progress, demographic change and globalisation (OECD, 2019[63]). With Korea being already a major player in the world market, both as exporter and importer, out of the three acting forces the focus of the chapter will be on technological change and demographic developments, which can be expected to play a particularly important role in shaping Korea's future labour markets.

[2].While this might sound like a very significant rise, it is important to bear in mind that the diffusion of other transformational technologies in the past may may have been even faster.

[3].However, this process will not necessarily be automatic, and policy makers should carefully monitor the possible emergence of barriers and market failures that might hinder such positive developments.

[4].In countries with a young and growing workforce, the opposite is likely to happen as the middle class expands and rapid urbanisation takes place. The challenge in this case will be to harness the full potential of this demographic dividend, ensuring that youth have the skills and opportunities for gainful employment, with positive implications for economic growth.

[5].This definition of temporary workers differs significantly from the internationally harmonised definition used by the OECD. The second and third types of temporary employment shown in Table 2.1 are not included in the international definition, whereas several of the categories of atypical workers shown in the table are included (daily, on-call and dispatched workers). Note that daily workers may have contracts somewhat longer than a single day, while dispatched workers typically would be called temporary agency workers in most other OECD countries.

[6].By providing additional protection for workers on fixed-term contracts these reforms, together with related reforms for dispatched and part-time workers, may have reduced the incidence of non-regular work, as measured in the EAPS by inducing employers to replace some of these workers *via* expanded use of in-house outsourced worker (Lee, 2012[65]). This latter type of employment may not show up as non-regular employment in Table 2.1, but raises many of the same issues about low job quality and limited career prospects.

[7].Although individual learning schemes fall under the umbrella of the broad denomination of "individual learning accounts (ILAs)", many of these schemes do not formally establish the accumulation of rights over time and therefore function more properly as voucher programmes. Examples of voucher schemes include the Opleidingscheques in Flanders (Belgium), the Bildungsprämie in Germany, the Cheque formação in Portugal, the Individual Training Accounts in Scotland, the Chèque annuel de formation in Geneva Canton

(Switzerland), and the Individual Training Accounts in the United States, Bildungskonto in Upper Austria (OECD, 2019[64]).

[8].*Hakwons* define themselves as private academic-focused institutions, where children age three-year-olds through to the end of secondary school age, learn particular skills, often in mathematics, languages, gymnastics and arts. Students often attend *Hakwon* after attending a half-day kindergarten or school programme. Usually, these private institutions have no official status in the statistics or system of education and do not receive financial support from the government.

[9]. In order to enhance the attractiveness and status of vocational education among young Koreans, a new group of vocational high schools, called Meister schools, was established in 2010. Meister schools are modelled after the German approach, with emphasis on learning a specific trade or craft that is in demand in the labour market rather than preparing for further academic progression.

3 The future of doing business

To keep up with its outstanding past economic performance while promoting more inclusive growth, Korea should address key challenges to its business environment, namely unbalanced growth across sectors and firm size, unequal distribution of productivity gains across population groups and slowdown in globalisation. Based on new internationally comparable OECD data on productivity, business dynamism and global value chains, this chapter presents a set of product market, industry, innovation, trade and investment policies that can lead to a virtuous circle between growth and inclusiveness, complementing and supporting the labour market reforms discussed in Chapter 2. Five key policy insights are discussed in detail: i) rebalancing productivity growth towards services; ii) creating a better environment for SMEs to work with large firms; iii) unleashing the growth of SMEs; iv) assessing, evaluating and streamlining SME support programmes; and v) designing a more inclusive global value chain strategy.

Summary and key policy insights

Korea has achieved remarkable growth in the past, closing the per capita GDP gap with G7 economies. Thanks to its innovative economy, strong institutions and capacity to engage in reforms, Korea has shown resilience during economic downturns and an ability to swiftly recover after the 1997 Asian crisis and the 2008 global financial crisis. The country can build on this ability to navigate difficult times and grow to deal with the challenges of the digital revolution and the slowdown in globalisation, while ensuring that productivity gains are shared by all.

In order to keep up with its outstanding past economic performance while promoting a more inclusive growth, Korea should address the key challenges to its business environment that are also found in other OECD economies, such as unbalanced growth across sectors and firm size, the unequal distribution of productivity gains across population groups and an increasingly uncertain international environment. Appropriately tailored reforms can lead to a virtuous circle between growth and inclusiveness.

To look at how Korea can reconcile growth and inclusiveness, this chapter combines for the first time new OECD data on productivity, business dynamism and global value chains (GVCs) that highlight the main issues to be addressed for the future of doing business. It presents a set of product market, industry, innovation, trade and investment policies that can be used to complement and support the labour market reforms discussed in Chapter 2. The analysis relies on internationally comparable evidence from a distributed micro-data approach (MultiProd and DynEmp) with first-time results for Korea and from the latest release of the *OECD Trade in Value-Added (TiVA) database* (see Box 3.1).

With respect to productivity, the chapter highlights the important disparities between firms in Korea, leading to a relatively low aggregate productivity average and large wage inequalities across workers. The two main productivity gaps are between the manufacturing sector and services industries, and between large and small firms. In Korea, labour productivity is 40% lower in service SMEs than in large manufacturing firms, as compared to 20% in other countries. These productivity gaps come with equally important wage gaps. Action can be taken to create a more inclusive economy while promoting productivity growth. This involves a shift towards service activities as well as helping SMEs to work with large firms and grow.

A key factor is the slow diffusion of technology, especially digital, to small firms. For example, less than 7% of Korean SMEs perform big data analysis, versus almost 20% in the OECD on average. Beyond supporting the development and adoption of new technologies, innovation policy can contribute to inclusiveness by ensuring a broad-based diffusion of existing digital technologies among all Korean firms. As digitalisation requires complementary skills, Korea needs to make the most of its human capital, which entails increasing the participation of women in the economy. Higher female participation can help overcome skill shortages and contribute to increase inclusiveness of the digital transformation without impairing productivity growth.

Regarding business dynamism, the chapter finds that Korea is characterised by low survival and scale-up rates amongst the many small start-ups and young firms, despite the large number of schemes supporting SMEs (more than 1 300). In the market services sector, only 2.5% of entrants with less than 10 employees grow, versus 6% in other OECD countries on average. The low rate of scale-ups is partly the consequence of thresholds in policies, which indirectly discourage small firms from growing.

Many support schemes targeting different types of firms and activities have introduced complexity and information costs in the SME business environment. The wealth of options might discourage entrepreneurs from applying for support, while at the same time it may entail rent-seeking by some businesses. To unleash the growth of small firms in a cost-effective way, existing policies should be reviewed to address any size contingency issue and to assess, evaluate and streamline support to SMEs.

The productivity gaps can also be partly explained by the focus of the former export-led growth strategies on key manufacturing industries and targeted support to a small set of IT sectors. Policies intended to help close these gaps might require reconsidering the GVC strategy of Korea, which is also needed in the context of rising protectionism and trade tensions.

Diversifying exports can allow a broader set of firms to benefit from gains from trade and can improve the resilience of the Korean economy to external shocks. To do so, the country needs to improve the connectivity of Korean firms and in particular their ability to access and share data across borders. All firms willing to go global should be supported – and not only firms in specific activities identified by the government. Inclusiveness can be improved by encouraging SMEs to participate in GVCs and through the diversification of exports towards services activities, which are less exposed to trade tensions. The consolidation of the network of free trade agreements to which Korea is a party can also help to mitigate the impact of protectionism and create a more GVC-friendly environment for Korean firms to grow.

To maintain Korea's position in global trade, promote business dynamism and address the productivity gaps – while promoting inclusive growth – this chapter provides **five key policy insights**. Each policy insight is summarised here and discussed in detail in the relevant section, where different policy options are reviewed. The suggested policies should be seen as a full package of reforms to be implemented together, as they are complementary and mutually reinforcing. Sequencing is discussed at the end of the chapter.

- **Encouraging a rebalancing of productivity growth towards services**
  - Create a level playing field between manufacturing and services for tax policy, incentives and support to firms, as announced by the Korean government in July 2019.
  - Introduce product market reforms in lagging service sectors, starting with horizontal measures (i.e. not sector-specific) before moving to sector-specific regulatory reforms.
  - Reduce barriers to international trade and inward foreign direct investment to create more competition and promote international productivity spillovers towards service firms.
- **Creating a better environment for SMEs to work with large firms and be more productive**
  - Prevent large firms from capturing the productivity gains of smaller firms through competition policy but also through trade and investment reforms and measures aimed at protecting the intellectual property rights of SMEs; encourage the co-operation between large and small firms and start-ups through incubators, and science and technology parks.
  - Strengthen business-academia ecosystems and support the development of start-ups within universities.
  - Address the skill mismatch of SMEs and facilitate the adoption of technologies that can lift up their productivity, reinforcing not only support aimed at hardware, software and use of technology, but also skills development across the whole workforce.
  - Review and assess existing programmes and support aimed at fostering women's entrepreneurship and participation in managerial jobs; encourage the acquisition of STEM skills through the development of gender-neutral learning environments and by addressing stereotypes and discrimination that lead women to feel uneasy in technology-rich environments.
- **Unleashing the growth of SMEs**
  - Address size contingency and transfer of ownership in schemes supporting firms, labour laws, tax policy and in the credit market.
  - Support the scaling up of small firms by redesigning R&D tax credits so that they benefit small (manufacturing) firms and by helping service SMEs to invest in intangible assets and knowledge-based capital.

- Reduce the cost of experimenting and venturing in new activities by promoting competition through regulatory reforms and by strengthening market selection through better insolvency regimes.

- **Assessing, evaluating and streamlining existing SME support programmes**
  - Help start-ups and SMEs navigate a complex and potentially confusing landscape by providing a single "one-stop" shop for SME support.
  - Assess, evaluate and streamline existing programmes by focusing on their rationale and effectiveness and by avoiding duplication and overlap.
  - Provide support to all SMEs rather than cherry-picking specific activities or types of firms, which could lead to misallocating resources and unintentionally creating disincentives for non-targeted firms.
- **Designing a more inclusive GVC strategy**
  - Improve the connectivity of Korean firms in order to give opportunities to different categories of workers to interact with global firms and diversify exports, by both encouraging strategic partnerships between Korean and foreign firms and adjusting cross-border data regulations to facilitate the transfer of information and promote e-commerce.
  - Promote inclusiveness in GVCs by increasing the participation of SMEs through streamlined support but also policies aimed at boosting their productivity (as described under points 2, 3 and 4 above) and by encouraging the rebalancing of GVCs towards service industries.
  - Mitigate the impact of protectionism to maintain Korea's position in GVCs by using mega-regional agreements to lock in trade preferences and make free trade agreements more GVC-friendly, while facilitating the consolidation of value chains and their re-organisation in the new trade environment.

Box 3.1. New evidence based on MultiProd, DynEmp and TiVA

This chapter combines novel evidence from two distributed micro-data projects (*MultiProd* and *DynEmp*) with first-time results for Korea and incorporates findings from the latest release of the *OECD Trade in Value-Added (TiVA) database*.

MultiProd

The *MultiProd* project gathers new evidence on productivity patterns based on firm-level micro-data. It extends productivity analyses beyond aggregate industry performance and focuses on the underlying dynamics and developments within industries. For example, *MultiProd* offers new insights on the evolution of "inequality in corporate performance" (measured by productivity dispersion within industries), and its structural and policy drivers. The *MultiProd database* relies on representative data and is harmonised across countries and over time, thus facilitating international comparisons with a cross-country benchmark and providing policymakers with detailed insights into the relative strengths and weaknesses of the economy in terms of productivity.

The *MultiProd* project relies on collaboration between the OECD and experts from National Statistical Offices within the MultiProd network. The project utilises a distributed micro-data approach that respects the confidentiality of the underlying data sources. See Berlingieri et al. (2017[1]) for a methodological presentation of the *MultiProd* project.

There are two data sources for Korea: the Survey of Manufacturing, which covers establishments in the manufacturing sector with at least 10 workers over the period 1994-2017, and the Survey of Business

Activities, which covers enterprises with at least 50 employees in the entire business sector over the period 2006-17.

The analysis focuses on manufacturing and non-financial market services ("services" for brevity) in order to enhance cross-country comparability, even though *MultiProd* covers most sectors of the economy. Macro-sectors ("sectors" for brevity, i.e. manufacturing and non-financial market services) are defined according to a customised 7-sector aggregation of ISIC Rev.4/NACE Rev.2 industrial classification. Detailed industries ("industries" for brevity) follow the SNA A38 classification. Coke and refined petroleum and real estate are excluded from the analysis. See Desnoyer-James et al. (2019[2]) for details on industry coverage and classification.

When relevant, the analysis compares Korea with a set of reference countries referred to as "Other OECD countries". This benchmark comprises Australia, Austria, Belgium, Canada, Chile, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Japan, the Netherlands, Norway, Portugal and Switzerland. Figures do not include benchmark statistics after 2012 due to limited data availability.

The size thresholds for inclusion in the surveys imply that the analysis of the manufacturing sector relies on the population of manufacturing establishments with at least ten workers ("10+"), while the analysis of the market services sector relies on the population of market service providers with at least 50 employees ("50+"), for both Korea and the set of reference countries. In some instances, the analysis of the service sector also shows the statistics for the population of firms with at least 10 workers for the benchmark countries.

DynEmp

The *DynEmp* project provides a comprehensive overview of employment and business dynamics across countries over the last two decades. The main contribution of the project is the creation of a harmonised micro-aggregated database with which business and employment dynamics can be analysed across countries in a comparable way. The data are based on administrative records with quasi-universal coverage (such as business registers or social security records). Assessing employment and business dynamics in comparison to those of an appropriately defined benchmark group of countries can further inform and orient policy intervention.

The *DynEmp* projects relies on collaboration between the OECD and experts from National Statistical Offices and other institutions within the DynEmp network. The project utilises a distributed micro-data approach that respects the confidentiality of the underlying data sources. See Criscuolo, Gal and Menon (2015[3]) for a methodological presentation of the *DynEmp* project.

The *DynEmp* database generally covers most sectors of the economy, but in order to enhance cross-country comparability the analysis focuses on manufacturing and non-financial market services (or "services" for brevity). The data source for Korea is the Statistical Business Register. See (Desnoyers-James, Calligaris and Calvino, 2019[2]) for more details on the metadata across countries.

Unless indicated otherwise, all presented numbers rely on averages for the period for which data are available; for Korea, this is 2010-15. To allow an evaluation of Korea's performance relative to that of other countries, the Korean results on employment and business dynamics are compared to a "benchmark" group of countries for which DynEmp data are available: Austria, Belgium, Brazil, Canada, Costa Rica, Finland, France, Hungary, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden and Turkey. Owing to methodological differences, figures may deviate from officially published national statistics.

TiVA

The *OECD Trade in Value-Added (TiVA) database* is a set of indicators designed to better inform policy makers by providing a value-added decomposition of international trade flows. The goods and services

we buy are composed of inputs from various countries around the world. However, the flows of goods and services within these global production chains are not always reflected in conventional measures of international trade. The development of *TiVA* addresses this issue by considering the value added by each country in the production of goods and services that are consumed worldwide. The data presented in the *TiVA* database can provide insights into the domestic and foreign content of gross exports, on the participation in GVCs via intermediate inputs embodied in exports (backward linkages) or domestic value-added embodied in partners' exports (forward linkages) or on the country and industry of origin of value-added in final demand.

The latest release of *TiVA* (2018 edition) covers 64 economies, including all OECD, EU28 and G20 countries, most East and Southeast Asian economies and a selection of South American countries. 36 unique industrial sectors are represented. This edition covers the period 2005 to 2015, with preliminary projections to 2016 for some indicators. The underlying Inter-Country Input-Output (ICIO) tables are based on statistics compiled according to the 2008 System of National Accounts (SNA 2008) from national, regional and international sources and uses an industry list based on the International Standard Industrial Classification (ISIC) Revision 4. For more information on *TiVA* see: http://oe.cd/tiva.

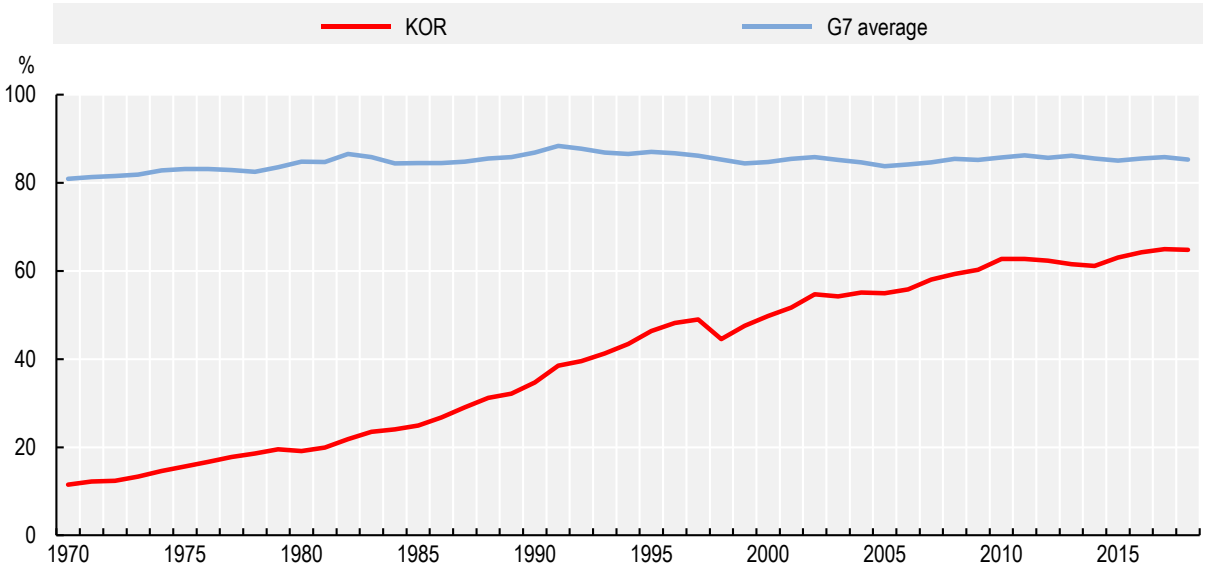
Reconciling growth and inclusiveness in Korea: main challenges

The strong growth of Korea from the 1960s to the 1990s has been described as a miracle.[1] Through an export-led growth strategy, Korea achieved a remarkable macroeconomic transition from an agricultural economy to a major industrial hub and became an OECD Member. Per capita GDP increased from 10% of the United States level in 1970 to 65% in 2018, rapidly closing the gap with the average of G7 economies (Figure 3.1). The growth miracle was characterised by a low degree of income inequality and the alleviation of absolute poverty. Korea also successfully integrated into GVCs and became the world's sixth largest exporter.

Since the 1997-98 crisis, the pace of income gains has been slowing down. Despite the convergence observed, aggregate labour productivity is low by OECD standards. In 2017, GDP per hour worked in Korea was 37% of the productivity level of the United States, below the OECD average of 55% (see Figure 1.5 in Chapter 1). But aggregate productivity hides important disparities across sectors and across firms. In some industries, Korea has some of the most productive global companies. If similar productivity levels are reached by a wider set of firms, Korea could not only create a more inclusive society but also further increase its aggregate productivity and resume its income convergence with G7 economies.

Figure 3.1. High growth rates in the past led to fast income convergence

GDP per capita relative to US level, 1970-2018



Source: *OECD Productivity Statistics database*, https://doi.org/10.1787/pdtvy-data-en.

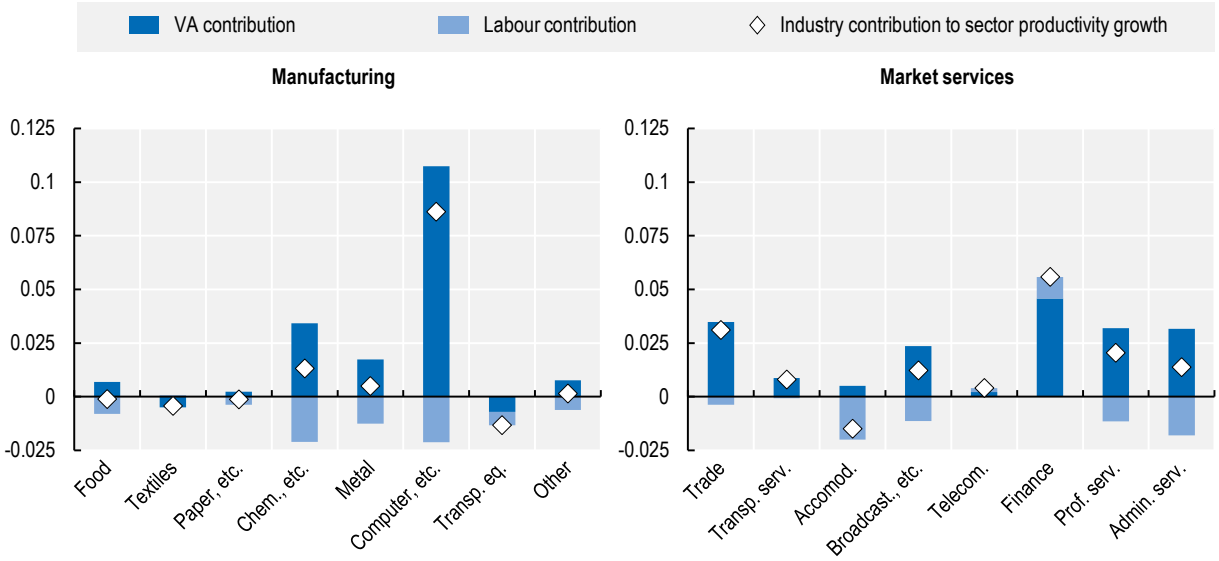
Imbalances in the Korean business environment

Korea's export-led development relied on light industries in the 1960s (such as textiles), heavy industries and chemicals in the 1970s and 1980s (such as shipbuilding), and motor vehicles and information and communication technology in the 1990s and 2000s. Today, the semiconductor industry plays a significant role in the Korean economy, accounting for more than 17% of total exports in 2017.

A few industries contributed to most of aggregate productivity growth in the recent period (Figure 3.2). In manufacturing, the lion's share of productivity growth between 2012 and 2017 was driven by the computer, electrical and machinery equipment industries (which include semiconductors). In services, the finance industry contributed the most to productivity growth.

Figure 3.2. Productivity growth is unbalanced across sectors

Breakdown of industry contribution to macro-sector productivity growth, 2012-2017

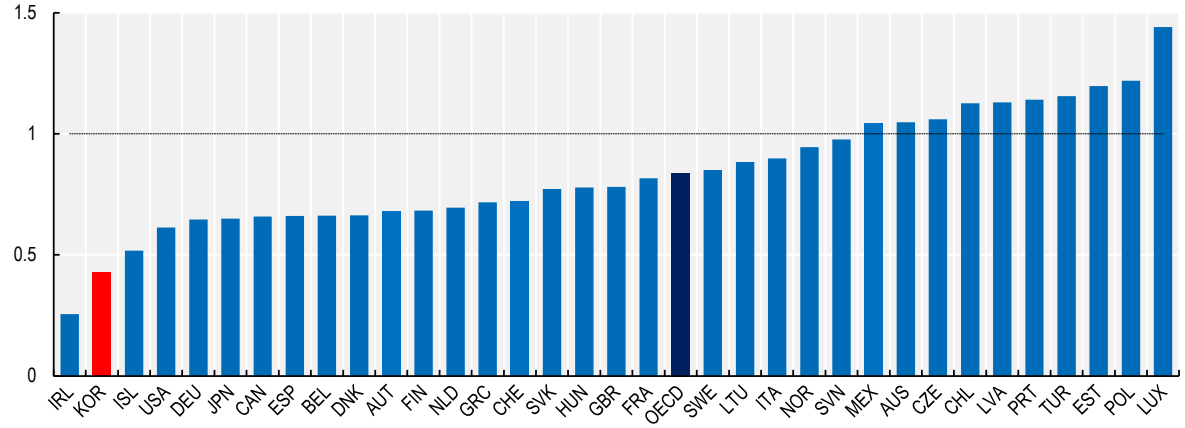


Source: Authors' calculations based on *OECD STAN STructural ANalysis Database*, https://oe.cd/stan.

Korea's reliance on manufacturing exports by chaebols also led to contrasted productivity outcomes between manufacturing and services. The sector-productivity gap in Korea is among the highest in the OECD (Figure 3.3). Productivity in market services was on average only 43% of the productivity level in manufacturing in 2016. This is less than the gap observed in the US (61%) or in the UK (78%). Low productivity in services is ultimately detrimental to all industries that use service inputs.

Figure 3.3. Korea has one of the largest productivity gaps between manufacturing and services

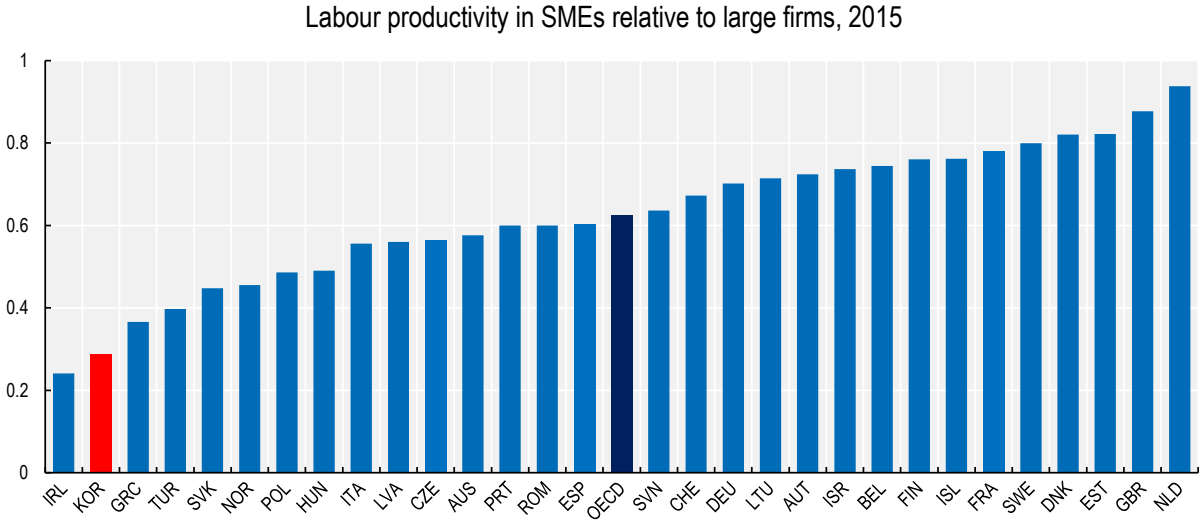
Labour productivity in services relative to manufacturing, 2015



Note: Figures show the ratio of labour productivity in the non-financial market service sector (ISIC Rev.4 industries 45-63;68-82) to labour productivity in the manufacturing sector (ISIC Rev.4 industries 10-33). Sectoral labour productivity is calculated as the ratio of sectoral value added (volume) to sectoral employment. The figure for OECD is the simple average of available countries.
Source: *OECD STAN STructural ANalysis Database*, https://oe.cd/stan.

Moreover, Korea has one of the highest size-productivity gaps in the OECD (Figure 3.4). Korean SMEs are more than 70% less productive than large firms, while this gap is only 30% in Germany and 13% in the United Kingdom. This is a concern as small businesses are generally key contributors to productivity and job creation and drive business dynamism.

Figure 3.4. There is a large gap in productivity between large firms and SMEs

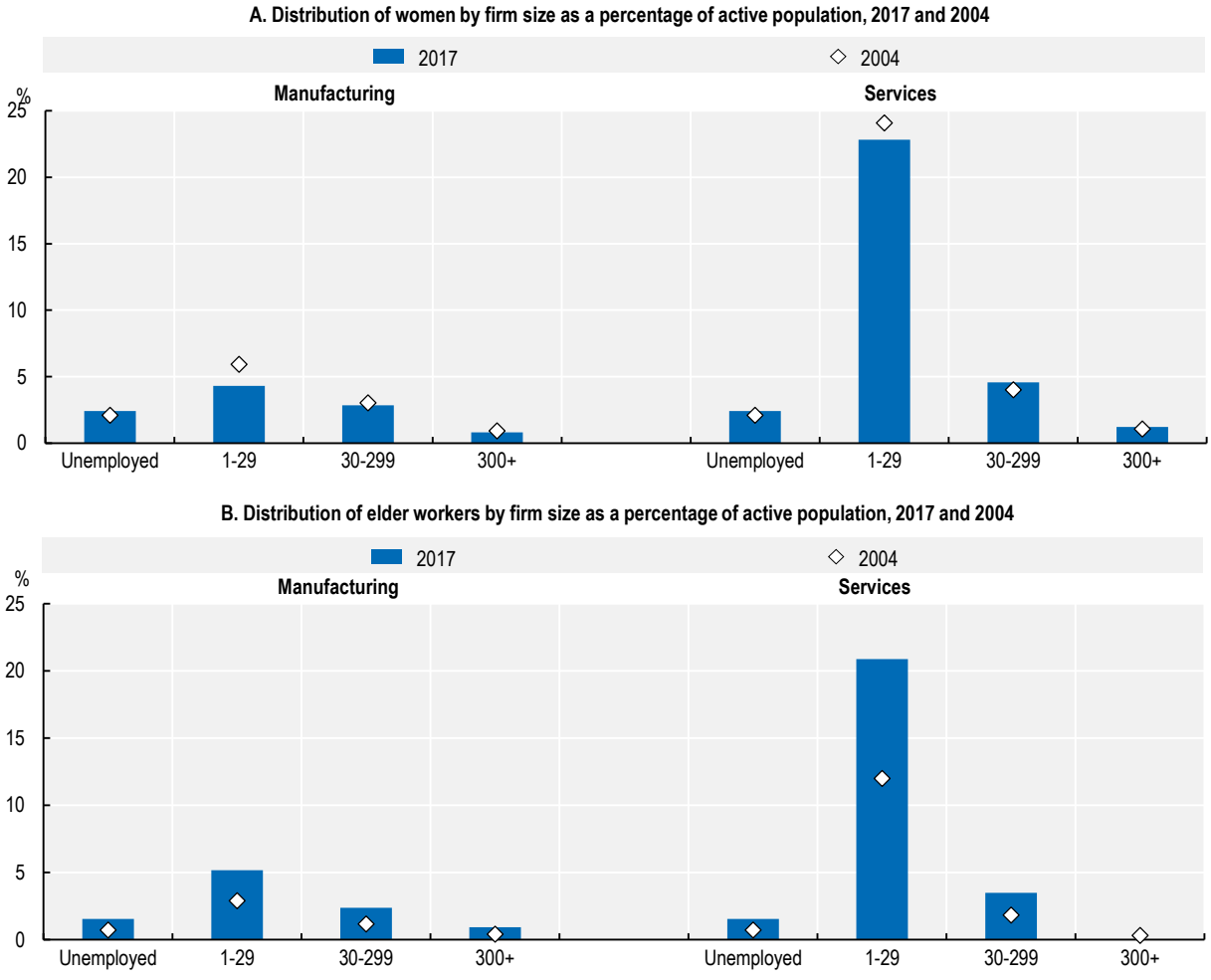


Note: Figures show the ratio of labour productivity in firms with fewer than 250 workers to labour productivity in firms with more than 250 workers in the non-financial business sector (ISIC Rev.4 industries 5-63;68-82). Labour productivity is measured as value added per person employed, broken down by economic sector and firm size class. The figure for OECD is the simple average of available countries.
Source: *OECD STAN STructural ANalysis Database*, https://oe.cd/stan.

The inclusion challenge

The link between disparities in productivity and inclusiveness was already highlighted in Chapter 2. The sectoral- and size-productivity gaps imply that productivity gains are not shared with all workers. For example, women and elderly workers are mostly employed in small service firms. In 2017, women accounted for 41% of the active population, with 23 percentage points corresponding to employment in small services firms and only 1 percentage point in large manufacturing firms (Figure 3.5, panel A). The pattern is the same for elderly workers, whose participation rate was 37% in 2017 with 21 percentage points corresponding to employment in small services firms and only 1 percentage point in large manufacturing firms (Figure 3.5, panel B).

Figure 3.5. Women and elder workers mostly work in small firms in the service sector



Source: KOSIS Economically Active Population Survey, http://kostat.go.kr/portal/eng/pressReleases/5/2/index.board.

An uncertain international environment

In addition to the inclusion challenge, the growth model of Korea is impacted by two important trends that are currently transforming the world economy. First, since the 2008 financial crisis, protectionism has increased, starting with non-tariff measures and contingent protection in selected industries under pressure during the crisis. However, it has now turned into tariff wars between major exporters. Korea is exposed to some of the current trade tensions, both directly and indirectly. Since a large share of GDP relies on exports, some policy answers are needed to mitigate the impact of protectionism and ensure that GVCs can still contribute to growth.

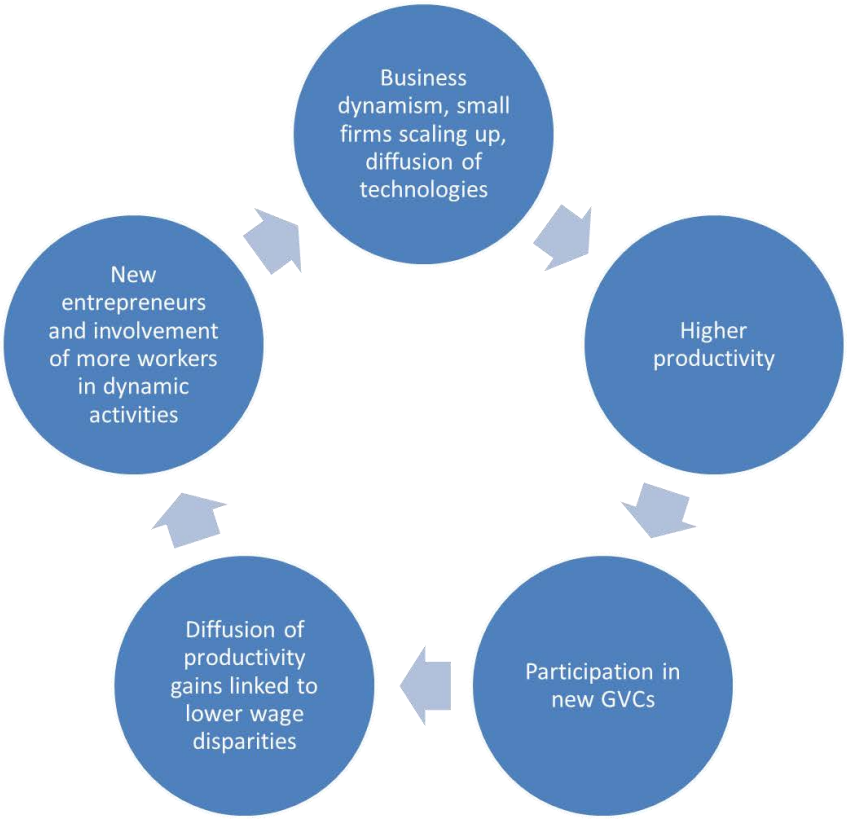
The second challenge is related to the digital transformation and how Korea can maintain its technological leadership. The Korean government plans to continue to support key industries, in particular the "big 3" sectors: semiconductors, bio-health and future cars. Support will also go to the so-called "DNA" sectors that are data, networks (5G) and artificial intelligence. The question is how Korea can redefine its industrial policy in the digital age. The digital transformation will provide opportunities but also challenges as competition heats up at the global level and leading firms can quickly scale up their operations through investment in intangible assets such as data, proprietary software, and human and organisational capital. The focus on inclusiveness does not mean that only small firms should receive the attention of the government as large Korean firms are also facing a new challenging international environment. But a more market- and demand-driven industrial policy means that future successful activities in Korea may come from a broader set of sectors and this is where inclusiveness can be part of a new growth model relying on business dynamism.

Towards a virtuous circle between productivity, business dynamism and inclusiveness

The policy recommendations in this chapter are based on the idea that there are strong complementarities between productivity, business dynamism and inclusiveness (OECD, 2018[4]). As summarised in Figure 3.6, reforms aimed at promoting business dynamism, helping small firms to scale up and accelerating technology diffusion between frontier firms and laggards can increase productivity and reduce the sector and size productivity gaps. This higher productivity benefitting a wider set of firms will enable Korea to participate in new GVC activities and allow productivity gains to be shared across more workers with a reduction in wage dispersion. This will in turn allow more workers to participate in the dynamic part of the economy and encourage new entrepreneurs to start businesses, thus contributing further to business dynamism.

To reach the desired level of granularity in the analysis of productivity and business dynamism and to provide international comparisons, this chapter relies on the *MultiProd* and *DynEmp* projects, which are distributed micro-data approaches (Box 3.1). To include a GVC perspective, the chapter also uses the latest release of the *OECD Trade in Value-Added (TiVA) database*. The combination of these datasets offers a new perspective on the strengths and weaknesses of the Korean economy and provides clues as to what the best policy course might be to reconcile growth and inclusiveness.

Figure 3.6. Virtuous circle between growth and inclusiveness



Addressing the productivity gaps

This section relies on novel data to document the productivity-inclusiveness nexus in Korea by looking at the productivity performance between and within industries, and linking it to patterns of wage disparities. The analysis suggests avenues for creating a more inclusive economy while still promoting productivity growth. This includes rebalancing productivity gains towards services and creating a better environment for SMEs to work with large firms and be more productive.

The global productivity slowdown and the concomitant rise in income inequalities have brought the importance of understanding the nature of firm-level productivity development to the forefront of the policy debate. Recent OECD work has documented a significant increase in the productivity gap between the most successful firms and those lagging behind since the 2000s, even within countries and narrowly defined industries. As there is a tight link between firm-level productivity and wages, the dispersion of firms' productivity matters for inclusiveness. Wage dispersion is linked to increasing differences between high and low productivity firms (Berlingieri, Blanchenay and Criscuolo, 2017[5]). Moreover, rising productivity gaps are linked to the global productivity slowdown, as they appear to weigh on aggregate productivity growth (Andrews, Criscuolo and Gal, 2016[6]).

A caveat applies regarding the productivity analysis for Korea based on the *MultiProd* data. The Korean data do not cover manufacturing firms with fewer than 10 workers. Moreover, no data for market services firms with fewer than 50 employees are available either. The productivity analysis takes this limitation into account, in particular when comparing data with other countries (see Box 3.1). Complementary sources were also used to check the robustness of results for the whole population of firms.

Different types of productivity gaps

At the aggregate level, the sector and size productivity gaps in Korea are among the largest in the OECD, as emphasised in the previous section. At a more disaggregated level, three main productivity gaps are identified: (i) between firms in different industries; (ii) between large firms and SMEs within industries and (iii) between top firms and laggards within industries. Overall, these gaps are large by OECD standards. Finally, productivity disparities also exist at the regional level. Regional disparities are relatively high and have been on the rise in Korea (OECD, 2018[7]). However, the present analysis does not address the regional dimension of productivity due to data limitations.

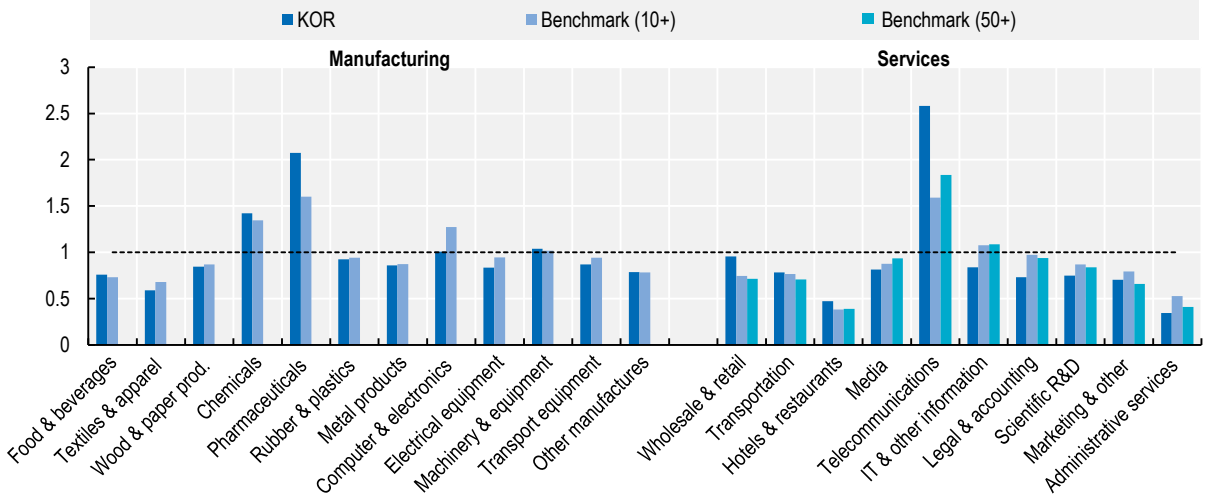
Productivity disparities between industries

Productivity disparities between industries are larger in Korea than in other OECD economies (Figure 3.7). Within-industry average labour productivity relative to the average in the manufacturing sector is highly heterogeneous across industries, and more so than in the benchmark set of other OECD countries. For example, the textile industry – the least productive industry in both Korea and in other OECD countries – is about 40% less productive than the average manufacturing industry, while it is only 30% less productive in other OECD countries. At the other end of the industry productivity distribution in manufacturing, labour productivity in the pharmaceutical industry is more than two times higher than the manufacturing average, while it is only about 50% higher in other OECD countries. Productivity disparities across industries do not necessarily imply economic inefficiency. In Korea, however, their magnitude and the legacy of the former development model that championed a few industries suggest that they may reflect resource misallocation.

The heterogeneity in industry productivity is even more marked in non-financial market services, where labour productivity in such activities as administrative and support services industries is relatively low, while it is very high in the telecommunications industry. Moreover, the productivity gap relative to the average manufacturing industry is larger for most market services industries in Korea than in the benchmark.

Figure 3.7. Productivity disparities between industries are larger in Korea than in other OECD countries

Within-industry average labour productivity relative to manufacturing average, available years



Note: This figure reports the average labour productivity in each industry relative to the average labour productivity in the entire manufacturing macro-sector, within industry for Korea and within country-industry pairs in a set of benchmark countries, over the period 2000-17 for manufacturing and 2006-17 for non-financial market services. Labour productivity is measured as the ratio of value added to employment. See Box 3.1 for details.
Source: *OECD MultiProd database*, https://oe.cd/multiprod.

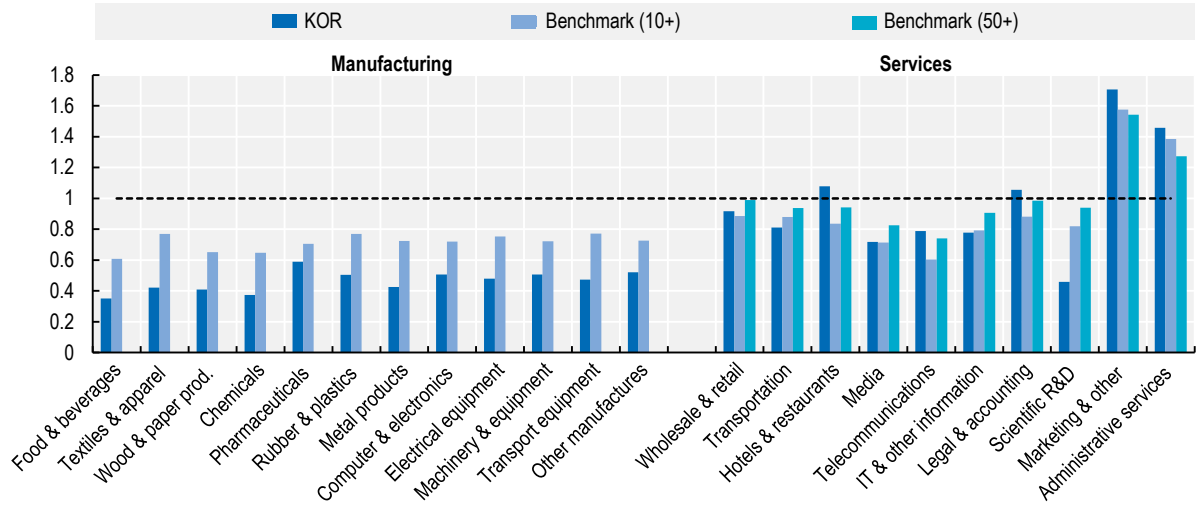
Productivity disparities between SMEs and large firms

Size productivity gaps are larger in Korea than in other OECD countries within most industries (Figure 3.8). However, there is a difference between manufacturing and services. On the one hand, SMEs – defined as firms with fewer than 250 workers – are less productive than large firms (more than 250 employees) in all manufacturing industries. While this is generally the case across OECD economies, the productivity gap between SMEs and large firms in manufacturing is substantially larger in Korea.

In non-financial market services, on the other hand, there is no clear-cut pattern regarding the size productivity gaps across industries. While in some industries, such as media or telecommunications, large firms are substantially more productive than SMEs, it is not the case in industries like advertising and market research. The absence of a robust positive correlation between size and productivity in non-financial market services is consistent with international evidence showing that large employers are generally more productive in manufacturing, but not in services (Berlingieri, Calligaris and Criscuolo, 2018[8]).

Figure 3.8. Size productivity gaps are larger than in other OECD countries in most industries

Within-industry average labour productivity of SMEs relative to large firms, available years



Note: This figure reports the average labour productivity of firms with fewer than 250 workers in each industry relative to the average labour productivity of firms with more than 250 workers, within industry for Korea and within country-industry pairs in a set of benchmark countries, over the period 2000-17 for manufacturing and 2006-17 for non-financial market services. Labour productivity is measured as the ratio of value added to employment. See Box 3.1 for details.
Source: *OECD MultiProd database*, https://oe.cd/multiprod.

The existence of persistent size productivity gaps may be related to the digital economy. The cost of information and communication technologies (ICT) and of investment in complementary intangible assets, the skill mismatch or the lack of absorptive capacity can explain a lower diffusion of technology and knowledge between large high-productivity firms and low-productivity SMEs.

However, not all low-productivity SMEs are firms that should go out of business but survive due to weak market selection. In a recent study, (Berlingieri et al., 2020[9]) show that the least productive firms are on average smaller and younger than other firms. It suggests that some of the low-productivity SMEs are young businesses with a high productivity growth potential.

In the case of Korea, the question is whether the different schemes supporting SMEs have not created disincentives for them to become more productive. Moreover, the difference in size between large chaebols and small firms that are often suppliers or sub-contractors also raises the question of unfair practices or market power that could lead to productivity gains being captured by large firms (Jones, 2018[10]).

Productivity disparities between laggards and frontier firms

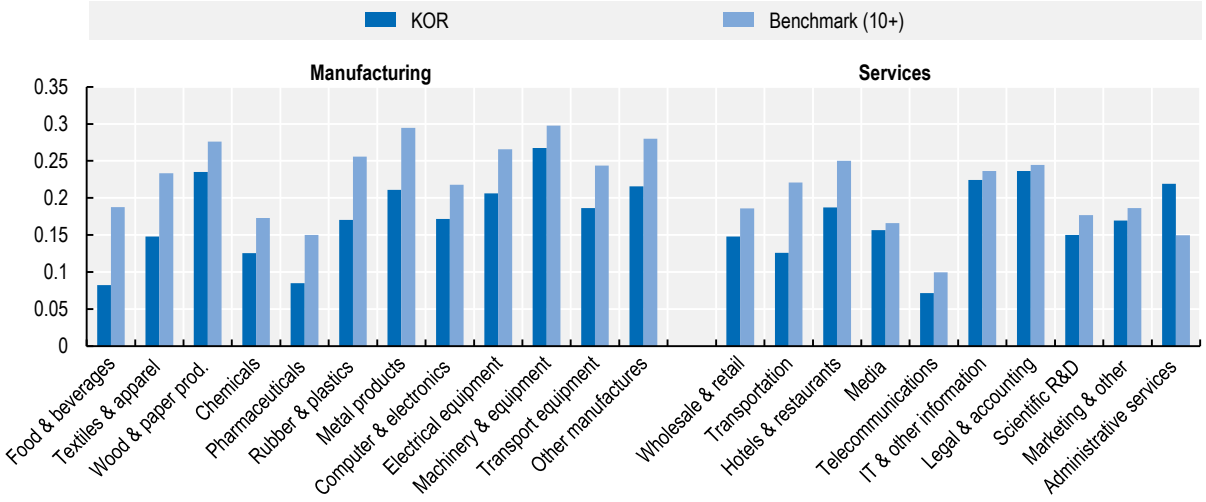
The productivity gap between the least and the most productive firms within industries – a measure of inequality in corporate performance – is large in OECD countries, even within narrowly defined industries.[2] This productivity gap tends to be larger in Korea than in other OECD countries (Figure 3.9). Defined here as firms in the 10th percentile of the labour productivity distribution, laggards are substantially less productive than frontier firms (i.e. firms in the 90th percentile of the productivity distribution). For example, the productivity of laggard pharmaceutical manufacturers is only 8% of the productivity of frontier firms in that industry, while it amounts to about 15% in other OECD countries. In services, the productivity of laggard firms in the Korean transportation and storage industry is only about 12% of that of frontier firms, while it reaches 23% on average in the OECD.

Within-industry productivity disparities matter at the aggregate level. Heterogeneity in firm performance within industries is associated with cross-country differences in aggregate productivity (Bartelsman, Haltiwanger and Scarpetta, 2013[11]; Hsieh and Klenow, 2009[12]). Moreover, the increase in productivity gaps between top firms and the others are correlated with slower aggregate productivity growth within industries across OECD economies (Andrews, Criscuolo and Gal, 2016[6]).

The rise in the productivity gap observed within-industry is less pronounced in sectors where the pace of product market reform was faster, both in OECD countries in general and in Korea in particular (Andrews, Criscuolo and Gal, 2016[6]; Choi, 2018[13]). Pro-competitive product market reforms promote the productivity catch-up of laggards by strengthening the process of creative destruction, which forces inefficient businesses out of the market and creates strong incentives for incumbent laggards to adapt better technologies and management practices. It also promotes technological diffusion by spurring entry, to the extent that young firms possess a comparative advantage in commercialising radical innovations. Moreover, pro-competitive reforms in upstream services sectors spill over to downstream sectors, thereby promoting productivity across the entire economy.

Figure 3.9. Productivity gaps between laggards and frontier firms are large by OECD standards

Within-industry labour productivity of firms at the 10th percentile of the distribution relative to firms at the 90th percentile, available years



Note: This figure reports the average labour productivity of firms at the 10th percentile of the labour productivity distribution in each industry relative to the average labour productivity of firms at the 90th percentile, within industry for Korea and within country-industry pairs in a set of benchmark countries, over the period 2000-17 for manufacturing and 2006-17 for non-financial market services. Labour productivity is measured as the ratio of value added to employment.See Box 3.1 for details.
Source: *OECD MultiProd database*, https://oe.cd/multiprod.

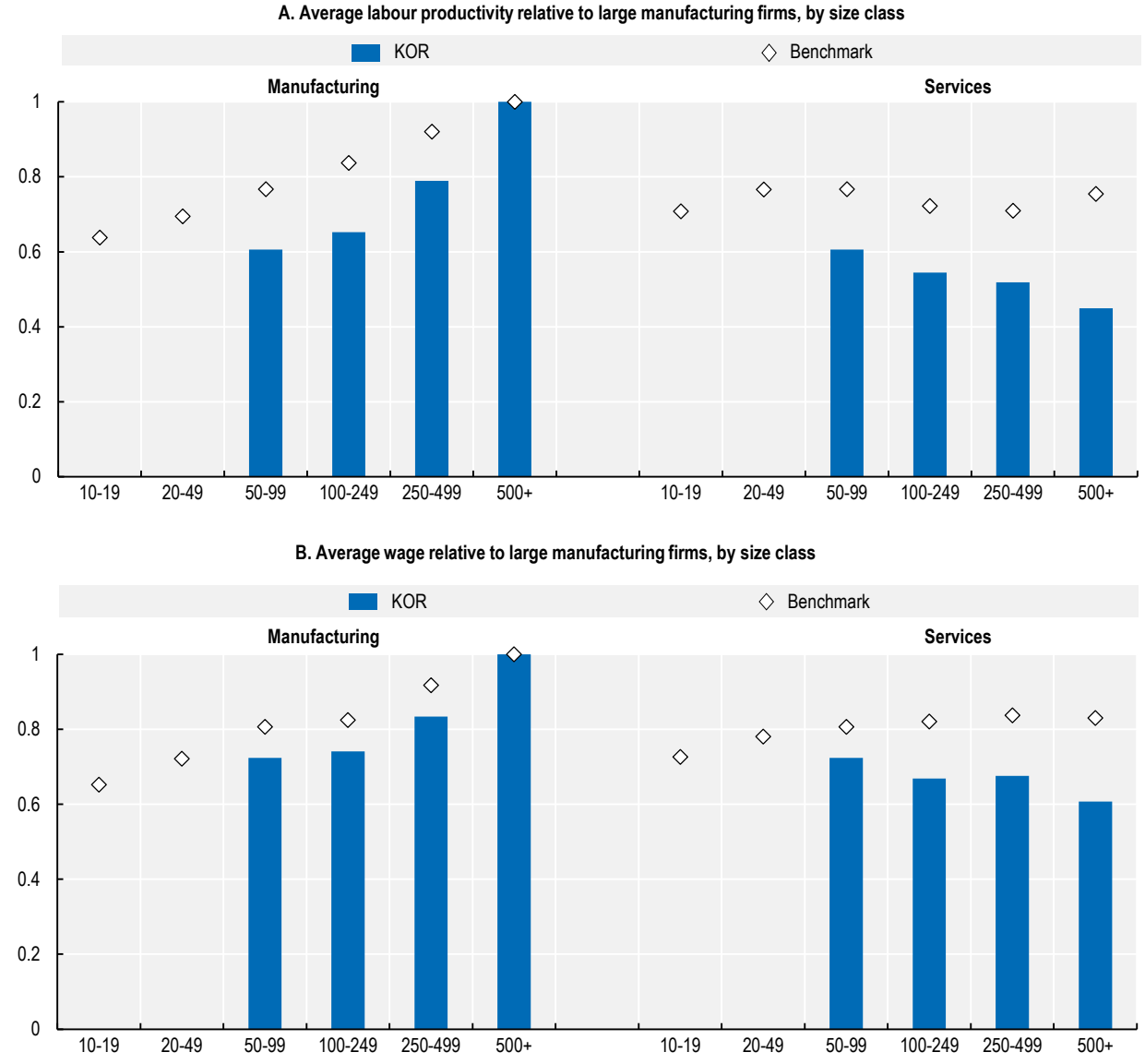
Productivity gains are not shared equally among workers

There exists a robust productivity-wage premium in OECD economies (Berlingieri, Calligaris and Criscuolo, 2018[8]). Higher wages are paid by firms that are more productive and there is a tight link between productivity and wages. Therefore, the three types of productivity gaps identified in the Korean economy come with equally pervasive wage gaps. Addressing the productivity gaps can contribute to reducing wage dispersion and creating a more inclusive society, since marginalised workers are over-represented in sectors and firms that lag behind in terms of productivity.

Wage gap between large manufacturing firms and services SMEs

The picture that emerges from Korea opposes large manufacturing firms to SMEs in the service sector. Combining the size and sectoral dimensions from the within-industry analysis and linking them to wages, it appears that productivity gains overwhelmingly accrue to large manufacturing firms. Productivity in small manufacturing firms and in service firms of all size is low compared to large manufacturing firms, and the gap is larger in Korea than in other OECD countries on average (Figure 3.10, panel A). Wage gaps largely reflect the productivity gaps (Figure 3.10, panel B).

Figure 3.10. Wage gaps relative to large manufacturing firms reflect the productivity gaps



Note: Panel A (Panel B) plots the average labour productivity (wage) level across firm size in Korea and in the set of benchmark countries, with size measured by the number of workers, over the period 2000-17 for both manufacturing and non-financial market services. Labour productivity (wage) level is measured as the ratio of value added (labour costs) to employment. Industry data aggregated to macro-sectoral (manufacturing and non-financial market services) level using weighted means, and then averaged (unweighted) over time for each country. The benchmark is the median of country averages. See Box 3.1 for details.
Source: *OECD MultiProd database*, https://oe.cd/multiprod.

Figure 3.10 offers three main takeaways regarding the distribution of productivity and wage levels across size and macro-sectors in Korea. First, it shows that productivity and wages are the highest in large manufacturing firms with more than 500 employees, both in Korea and in other OECD countries. Second, it indicates that both the productivity gap and the wage gap between large manufacturing firms and the rest is larger in Korea than in other countries. Third, it confirms the positive correlation between productivity and wages in manufacturing and the absence thereof in services, as mentioned above.

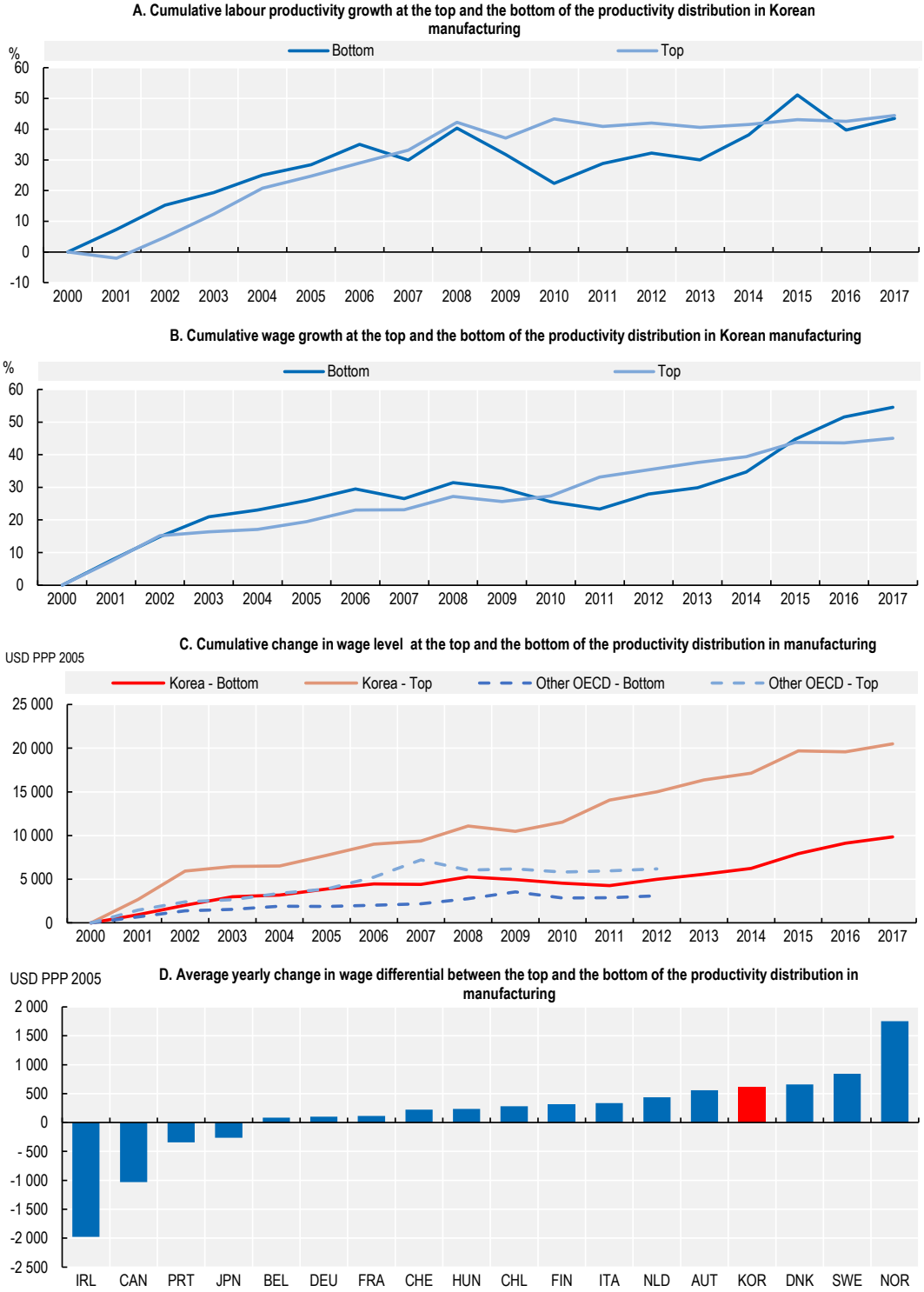
Rising wage gap between top firms and laggards in manufacturing

Earnings inequality has increased over the past two decades in Korea (OECD, 2018[14]). One aspect is related to differences in wages between firms within the same industry, which is found to be positively correlated with rising earnings inequality in OECD economies. Most of the observed divergence in wages between firms is driven by differences in pay across firms within industries rather than by differences across industries (Berlingieri, Blanchenay and Criscuolo, 2017[5]).

Another aspect of earnings inequality arises from the *productivity* distribution of wages, i.e. differences in average wages paid by firms at different parts of the productivity distribution. Indeed, economic policies that shape wage distribution may have a heterogeneous impact across different segments of productivity distribution. For example, in OECD economies, high minimum wages are associated with reduced wage dispersion (and hence overall inequality) and tend to weaken the correlation between wages and productivity in the bottom and the middle part of the productivity distribution, but not at the top (Berlingieri, Blanchenay and Criscuolo, 2017[5]).

In the Korean manufacturing sector, the firms at the top and those at the bottom decile of the productivity distribution have experienced the same cumulative growth in labour productivity since 2000. Indeed, while Figure 3.9 shows a high *level* of within-industry productivity dispersion between the top and the bottom, Panel A of Figure 3.11 indicates that the gaps have not *grown* larger. This absence of within-industry divergence in productivity contrasts with the experience of most OECD countries.[3] There was no divergence in within-industry wage *growth* between the top and the bottom of the productivity distribution either, which is reminiscent of the link between wages and productivity within manufacturing industries described above (Figure 3.11, panel B). However, the *level* of wage dispersion is very high in Korea compared to other OECD countries (OECD, 2018[14]). Therefore, the cumulative wage differential in monetary value between the top and the bottom of the productivity distribution is sizeable, even though wages grew at the same pace at the top and the bottom (Figure 3.11, panel C).[4] Consequently, Korea is one of the countries with the highest average yearly increase in the wage differential between firms at the top and firms at the bottom (Figure 3.11, panel D).

Figure 3.11. Large wage differentials between frontier firms and laggards in manufacturing



Note: Panel A (Panel B) reports the estimated year dummies of a panel data regression of average log labour productivity (wage) in the top decile and in the bottom decile of the productivity distribution within industries, taking the first year as the baseline. Labour productivity (wage) is measured as the ratio of value added (labour costs) to employment.Panel C reports a similar panel data regression of the average wage level, within industries in Korea and within industry-country pairs in the set of benchmark countries. Panel D plots the average yearly change in the difference between the average wage in the top and in the bottom decile across the benchmark countries. Results estimated for manufacturing only, over the period 2000-17. See Box 3.1 for details.

Source: *OECD MultiProd database*, https://oe.cd/multiprod.

The challenge of digital adoption for small firms in Korea

Insufficient development and adoption of new technologies, particularly those related to the digital transformation, is one of the reasons why large productivity gaps are observed between frontier firms and laggards (Andrews, Criscuolo and Gal, 2016[15]). This is true for Korea as well, where the uneven diffusion of technologies is contributing to the productivity gap (Choi, 2018[13]).

On the one hand, Korea generally scores well on digital economy-related indicators when it comes to key enabling infrastructure. For example, Korea has one the highest penetration rates for high-speed broadband internet observed worldwide and is the leading country in terms of the deployment of the fifth generation of cellular network technology (5G). Korea is also well advanced in the automation of its flagship industries, such as the automotive and electronics sectors. Korean firms further account for a large share of artificial intelligence (AI) patents filed worldwide (OECD, 2017[16]) and the country hosts the headquarters of some of the key world players in the field. Through programmes such as the "big 3" and "DNA", Korea is trying to maintain such technological leadership.

On the other hand, evidence shows that technology diffusion has been uneven, especially when different types of ICT tools are considered (Figure 3.12). For example, while virtually all Korean companies have broadband access, and many of them use basic ICT tools such as website and enterprise resource planning (ERP) software, they tend to lag behind in terms of other key tools, such as consumer relationship management (CRM) support, cloud computing, e-sales or big data.[5]

Figure 3.12. Uneven diffusion for key ICT tools

Diffusion of selected ICT tools and activities in firms as a percentage of firms with ten employees or more



Note: Broadband includes both fixed and mobile connections with an advertised download rate of at least 256 Mbps. E-purchases and e-sales refer to the purchase and sales of goods or services made over computer networks by methods specifically designed for the purpose of receiving or placing orders (i.e. web pages, extranet or electronic data interchange [EDI], but not orders by telephone, fax or manually typed e-mails). Payment and delivery methods are not considered. Enterprise resource planning (ERP) systems are software-based tools that can integrate the management of internal and external information flows, from material and human resources to finance, accounting and customer relations. Here, only sharing of information within the firm is considered. Data for ERP relate to the year 2015. Customer/supplier relationship management software (CRM) is a software package used for managing a company's interactions with customers, clients, sales prospects, partners, employees and suppliers. Data for CRM relate to the year 2015. Cloud computing refers to ICT services used over the Internet as a set of computing resources to access software, computing power, storage capacity and so on. Cloud computing figures are based on 2016 data for Korea; 2018 data, unavailable at the time of writing, may show that diffusion has increased. Big data analytics refers to the analysis of vast amounts of data generated by activities carried out electronically and through machine-to-machine communications. Big data figures are based on 2017 data for Korea; 2018 data, unavailable at the time of writing, may show that diffusion has increased. Radio frequency identification (RFID) is a technology that enables contactless transmission of information via radio waves. RFID can be used for a wide range of purposes, including personal identification or access control, logistics, retail trade and process monitoring in manufacturing. Data for RFID relate to the year 2014. Unless otherwise stated, only enterprises with ten or more employees are considered. For country exceptions, see details at the source.

Source: (OECD, 2017[16]), *OECD Digital Economy Outlook 2017: Spotlight on Korea*, https://www.oecd.org/korea/digital-economy-outlook-2017-korea.pdf (accessed on 7 October 2019).

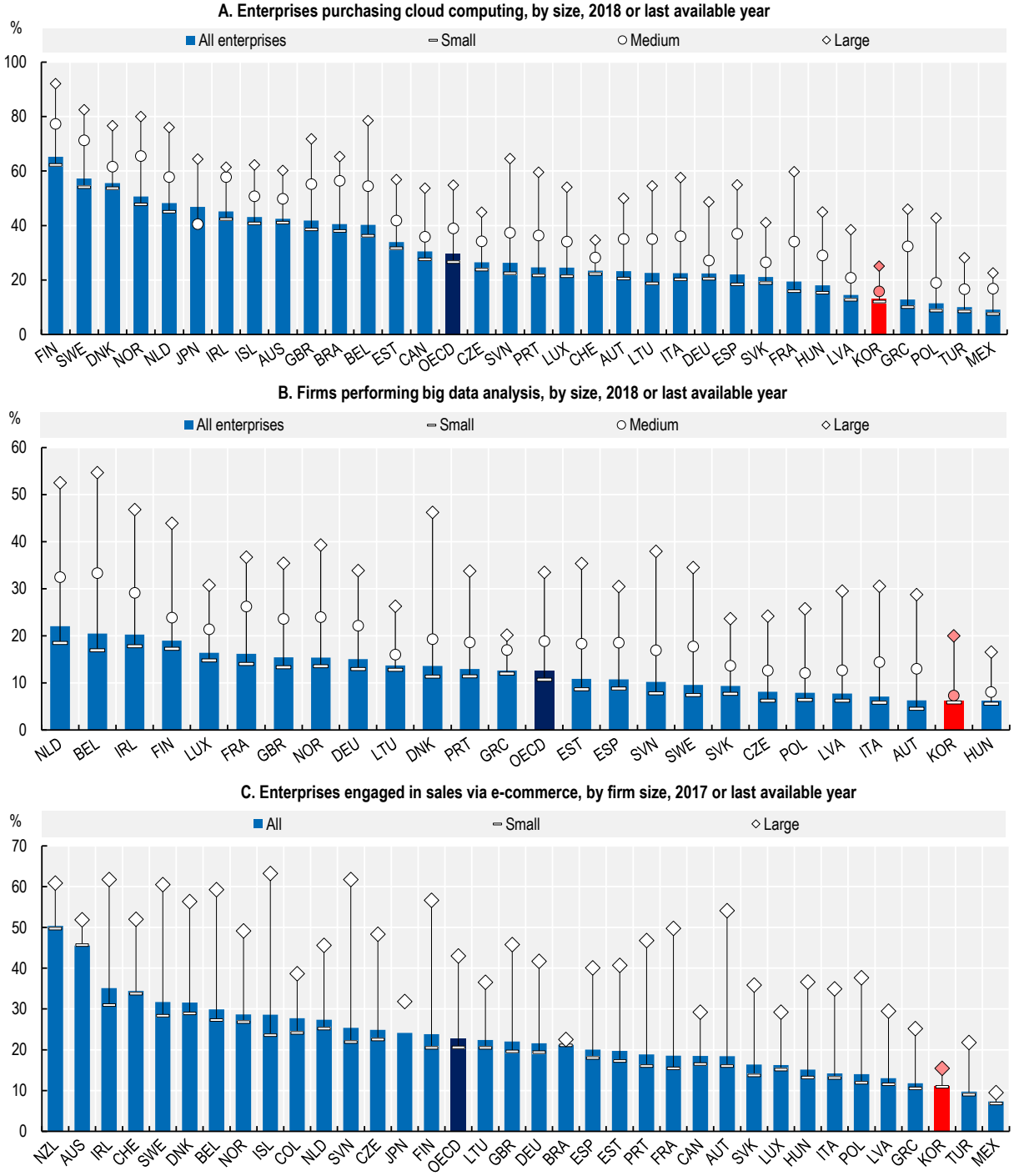
When it comes to cloud computing, big data analysis and e-commerce, lower adoption rates are especially observed for small firms (Figure 3.13), whose growth and efficiency would benefit most from adopting such technologies. Cloud computing, for example, may allow young firms to rapidly scale up, by reducing the need to purchase costly servers and ICT computing devices ahead of scaling up, thus exchanging ICT sunk capital for pay-on-demand services, and allowing SMEs to only pay for what they really need (DeStefano, Kneller and Timmis, 2019[17]). In turn, big data analysis (performed or not using cloud computing) can help support the decision-making and marketing strategies of SMEs at a more accessible cost as compared to traditional marketing tools, while e-commerce helps them tap into larger and different (including international) markets and to customise the offer, to be able to better adjust prices and mark-ups.

As shown in Figure 3.13 (panel C), Korean firms have low rates of participation in e-commerce (11% in 2017), as compared to shares of more than 40% in New Zealand or Australia and an average of more than 20% across OECD countries.

Moreover, as mentioned, Korea hosts the headquarters of some of the most important innovators worldwide, companies that rank high among the corporations that invest the most in R&D activities worldwide, the so-called “top corporate R&D investors” (see (Dernis et al., 2019[18]) for details). However, this stylised fact is to some extent the bright side of a coin that sees on the other side the concentration of Korea’s innovative ability in just a few large companies, such as Samsung Electronics or LG Electronics (Figure 3.14). The productivity gap between large and small firms also reflects these disparities in innovative activity.

Figure 3.14 further shows that leading Korean innovators focus relatively more on patenting and trademarking than on publishing scientific research. This may hinder knowledge spillovers and the ability of other companies, including SMEs, to pursue cumulative innovation strategies by building on the shoulders of the giants.

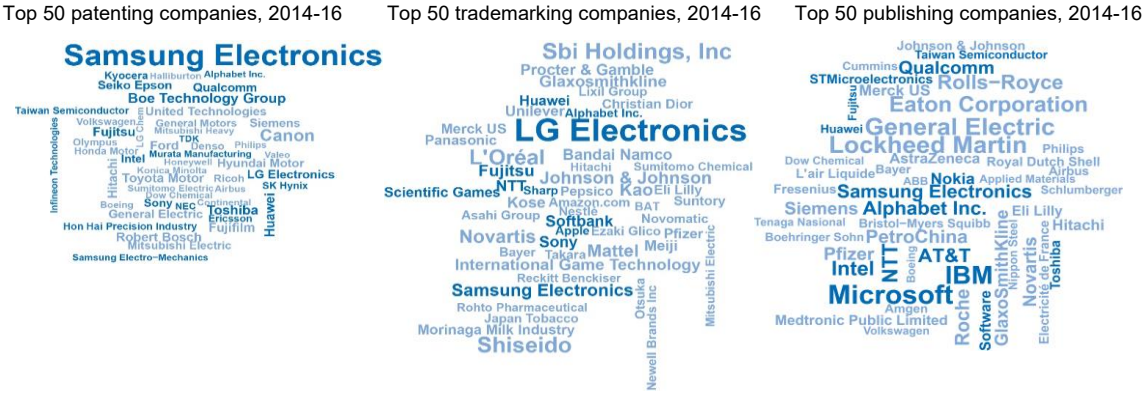
Figure 3.13. Low adoption of productivity-enhancing ICTs that are well suited to SMEs



Note: Panels A, B and C show the percentage of enterprises that have adopted the selected technology in each employment size class. Size classes are defined as: small (10-49 persons employed), medium (50-249) and large (250 and more). OECD data are based on a simple average of the available countries. See Figure 3.12 for the definitions of the selected technologies and information on the data.

Source: (OECD, 2019[19]), *Measuring the Digital Transformation: A Roadmap for the Future*, OECD Publishing, Paris, https://doi.org/10.1787/9789264311992-en.

Figure 3.14. Korea's innovative ability is very concentrated and not oriented towards publishing scientific research

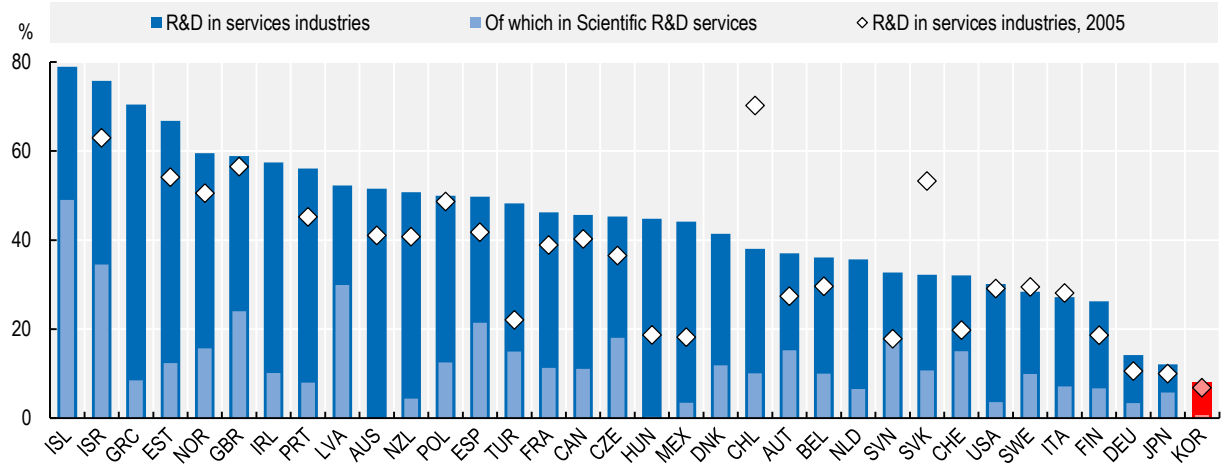


Note: ICT-related companies are shown in darker blue.
Source: (Dernis et al., 2019[18]), *World Corporate Top R&D investors: Shaping the Future of Technologies and of AI*. A joint JRC and OECD report, Publications Office of the European Union, http://dx.doi.org/10.2760/472704.

Finally, a gap emerges in terms of innovation between manufacturing and services firms, similar to the productivity gap previously identified. R&D spending and government support for R&D are very high in Korea, but the share that is accounted for by the service sector is the lowest in the OECD (Figure 3.15).[6] In 2015, services accounted for only 8% of Korea's business expenditure on R&D, as opposed to 15% in Germany and 30% in the US. For public R&D spending (not shown in the Figure), the share of services was only 3.5% in 2017. This gap in R&D between services and manufacturing partly reflects the size composition of the two macro-sectors, and the fact that the services sectors in Korea mainly features SMEs, which in turn are reluctant to invest in R&D (OECD, 2018[14]).

Figure 3.15. The gap between R&D in services and in manufacturing is the largest in the OECD

R&D in services as a percentage of business enterprise R&D, 2015



Source: (OECD, 2017[20]), *OECD Science, Technology and Industry Scoreboard 2017: The digital transformation*, OECD Publishing, Paris, https://doi.org/10.1787/9789264268821-en.

Leveraging the full potential of technology, human capital and skills for inclusion

Human capital is crucial to reap the benefits of the digital transformation. According to the 2015 *OECD Skills Strategy Diagnostic Report of Korea*, Korean students are among the top performers in reading, mathematics and science and a high share of them continues to tertiary education, while Korean workers display close to OECD average numeracy and problem-solving skills. However, Koreans use these skills at work less than the OECD average, which points to a possible skills mismatch. This suggests that, at present, there is a potential for the working population of Korea to both upskill and contribute more to improving the productivity performance of Korean firms (OECD, 2017[21]).

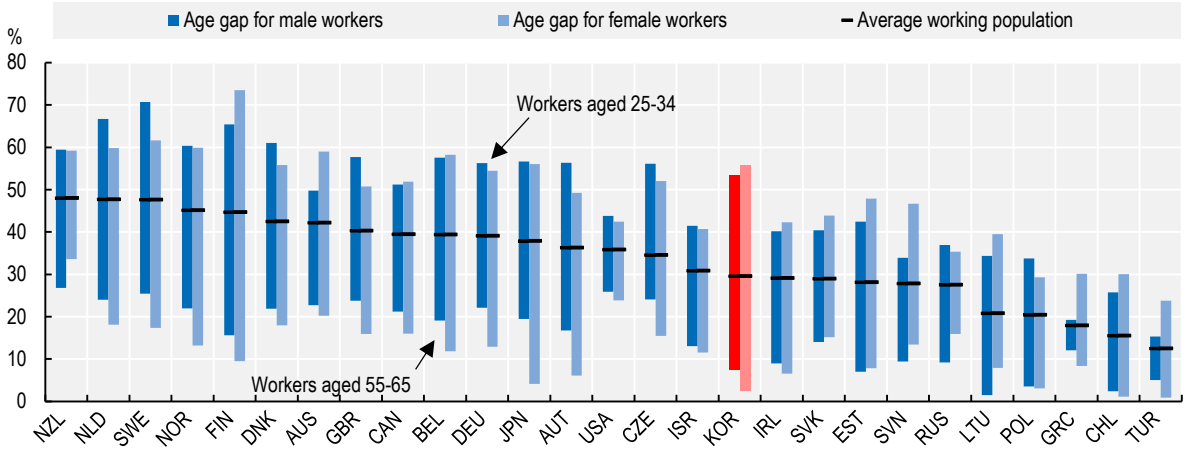
As discussed in Chapters 1 and 2, evidence shows that the participation of Korean women in the labour market is relatively low compared to other OECD countries. As female students have tended to outperform male students in recent years, women's limited participation in the labour market may curb the country's economic performance, as the best talent available remains untapped. Promoting women's participation in the labour market thus appears like a necessary precondition for and an enabler of Korea's enhanced economic performance.

In what follows, the analysis highlights how important it is to couple technology development and adoption with human capital development. This would help enhance Korea's economic performance and growth while at the same time fostering societal inclusiveness and well-being. As the digital transformation unfolds – with Korea playing a key role in shaping the future of digital technologies and of artificial intelligence – it is important to add to the elements discussed in Chapter 2 some insights that are specific to digital economies and societies (including e.g. how to narrow the digital gender divide).

Young Korean women have a high potential to harness the possibilities offered by the digital transformation. Solid cognitive skills coupled with the ability to solve problems and think creatively are key to adapting to the scale, speed and scope of digital transformations. In Korea, top-performing young female workers have better problem-solving skills in a technology-rich environment than their male counterparts (Figure 3.16). While this may to some extent be a result of selection (i.e. that only few and the best performing women enter the labour market), it nevertheless points to untapped growth potential, as women are amongst the best skilled part of the Korean population. Another factor holding back Korea's economic performance is wide gap between the skill level and spectrum of young people in the workforce versus their older counterparts. For instance, Korea has one of the largest age gaps in skills related to problem-solving in technology environments, which is a problem for older workers in the digital economy. As shown in the *OECD Skills Outlook 2017*, a country's dispersion of skills influences what industry it specialises in, as well as its competitiveness patterns (OECD, 2017[22]). Even if two countries have identical average skills endowments, they will trade with each other depending on the properties of their human capital dispersion.

Figure 3.16. Young Korean women have a high potential to harness digitalisation

Percentage of workers with medium and high performance in problem solving in technology-rich environments, by gender, for workers aged 25-34 and 55-65



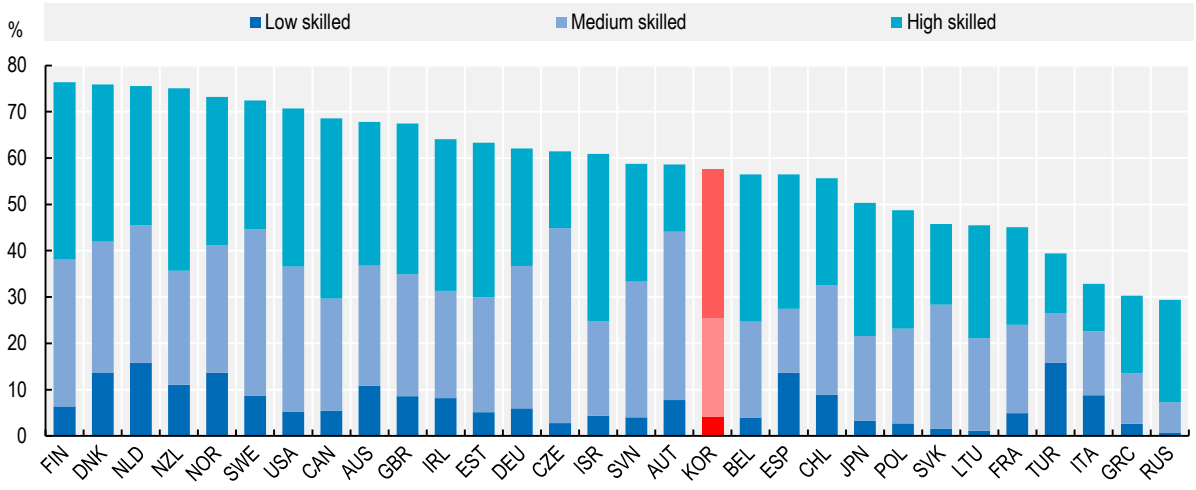
Note: Figures show the proportion of the working population with either medium or high proficiency levels in using digital and communication technology tools to perform practical tasks, broken down by gender and age.
Source: (OECD, 2017[20]), *OECD Science, Technology and Industry Scoreboard 2017: The digital transformation*, OECD Publishing, Paris, https://doi.org/10.1787/9789264268821-en.

Human capital and skills need to be acquired but, perhaps more importantly, maintained. Evidence shows this to be only marginally the case in Korea, as firm-based training is relatively low in the country, especially for low-skilled workers. (Figure 3.17). Training helps technology diffusion as it provides workers with the skills they need to navigate the digital transformation. It also contributes to fostering inclusiveness, as workers become more productive, and may thus be compensated with higher wages. Recognition increases the sense of belonging to a company and a worker's willingness to contribute to its performance and success – see e.g. Khan (2012[23]) and Elnaga and Imran (2013[24]).

In Korea, less than 60% of workers receive any type of firm-based training, versus more than 70% in the United States. Moreover, low-skilled workers receiving firm-based training account for about 4% of the total number of workers, while high-skilled workers account for more than 30%. Low skilled workers mostly receive informal training, and less than 5% of national gross value added is invested in training, as opposed to more than 8% in the United States (Squicciarini, Marcolin and Horvath, 2015[25]).

Figure 3.17. Firm-based training lags behind, especially for Koreans with low skill levels

Workers receiving firm-based training, by skill level, as a percentage of total employed persons, 2012 or 2015



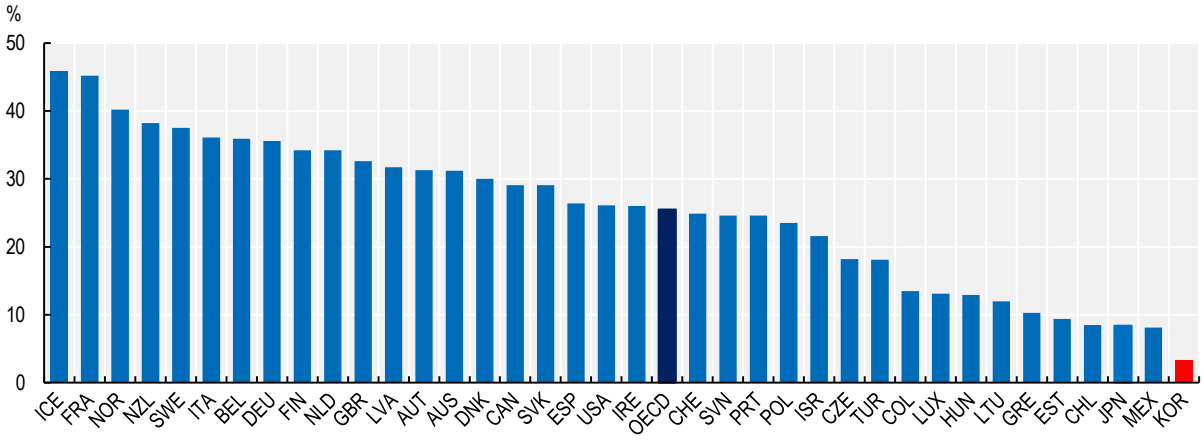
Source: (OECD, 2017[20]), *OECD Science, Technology and Industry Scoreboard 2017: The digital transformation*, OECD Publishing, Paris, https://doi.org/10.1787/9789264268821-en.

Finally, gender-related differences are large in the Korean business environment. While women hold more than 30% of the seats on the boards of the largest publicly listed companies in Germany, in Korea this share is a mere 3.6%, the lowest proportion among OECD countries (Figure 3.18). Making boards more diverse would be important not only for the inclusion of women in Korea's economy and society, but also to enhance companies' economic performance. According to data, there is a positive correlation between firm performance and board gender diversity, e.g. Conyon and He (2017[26]). Christiansen et al. (2016[27]) further show that corporate returns on assets and the share of women in senior positions are also positively associated. Such correlation is more pronounced in sectors where women tend to account for a larger share of the labour force (e.g. service sector) and where complementarities in skills and critical thinking are in high demand (e.g. high-tech and knowledge-intensive sectors).

Korean women are not only prevented from fully contributing to a successful business performance, but are also left at the margins of professional and scientific networks. For example, the share of co-inventions that include a woman inventor as a percentage of IP5 patent family is the second lowest in the OECD (OECD, 2017[28]). Across the OECD, women entrepreneurs have greater difficulty accessing finance than men (Lassébie et al., 2019[29]). In Korea, only 10.6% of loans and 5.9% of guarantees were available to women entrepreneurs in 2018.

Figure 3.18. Gender differences are sizeable in Korean businesses

Share of seats occupied by women on listed company boards, 2019



Source: *OECD Employment database*, https://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm.

Policy insights

The above analysis has highlighted various explanations as to why the sector and size productivity gaps are so wide. Not all countries have a lower productivity in services as compared to manufacturing. In the case of Korea, it seems that both past policies, which pushed manufacturing exports, and missed opportunities for regulatory reforms in services have exacerbated productivity differences across the two sectors. Encouraging a rebalancing of productivity growth towards services will require further strategic thinking on how to implement services reforms as well as creating a level playing field between manufacturing and services.

To address the productivity gap between large and small firms, a different set of policies might be required, in particular to enhance the capacity of small firms to work with large firms and to facilitate the diffusion and adoption of technologies that can boost their productivity. In addition to the need of concerted policy actions aimed at facilitating the diffusion and adoption (and performance-enhancing) technologies, especially by SMEs, upskilling and making full use of human capital in the Korean economy is key. Both types of measures would contribute to improving the economic growth and performance of Korea while making the country more inclusive. As most policies related to skills and the participation of women in the labour market were addressed in Chapter 2, the policy insights focus on some complementary policy measures that are aimed more at businesses.

Policy insight #1: Encouraging a rebalancing of productivity growth towards services

There is robust evidence across OECD countries that high regulatory barriers in the service sector shelter incumbent companies and create costs for production, with a detrimental impact on productivity (Conway et al., 2007[30]; Bouis, Duval and Eugster, 2016[31]). However, service reforms are complex to design and to implement. Since 2001, Korea has announced every year a strategy for the development of services. Between 2003 and 2013, some studies reported an improvement in the ease of doing business in services (Park et al., 2014[32]). However, the pace of reforms has been slower than in other countries, with Korea becoming the fifth OECD country with the highest overall Product Market Regulation (PMR) index in 2018 – i.e. with the highest regulatory barriers-, as opposed to being the sixth ten years before (out of 34 countries). The Ministry of Economy and Finance acknowledges that reforms have been limited and that many of the services strategies have not been implemented (MOEF, 2019[33]). The adoption of the Framework Act on the Service Industry Development has been pending in the National Assembly since

2011. Services reforms are still seen as a controversial issue and there is a persistent negative perception of the service sector, particularly when it comes to productivity. Yet, long-term structural trends requiring urgent policy action, such as ageing and climate change, provide service industries with opportunities to develop productivity-enhancing innovations, in particular related to health care and well-being applications.

Create a level playing field between manufacturing and services

A strategy aimed at reforming services industries in Korea should start with a strong signal from the government that services matter as much as manufacturing industries. Firms in the manufacturing and service sectors do not benefit from the same support or operate under the same tax rules, which might partly explain the productivity gap. In July 2019, the government announced a plan to provide the service sector with the same level of fiscal and financial support as the manufacturing sector, in order to promote R&D, service standardisation and service-manufacturing convergence (MOEF, 2019[33]).

Creating a level playing field between the manufacturing and service sectors is a policy objective that should be less controversial and can bring about key reforms without opening difficult discussions on the regulation of specific industries. It should however be accompanied by a more consistent strategy to promote services industries. The “big 3” and “DNA” programmes of the current government, for example, remain rather focused on manufacturing, even if some services are included under the bio-health industry and as part of digital activities under DNA (e.g. the development of the fintech market).

There were also announcements by the government that four service sectors would be promoted, including health, tourism, content and logistics. This is a step in the right direction if support does not lead to a misallocation of resources and, instead, complements a market-driven expansion, as can be seen in the case of the content industries (e.g. animation, broadcasting, gaming, music), providing firms with a better regulatory environment. The practice in the past has been to select specific sectors in an export-led growth strategy. While successful when catching-up with industries in other countries, this strategy is less relevant when the country is close to the technology frontier and when there is a digital transformation, as it is difficult for the government to identify the best industries to allocate resources. In this case, a level playing field that allows young firms to emerge in any sector is preferable.

Introduce product market reforms in lagging service sectors

There is currently no plan to further introduce product market reforms in service sectors where the productivity gap with manufacturing is the highest. In order to identify areas where reforms are needed, several OECD tools can be used. The PMR highlights that there is scope for reforms with respect to government’s involvement in business operations, barriers in network industries as well as trade and investment barriers (see below). Priorities can be set based on the feasibility of each type of reform and the expected benefits. In particular, some horizontal restrictions affect manufacturing as much as services and their removal would, therefore, also benefit the manufacturing sector. The fact that they are horizontal could avoid moving directly into sector-specific discussions where stakeholders may have different views and oppose reforms. When the political environment is more favourable, some sectoral reforms could then be considered. Removing barriers to investment and foreign entry in sectors such as IT and other information services, professional services and transport services could create a more competitive environment increasing the productivity of Korean firms and allowing them to compete on global markets. Box 3.2 provides examples of successful reforms in the service sector and their impact on productivity.

Finally, it should be noted that with the *servitisation* of manufacturing and digital transformation, services are increasingly important for the future of the manufacturing sector. Therefore, reforms aimed at enhancing the productivity of services will also benefit downstream manufacturing industries, which is just one more reason why service reforms are needed and could help convince those who may still have negative perceptions about services or do not consider them as big of a priority.

Box 3.2. The challenge of reforming the service sector

While there is a consensus about the benefits of service reforms, it is often challenging to design and implement them. On the one hand, the regulation of services involves different ministries, regulatory agencies and government bodies that may have diverging views. On the other hand, incumbent firms that benefit from the status quo will tend to block reforms. Three examples of successful service reforms are described below with some explanations of how countries have overcome the challenges related to their adoption.

Mexico's reform of telecommunications

The telecommunications market in Mexico was very concentrated in 2012. After the privatisation of the former state company, the market was dominated by incumbent firms in the fixed-line and mobile markets. Mexico had some of the highest telecommunications prices in the OECD. In 2012, at the request of the Mexican government, the OECD conducted a *Review of Telecommunication Policy and Regulation in Mexico*. The report recommended key measures to make telecommunication services more efficient. In 2015, a new telecommunications and broadcasting law (Ley Federal de Telecomunicaciones y Radiodifusión) entered into force removing foreign equity restrictions in the fixed-line and internet services segments of the sector. The law also introduced a new independent regulator and a series of pro-competitive measures to challenge the dominant position of incumbent firms. Before changing its telecommunications law, Mexico introduced in its constitution a new amendment with the main principles of the reform, in order to give to the government enough power to deal with private monopolies in the sector. The three main political parties also agreed on a "pact for Mexico" that included the reform of the telecommunications sector, thus building a national consensus. After the reform, not only important productivity gains were reported but they were also passed on to consumers through lower prices. The reform thus contributed to inclusiveness by giving access to affordable telecommunication services to poor households.

The reform of professional services and other regulated professions in Portugal

In 2008, Portugal ranked 26th out of 34 countries in the OECD PMR (overall indicator). In the aftermath of the financial crisis, growth was slow and the country engaged in a series of structural reforms in order to increase productivity and competition. Many professional services are self-regulated by professional bodies that tend to reduce competition and exclude foreign providers. Portugal introduced a horizontal framework covering all self-regulated professions. In 2011, 174 professions were deregulated. In 2012 and 2013, all regulated professions were reviewed to check for any unjustified or unnecessary requirements in the regulations and compliance with the constitutional principle of freedom of choice of profession. This process led to further policy recommendations and 14 more professions were deregulated. In 2018, Portugal ranked 16th in the OECD PMR. Using firm-level data, Monteiro et al. (2017[34]) highlight the positive impact on total factor productivity of product market reforms in Portugal, including for companies downstream using services inputs. Moreover, the reforms had a larger impact on laggards, i.e. firms that are farther away from the technological frontier, and contributed to a more efficient allocation of resources as it encouraged the exit of less productive companies. The use of a horizontal framework with the same process of review applying to all regulated professions helped to overcome the resistance to reforms.

Reforms in the road freight industry in Central and Eastern Europe

The transport industry is one of the most challenging to regulate due to network effects and specificities inherited from the past. The air transport industry, for example, has a specific international regulatory regime and very strict rules on the entry of firms, pricing and business operations. Rail freight is a sector

where there are still many domestic monopolies and where there is no consensus on the best way to implement pro-competitive reforms. In the road freight market, however, some reforms have been successful in promoting competition and improving productivity. When eight central and eastern European countries joined the European Union in 2004, their road freight market had already been substantially reformed and aligned with EU regulations as part of their accession process, begun in the early 1990s. These economies in transition were starting from a very different economic system and the liberalisation of the road freight market was one of the first major product market reforms they implemented. In order to foster reform acceptance, the first step taken by governments was to re-organise the profession and to group the various associations and syndicates into a single federation of the road transport sector. This way, a single organisation could be the counterpart of the ministry in charge of road transport when designing and implementing reforms. Ownership of the process by the profession was an important element in the success of the liberalisation. Following the deregulation of prices and the removal of barriers to entry, there was an important increase in road haulage and in the number of road transport companies. International traffic increased more than domestic traffic with stiffer international competition. Poland became particularly competitive and had the largest market share of EU road freight traffic in 2018. While the advantage of central and eastern European countries was first based on lower labour costs for drivers, it shifted to a higher productivity based on scale, reduced maintenance costs and better financing of trucks when wages increased in these countries.

Source: Monteiro et al. (2017[34]), OECD (2017[35]; 2017[36]), World Bank and IRU (2017[37]).

Reduce barriers to international trade and inward foreign direct investment

Korea's relatively high trade and investment barriers may partly explain the productivity gaps between industries. Product market competition is one of the main engines of productivity growth through its impact on efficiency and on innovation (Aghion and Griffith, 2005[38]). Barriers to trade and investment typically reduce competitive pressures and hinder the creative destruction that forces inefficient businesses to exit. As of 2018, trade and investment barriers in Korea are among the highest in the OECD, second only to Mexico according to the OECD PMR database. Many of the key barriers affect industries in the service sector.

Moreover, there are productivity spillovers through trade and foreign direct investment (Saia, Andrews and Albrizio, 2015[39]; Keller and Yeaple, 2009[40]). Domestic firms can learn from foreign suppliers and even more when selling their products to global buyers. High trade and investment barriers can also hinder such productivity spillovers.

In addition to the PMR, OECD has detailed information on trade and investment barriers in its Services Trade Restrictiveness Index (STRI) and Foreign Direct Investment (FDI) Restrictiveness Index. For Korea, these indices report barriers related to market entry, the movement of business people and regulatory transparency. Horizontal measures could be first targeted for reforms. For example, Korea could consider facilitating the entry of foreign service providers through "Mode 4" in the language of the WTO General Agreement on Trade in Services (GATS). Procedures to set up companies could also be simplified for foreign firms. Foreign firms and service suppliers can improve the "connectedness" of the Korean economy (see policy insight #5).

Policy insight #2: Creating a better environment for SMEs to work with large firms and be more productive

While product market reforms and the removal of trade and investment barriers can also increase the productivity of small services firms and reduce the gap with large manufacturing firms, the size-productivity gap is not limited to services firms and requires additional policy answers. Helping SMEs to be more

productive should start with policies addressing their relationship with large firms with a priority for measures related to the prevention of unfair business practices.

Prevent large firms from capturing the productivity gains of smaller firms and encourage co-operation between large and small firms

A potential driver of the productivity gap between large manufacturing firms and small service businesses is the fact that large chaebols may be the only buyers of some intermediate inputs. This creates a monopsony or oligopoly where efficiency gains from small firms are captured by large firms through market power. The Korea Fair Trade Commission (KFTC) is monitoring such cases and has legal tools to enforce competition but small firms may not always co-operate with the Commission, as they fear losing markets.[7] Some large companies are also exempted from investigations when they receive an A or B grade from the Korea Commission for Corporate Partnership (KCCP) based on KFTC and KCCP assessment. In principle, this exemption comes from their good practices with respect to co-operation with small firms but the result is that some large firms are no longer under scrutiny for unfair trade practices. With respect to co-operation between large and small firms, KCCP promotes "win-win" partnerships but is also restricting certain activities to SMEs, which might not be the best option for productivity.

In addition to strengthening KFTC rules, the entry of foreign firms (both as suppliers and as buyers) could be an effective way to reduce the market power of large domestic incumbent firms. Curbing their dominant position could be done by lowering barriers to trade and FDI that, as mentioned above, are still high in Korea. Foreign firms themselves can be involved in unfair business practices, this is why such policy should be carried out at the same time as reinforcing the tools of KFTC to address such practices. If foreign firms, however, were to enter the domestic economy, SMEs would no longer be left facing only potentially dominant large Korean firms.

Finally, it could be useful to reinforce the capacity of SMEs to protect their intellectual property. Their ability to deal with IP disputes is generally weak (Sohn, 2017[41]). Korea enacted a Framework Act on Intellectual Property in 2011 and established the Industrial Property Protection Cooperation Bureau to support SMEs, a policy which could be reinforced.

Guaranteeing a level playing field is important, as it is through the co-operation between small and large businesses that technologies and know-how can be shared and that productivity can trickle down. To encourage co-operation between large companies and small firms, particularly start-ups, several countries have been successful in creating incubators and Science or Technology Parks – see e.g. Squicciarini (2008[42]; 2009[43]) and Link and Scott (2015[44]). For example, in the area of bio-health, which is part of the "big 3", Luxembourg opened in 2015 a new incubator for firms working in biotechnology and ICTs. Through co-location on a common site, it is expected to create synergies and opportunities at the intersection of biomedical research and big data. Beyond large firms, incubators and Science and Technology Parks also establish co-operation networks among SMEs, helping them to overcome the lack of management skills and organisational capital. In Korea, the "Accelerator Investment-Driven Tech Incubator Program for Startup" (TIPS) was recently launched and is supported by government funds combined with angel investment and business mentoring. Previously, start-up incubators and accelerators relied on private initiatives.

Strengthen business-academia ecosystems and support the development of start-ups within universities

The productivity of small firms can then be enhanced through business-academia linkages, which are also avenues for large firms and small firms to work together in programmes involving also universities. Korea already has such programmes. For example, the Leaders in Industry-University Co-operation Plus (LINC+) programme aims to create an ecosystem where small firms have access to universities' research outcomes, advanced machinery and research facilities, as well as young talents. There is also an

Integrated Industry-Academia Co-operation platform created by the Ministry of Education and the National Research Foundation of Korea as well as a Programme for Specialized College of Korea (SCK) and a Programme for Industrial Needs-Matched Education (PRIME).[8] Korea could strengthen this academic-industrial co-operation system aimed at SMEs.

European OECD countries offer relevant examples of well-functioning co-operation between businesses and universities. Universities can require (or at least strongly encourage) that graduation thesis research (e.g. in engineering sciences, management studies) be conducted in direct project-based collaboration with industry. This requires professors to prepare for and accept thesis themes relevant to industrial innovators. It has worked in bringing graduates closer to companies (OECD, 2014[45]). In Korea, particular emphasis should be placed on collaboration with SMEs. In that respect, the KU Leuven Research and Development (LRD) in Belgium is an example of best practice in terms of technology transfer to society in a broad sense. LRD is a separate entity within the university and an active partner in planning and setting up the broader infrastructure for innovation in the region, such as clusters, science parks and incubators. Seed financing is another key ingredient of its success (OECD, 2016[46]).

The mission and financial setup of some Korean research institutes could be re-considered to incentivise collaboration with the industry, in particular with SMEs. The funding mode of the institutes of the Fraunhofer Society (FhG) in Germany may serve as an interesting example. The typical FhG institute receives 40% of its income from industry, 30% from participation in public competitive funding programmes for collaboration between the public sector and industry, and 30% from government funding. If the income from industry is lower, government funding is reduced so that the institute has to increase its collaboration efforts with industry. If industrial income rises above a certain ceiling, government funding is reduced as well, to avoid subsidising private research efforts that would have happened in the absence of support (OECD, 2014[45]).

This could be complemented with measures facilitating the mobility of researchers abroad as well as facilitating the entry of foreign researchers. Aiming to achieve a similar goal, the Finnish Government is exploring new measures to facilitate the entry of more international students and to get them to work in the country once they have completed their training. A co-operation group was set up between the Ministry of Education and Culture and the Ministry of Interior in order to streamline entry and residence practices for foreign students.[9]

Finally, university entrepreneurship can help nurture innovative start-ups and create links between universities and the private sector. In 2017, the Korean Ministry of Education launched the University Entrepreneurship Fund to invest in university start-ups. With this Fund, students receive an equity investment and not a loan to start a business, so that they can restart in case of failure.

Address the skill shortage of SMEs and facilitate the diffusion of technologies that can boost their productivity

Skill shortages create upwards pressures on wages, so that less productive firms (“laggards”) are unable to afford the cost of high-skill workers. The government partly addressed the issue by reforming the curricula at vocational schools and expanding the Meister School and Work-Study Dual Systems, as discussed in Chapter 2. Further actions could be taken, e.g. by increasing public training opportunities, which help relax such tensions and foster laggards’ productivity growth. Institutional public training is a particularly good policy lever to help SMEs, as they often lack the resources to organise in-house training and rely on outside training institutions.

Product market reforms – already emphasised in policy insight #1 – can help close the gap between leaders and laggards, especially in the service sectors, which are generally more sheltered from international markets. This would also create better conditions for growth-enhancing reallocation through the entry of more productive businesses and the exit of less successful ones, which would sharpen the incentives for technological adoption. Cross-country analysis shows that the productivity gap between

frontier and laggards is much smaller in sectors where pro-competition market reforms were the fastest (Andrews, Criscuolo and Gal, 2016[15]). This has been confirmed also for Korea (Choi, 2018[13]).

When it comes to promoting innovation and facilitating the diffusion of new technologies, especially to SMEs, several mechanisms are already in place in Korea. The government grants R&D support of KRW 3 trillion a year to SMEs, placing Korea second among OECD countries (Jones and Lee, 2018[47]). But there is an issue with the efficiency of such support and the selection of recipients, as the current system leads to grant support to recipients whose performance is lower than that of non-recipients (Lee, 2018[48]). Given the low diffusion rates observed for technologies that are particularly important for SMEs and the role of complementary assets in adopting such digital technologies, support should not only be directed to technology development but also technology adoption. Support could target infrastructure and acquisition of hardware and software and, more importantly, investment in skill development, management and organisational capital. Recent measures go into this direction, in particular subsidies to SMEs to access cloud services. However, investment in organisational capital accounts for only 1.7% of total value added in Korea, lower than the OECD average, which is 2.2% (OECD, 2015[49]). It is important for these measures to encompass the development of skills and organisational capital to have the expected impact, as technologies alone would not lead to the performance improvement sought.

But more generally, policies that can have an impact on the productivity gap between frontier firms and laggards and accelerate the diffusion and adoption of technologies are those promoting business dynamism. They are reviewed more in detail in the next section with further policy insights.

Review and assess existing programmes and support aimed at fostering women's entrepreneurship and encourage the acquisition of STEM skills

Despite some progress, the gap between women and men in Korean society remains large. While this is related to culture, and thus requires a sustained long-term approach aimed at addressing engrained social norms and stereotypes, many short- and medium-term policies can allow women to contribute fully to growth, innovation and entrepreneurship. As part of such an integrated policy approach aimed at leveraging the untapped potential of women in the Korean society (see Chapter 1), the following measures related to the future of doing business could be included.[10]

First, to stimulate women's entrepreneurship and participation in management jobs, it would be important to review and assess existing programmes and support aimed at fostering women's participation in the labour market and in entrepreneurship. The objective would be to identify key bottlenecks and define clear priorities, while promoting and implementing actions to address sources of discrimination. Among the possible actions that can be envisaged include: fostering blind applications, affirmative action, and (voluntary or compulsory) reporting by firms on positive actions implemented to prevent or at least address discrimination. In Korea, affirmative action is envisaged only for firms with more than 500 workers.[11] Yet the share of women accounts only for 37% of total employees of such firms. Female entrepreneurship could also be supported by connecting female and male entrepreneurs, through small business initiatives or by fostering links between large and small businesses. While targeted actions are needed, it should be noted that women's entrepreneurship and participation should be encouraged by transparent and stable regulations for *all* entrepreneurs, including easy access to public information on starting a business. A culture of non-discrimination is better achieved by not singling out women. This is why affirmative action and support to firms based on gender would need to be carefully conceived and enacted. The Ministry of Gender Equality and Family has taken steps to advance gender equality in the business sector, e.g. by helping companies set and implement gender balance objectives. In addition, it promotes gender equality throughout society through consensus-building strategies, e.g. by publicizing the gender of listed corporations' executives.

To remove obstacles to the career development of women, it is also important to address stereotypes and socio-cultural norms that discourage women's participation in environments considered "masculine".

Promoting the development of women-friendly environments can further be achieved through role models, mentors and "ambassadors", which would make women feel more comfortable in unwelcoming environments. In addition, better networking among female professionals could enhance the career development of women. A country that has implemented such a policy is Sweden. In 2008, the government funded an ambassador's project to highlight successful women in different business activities who could inspire others to become entrepreneurs. These women could share their stories and experiences in networks, encouraging more women to view entrepreneurship as a possibility for their career while also addressing the challenges they face. Between 2008 and 2014, about 2 000 women were selected to become ambassadors and participated in about 11 000 activities, reaching 170 000 people at the national and regional level (OECD/EU, 2016[50]). Similar programmes have been introduced in many countries, including Germany and Scotland. As a first step in this direction, the Ministry of Gender Equality and Family has set up the Women's Talent Academy to foster young women's careers through mentoring and networking.

Finally, young Korean women often display relatively higher skills and better educational outcomes than their male counterparts. However, when looking more broadly at STEM skills (science, technology, engineering and mathematics), there is still a significant gender gap in Korea. This could be addressed by encouraging the acquisition of STEM skills amongst women through the development of gender-neutral learning environments and addressing stereotypes and socio-cultural biases that lead women to feel uncomfortable in STEM environments. Gender-neutral textbooks and methodological approaches in education and training can help to create such a gender-neutral environment. One can also provide targeted advice, especially related to the career prospects of different educational choices and support such STEM- and technology-related choices, through e.g. loans or grants, or quotas in educational institutions: 27% of researchers in public research institutions are women, 32% in universities and 16% in firms.[12] Greater participation of women in innovative activities (including software development) can also be fostered by means of designing incentives and supporting mechanisms that favour or reward to a greater extent the scientific and inventive output of women or of mixed teams of researchers and inventors that include women.

Promoting business dynamism

There are many start-ups and young firms in Korea, and a variety of schemes supporting SMEs. Yet, Korea is characterised by low survival rates of entrants and a difficulty for firms to scale up. This section uses novel data to characterise business dynamism in Korea and compare it to other OECD economies. It provides insights into policies that could unleash the growth of SMEs by addressing size contingency issues in support policies, re-designing R&D support to accelerate technology diffusion, and reducing the cost of experimentation. Moreover, this section recommends the assessment, evaluation and streamlining of existing SME support programmes.

A dynamic business environment is key to enable new productive firms to enter the market, grow and replace old and unproductive ones. This Schumpeterian process of "creative destruction" leading to productivity-enhancing resource reallocation is a major driver of aggregate productivity growth (Decker et al., 2017[51]). Business dynamism is also of primary importance for labour market outcomes, as young firms and start-ups disproportionately contribute to job creation in OECD countries (Criscuolo, Gal and Menon, 2014[52]). Moreover, fast-growing young firms are more likely to recruit workers who are marginalised on the labour market, thereby contributing to sharing productivity gains with larger segments of the population (Coad et al., 2014[53]). Therefore, when young firms perform well it improves the business environment while creating opportunities for all.

Analysing the specific contribution of firms of different sizes to employment growth requires detailed data on job creation and destruction. The evidence base in this section relies on *DynEmp* (see Box 3.1), an

OECD distributed micro-data project that collects different aggregations of annual job flows at the industry level for different types of firms (young and old, small and large) and according to their transition dynamics (growing, stable, shrinking) and their demographic status (entrants, exiting, incumbent). The resulting database is comparable across countries and over time.

Heterogeneity in the SME landscape

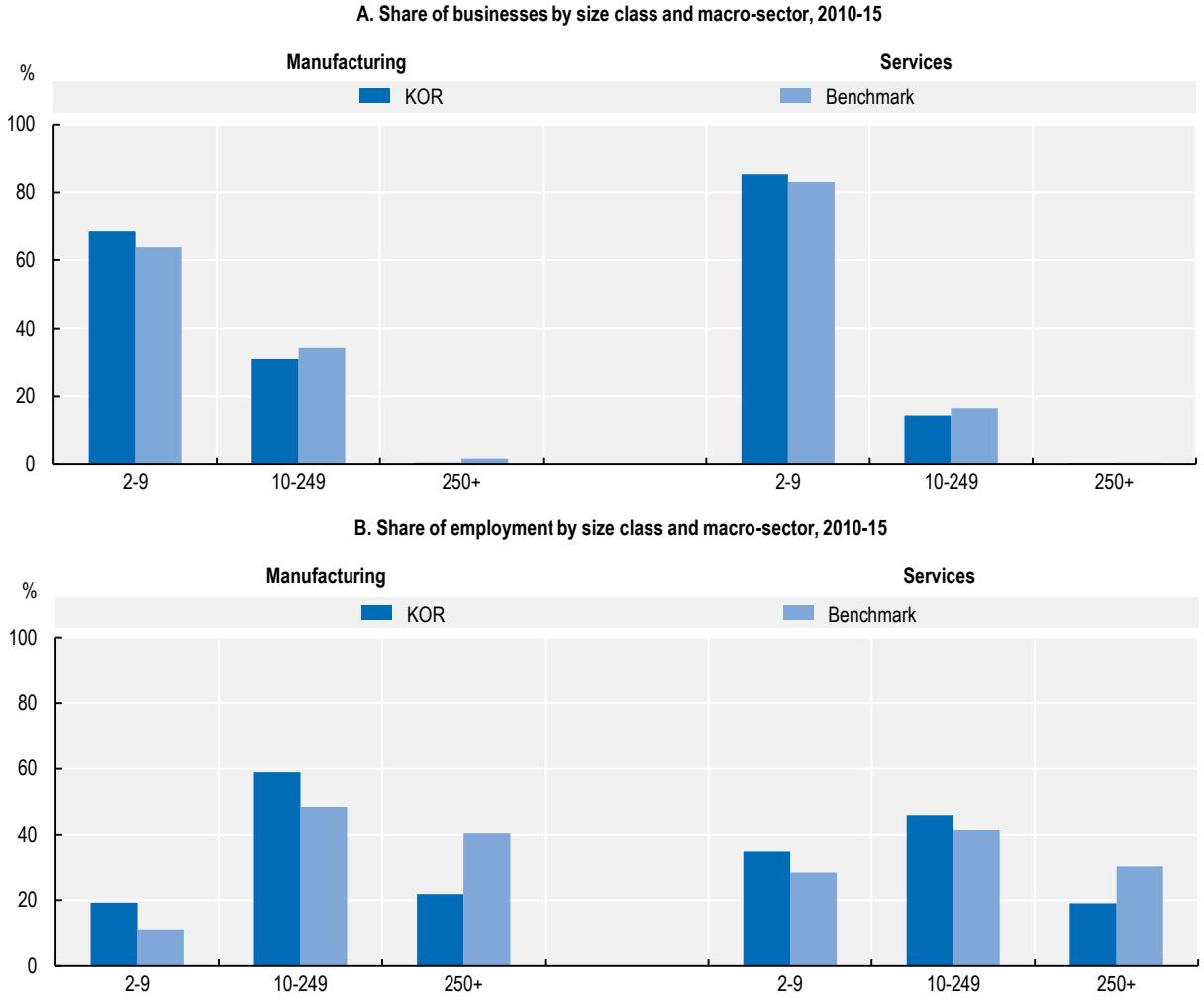
SMEs play a prominent role in Korea. Their share of employment is higher than in any other OECD economy and they occupy a central place in the government's new paradigm, in which they replace large firms as the drivers of innovation (OECD, 2018[14]). The development of SMEs promotes inclusiveness by creating broad-based income gains across regions and industries in OECD economies (OECD, 2017[54]). However, the existence of pervasive size productivity gaps suggests that achieving inclusive growth requires improvements in the business environment of SMEs, especially in the service sector.

The size distribution in Korea is skewed towards small establishments, both in manufacturing and non-financial market services. While micro-businesses with fewer than 10 workers are more prevalent in Korea than in the reference set of countries, the opposite holds true for businesses with more than 10 workers, both SMEs with 10 to 250 workers and large establishments with more than 250 workers (Figure 3.19, panel A).[13] The relatively large discrepancy in the size distribution of firms in Korea and the significant differences with other countries points to the existence of firm-level barriers to growth.

A very large share of employment in the Korean manufacturing and non-financial market services is found in SMEs. Large Korean enterprises only account for about 20% of employment in both macro-sectors, versus respectively 40% and 30% in the manufacturing and services sectors of other countries (Figure 3.19, panel B).[14] As it indicates where the typical worker in the economy works, the distribution of employment shows that Korean workers are less likely than others to be active in large businesses.

Analyses of the size distribution at the macro-sector level hide important heterogeneity across industries within the manufacturing and service sectors (Figure 3.20, panel A). The share of micro-businesses in manufacturing industries such as textiles or wood and paper is almost 80%, while it is only 60% in the computer and electronics industry, and about 45% in the transport equipment industry. The cross-industry heterogeneity is large in the service sector as well, with 90% of micro-businesses in the retail and wholesale industry and in the hotel and restaurant industry, versus only 60% in the IT industry. This confirms previous studies highlighting that one issue with services in Korea is related to the many small firms in the retail sector and in the hospitality sector (Kim, 2018[55]).

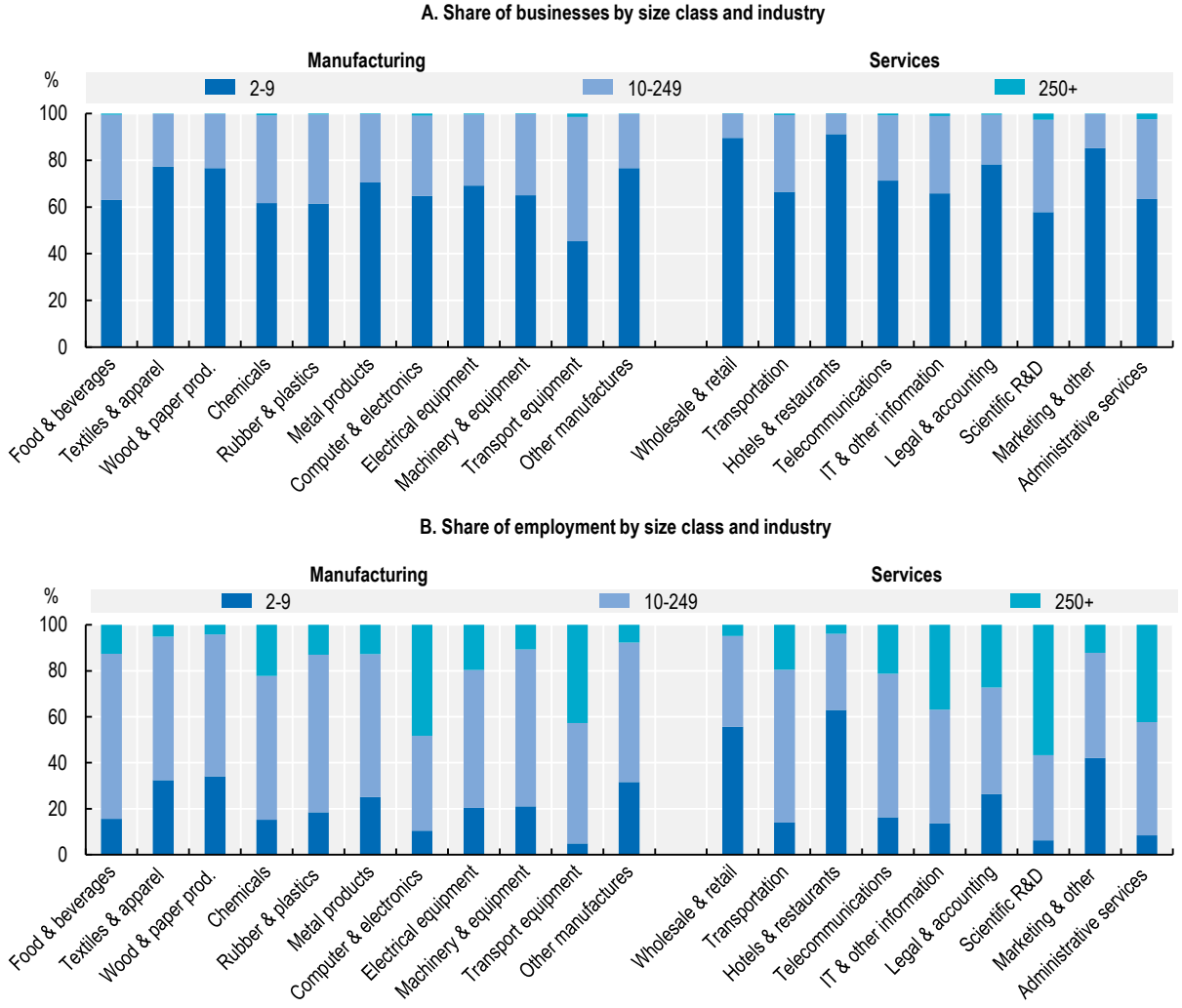
Figure 3.19. The size distribution is skewed towards micro-businesses and SMEs in Korea



Note: This figure reports the size distribution in Korea and in the reference group of countries for three size classes, separately for manufacturing and non-financial market services, on average in the period 2010-15. Shares are calculated in terms of units (panel A), and employment (panel B). Owing to methodological differences, figures may deviate from officially published national statistics. See Box 3.1 for details on data and industry coverage.
Source: *OECD DynEmp3 database*, http://www.oecd.org/sti/dynemp.htm.

The distribution of employment shares is very heterogeneous across industries as well (Figure 3.20, panel B). Cross-industry heterogeneity largely reflects the former development strategy that championed a few selected sectors. Indeed, while large firms account for a low share of employment in most industries, they account for a very large share in the computer and electronics industry, in the transport equipment industry, in the IT industry and in the scientific and R&D industry.

Figure 3.20. The size distribution is heterogeneous across industries

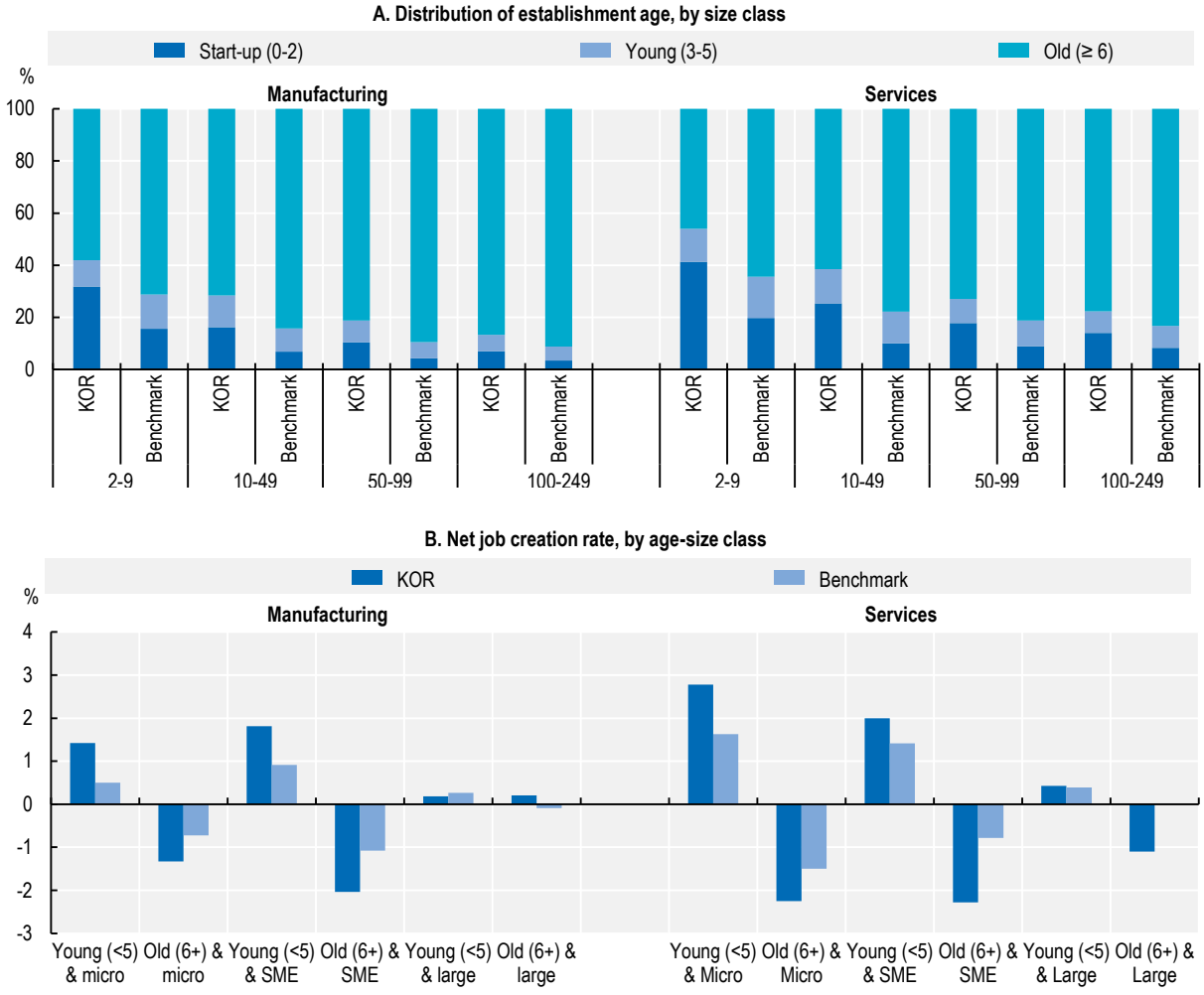


Note: This figure reports the size distribution in Korea for three size classes, by SNA a38 sectors on average in the period 2010-15. Shares are calculated in terms of (a) units, and (b) employment. Owing to methodological differences, figures may deviate from officially published national statistics. See Box 3.1 for details on data and industry coverage.
Source: *OECD DynEmp3 database*, http://www.oecd.org/sti/dynemp.htm.

Barriers to scaling-up

The Korean business environment appears very dynamic at first sight. The share of start-ups and young establishments is significantly larger in Korea than in other OECD countries across all size classes (Figure 3.21, panel A). The share of start-ups is particularly high among small enterprises.[15] Consistent with this, other evidence shows that the difference in the birth rate[16] of employer enterprises and non-employer enterprises is higher in Korea than in any other OECD country (OECD, 2017[54]).[17] This points to the coexistence of very different types of entrepreneurship in Korea, including subsistence entrepreneurship[18] as a key element of the social safety net (OECD, 2018[14]). Moreover, the Korean business environment is characterised by relatively high flows of job creation and destruction, in particular for establishments of small size (Figure 3.21, panel B). Job flows appear larger than in other OECD economies. According to Cho et al. (2017[56]), small businesses are the driving force of aggregate employment growth in Korea, but growth is mostly driven by the entry of very small firms, which is offset by job destructions of a similar magnitude.

Figure 3.21. The Korean business environment appears very dynamic at first sight

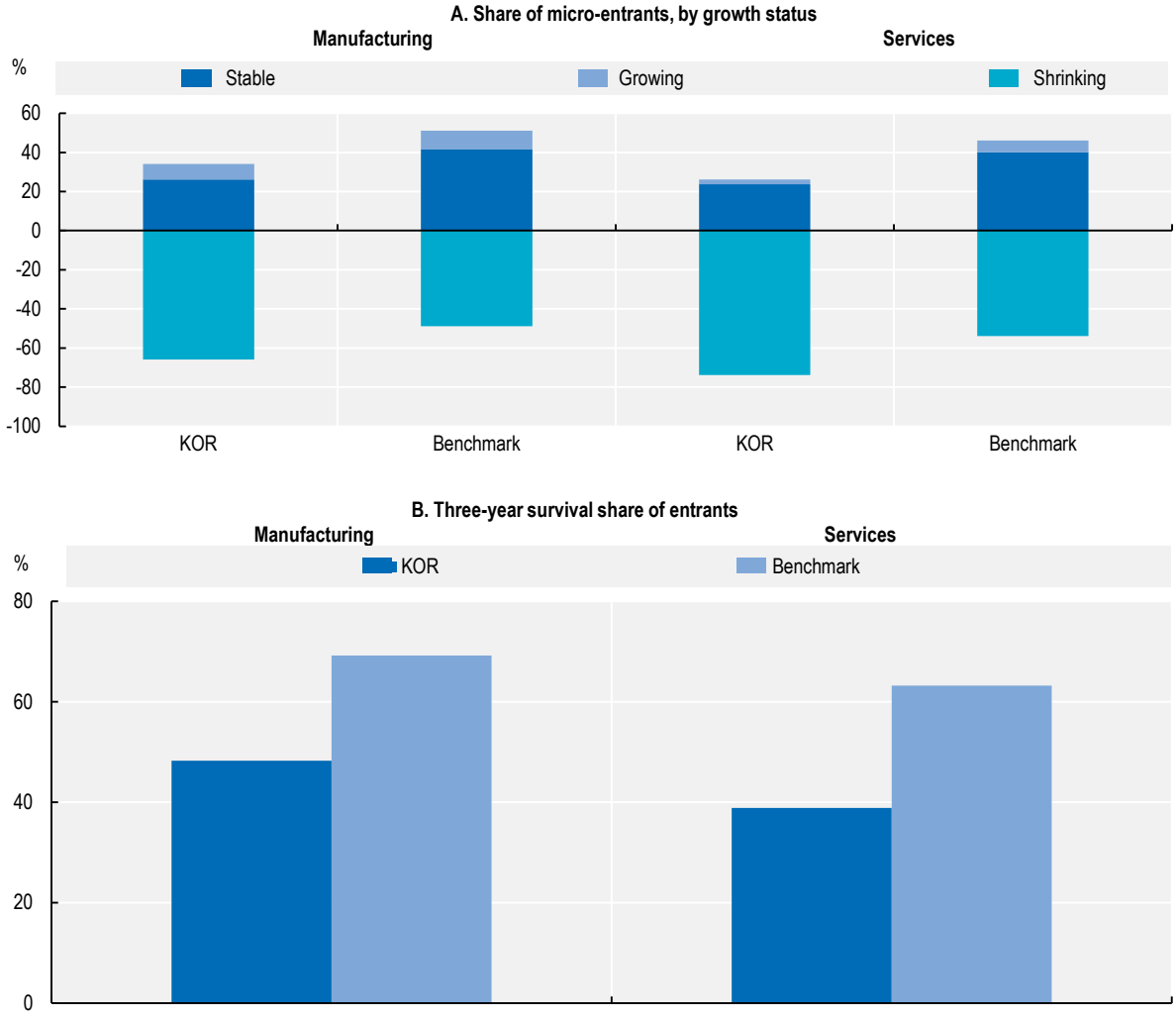


Note: Panel A reports the age distribution by size class in Korea and in the reference group of countries, separately for manufacturing and non-financial market services in 2015 or in the last available year. Shares are calculated in terms of units. Panel B reports the average contribution to net job creation rate by size and age class in Korea and the reference group of countries, by macro-sector in the period 2010-15. This is defined as net job creation by the particular group over total employment (on average between time t and t-1) in the macro-sector. Units with missing age are excluded. Owing to methodological differences, figures may deviate from officially published national statistics. See Box 3.1 for details on data and industry coverage.
Source: *OECD DynEmp3 database*, http://www.oecd.org/sti/dynemp.htm.

Yet, this apparent dynamism hides the very low scaling-up and survival rate of entrants, which suggests large impediments to SME scaling up. Small entrants, which account for most job creation, grow much less and shrink more than in other OECD countries, especially in non-financial market services (Figure 3.22, panel A). Moreover, the survival share of entrants is very low by OECD standards (Figure 3.22, panel B). Over the period 2010-15, only about 50% of entrants in manufacturing and 40% in services had survived three years after entry, versus about 70% in manufacturing and 65% in services in the benchmark set of countries.

Such characterisation of business dynamics in Korea (high share of start-ups but little scaling up) points to an environment that is not conducive to sustainable entrepreneurship and growth. This contributes to perpetuating productivity and wage gaps between large conglomerates and the rest of the economy, and hence to the concentration of wage gains in a small part of the workforce.

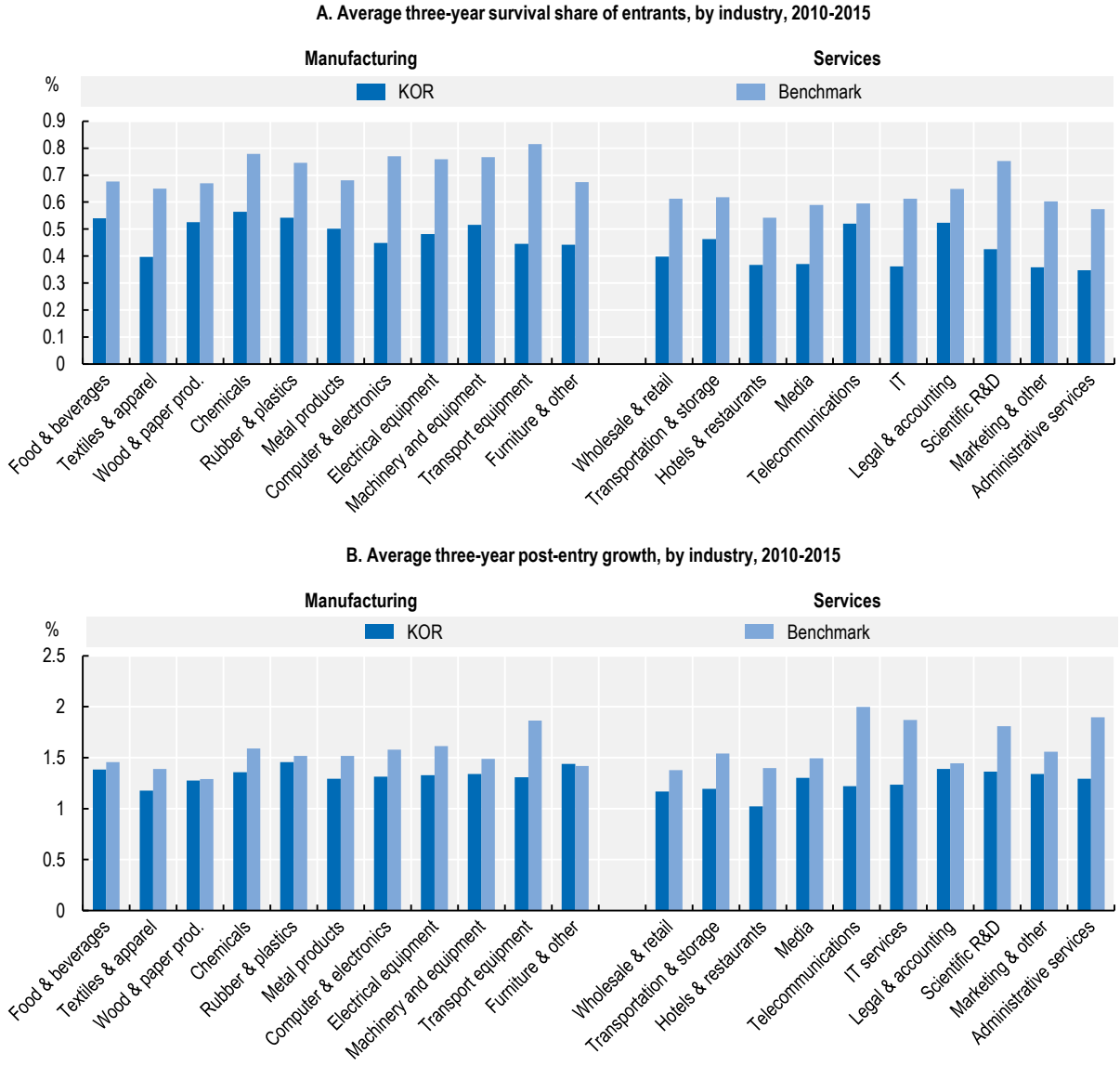
Figure 3.22. Most micro-entrants do not scale up…if they survive at all



Note: Panel A reports the average share of units in all micro (2-9) entrants that are stable, growing or shrinking/exiting over the period 2010-15 by macro-sector for Korea and the reference group of countries. Panel B reports the average three-year survival share of entrants by macro-sector for Korea and the reference group of countries. Cohorts of entrants can start on 2010, 2012 and are followed for 3 years, conditional on the availability of data. Owing to methodological differences, figures may deviate from officially published national statistics. See Box 3.1 for details on data and industry coverage.
Source: *OECD DynEmp3 database*, http://www.oecd.org/sti/dynemp.htm.

Scaling-up patterns are heterogeneous across industries in both manufacturing and non-financial market services (Figure 3.23). While both survival and post-entry growth rates of entrants are generally lower in Korea than in other countries across all industries, some industries stand out. At one end of the spectrum, the hotels and restaurants industry is characterised by the lowest rate of post-entry growth and the second lowest survival rate across manufacturing and non-financial market services. At the other end of the spectrum, entrants in the chemical industry have both a relatively high survival rate and more robust post-entry growth.

Figure 3.23. Survival and post-entry growth are heterogeneous across industries



Note: Panel A reports the average three-year survival share of entrants by SNA a38 sectors on average in the period 2010-15 for Korea and the reference group of countries. Panel B reports the average three-year post-entry growth by SNA a38 sectors on average in the period 2010-15 for Korea and the reference group of countries. Cohorts of entrants can start in 2010, 2012 and are followed for three years, conditional on the availability of data. Owing to methodological differences, figures may deviate from officially published national statistics. See Box 3.1 for details on data and industry coverage.
Source: *OECD DynEmp3 database*, http://www.oecd.org/sti/dynemp.htm.

Policy insights

Korea has a very developed set of policies aimed at helping SMEs and young firms. In 2016, Korea provided financial support to SMEs through public funds and credit guarantees amounting to 3.8% of GDP, the second largest share in the OECD (Jones and Lee, 2018[47]). The current government has reinforced this support (Box 3.3). The above analysis suggests possible explanations of why these firms do not manage to scale up despite the support they receive.

Box 3.3. Financial support for SMEs and start-ups

Many of the policies of the current administration are aimed at SMEs and start-ups. In 2019-2020, this includes:

- Loans amounting to KRW 10 trillion to SMEs in key industries (motor vehicles, shipbuilding, display and oil & gas), future industries (future cars, drones, bio-health, smart cities) and "DNA" and KRW 5 trillion to SMEs investing in facilities for the environment and safety.
- Extension of the Growth Support Fund amounting to KRW 8 trillion, with 40% of funding provided by the government and the rest by the private sector.
- Additional loans and guarantees by financial institutions and credit guarantee organisations for firms' facility investment and restructuring (MOEF, 2017[57]).
- Plan for a new "Scale-Up Fund" focused on scale-up of firms with innovative technologies. The fund will raise KRW 12 trillion by 2020. (MOEF, 2019[58]).
- New Capital Market Innovation Plan to ease the access of SMEs to capital markets by reducing the threshold for crowdfunding (FSS, 2018[59]).

New rules for financial institutions providing loans and credit guarantees, such as using movable assets (IP collateral and half-finished goods) as collateral and abolition of joint sureties for corporate owners, which posed a heavy burden on entrepreneurs. Private institutions will phase it out gradually.

Policy insight #3: Unleashing the growth of SMEs

The policy environment is key in unleashing the growth potential of SMEs. One important question is whether regulations are not to some extent discouraging firms in Korea from growing. There are many policies in place aimed at enabling SMEs to overcome their disadvantage in accessing credit, dealing with red tape and bearing fixed operation costs. However, such policies can create disincentives to grow and cross the size threshold beyond which the policy no longer applies. Size-contingent policies may therefore partly explain size gaps (Box 3.4). Moreover, such policies reduce aggregate productivity because they distort the allocation of resources, both labour (e.g. in the case of size-contingent labour laws) and capital (e.g. in the case of size-contingent corporate income tax provisions).

Box 3.4. Size contingencies and disincentives to grow

The business environment of advanced and developing economies alike is characterised by the existence of size-contingent policies, i.e. policies that seek to ease the regulations on small businesses with employees or turnover below a certain threshold. The typical regulatory sources of size contingencies include labour laws, rules governing the provision of healthcare and other benefits to workers, and the corporate tax system.

Market failures vs. disincentives to grow

The rationale for size-contingent policies stems from market imperfections that disproportionately affect small businesses. Size-contingent support or exclusion from regulations aim at levelling the playing field by addressing the competitive disadvantage of small firms in terms of access to credit, red tape and other fixed operating costs (OECD, 2019[60]).

However, size-contingent policies have adverse effects because support is cut off beyond a given threshold. Efficient businesses with growth potential may choose to remain small in order to avoid the

additional costs associated with crossing the threshold – the so-called "Peter Pan syndrome". Such disincentive to mature and grow distorts the allocation of labour and capital inputs, which is detrimental to aggregate productivity.

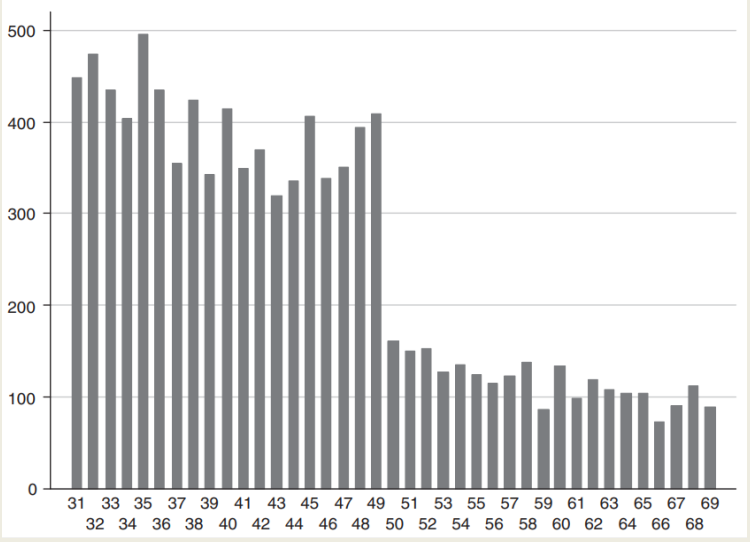
The welfare and policy implications of trade-offs associated with size-contingent policy interventions are the subject of debates and require empirical assessment. Academic research regarding the case of labour legislation in France recently attracted policymakers' attention. The regulatory burden that French firms face increases substantially when they employ 50 workers or more. Among others, they must create a works council (*comité d'entreprise*), establish a health and safety committee, report detailed information on all employees to the administration and appoint a union representative. In fact, some firms choose to remain below the threshold to avoid the extra burden.

The case of French labour legislation

The hypothesis was formally tested based on micro-data covering the population of French firms (Fichier de Comptabilité Unifiée – FICUS) – see Garicano, Lelarge and Van Reenen (2016[61]). The research identifies departures from the theoretical firm size distribution, namely a bulge before the 50 worker threshold and a valley after the threshold (Figure 3.24). The size-contingent regulation distorts resource allocation, and thus reduces aggregate productivity, as some firms with fewer than 50 employees would be larger if the threshold were not in place, while the extra cost associated with the regulation makes firms with more than 50 employees smaller than they would be in an unregulated economy. The associated welfare loss depends on the degree of wage flexibility in the labour market. In France, a country with relatively high minimum wages and powerful unions, it is estimated to be 3.5% of GDP.

Figure 3.24. Size-contingent labour laws create disincentives to grow in France

Number of firms by employment size, sizes from 30 to 70 workers, 2000



Source: (Garicano, Lelarge and Van Reenen, 2016[61]), "Firm Size Distortions and the Productivity Distribution: Evidence from France", *American Economic Review*, Vol. 106/11, pp. 3439-3479, http://dx.doi.org/10.1257/aer.20130232.

Address size contingency and transfer of ownership in schemes supporting firms, labour laws, tax policy and in the credit market

The relative lack of medium-sized companies in Korea is often blamed on the abrupt discontinuation of support schemes for companies that graduate from the SMEs category. Companies that have annual revenue in excess of KRW 150 billion on average for three years are excluded or benefit less from a range of support schemes, including below-market interest on bank loans, finance from the technical guarantee fund, and tax benefits (OECD, 2014[45]).[19] Beyond the discontinuation of government financial support, the following regulations kick in at various size thresholds:

- Labour laws:
  - 5 workers: cap on working hours and minimum additional pay for supplementary hours; minimum paid leave; obligatory security and health training; limits on temporary employment; restrictions regarding retirement age
  - 10 workers: employment handbook required
  - 30 workers: compulsory consultations with labour unions
  - 50 workers: security and health managers required; quotas of disabled workers
- Healthcare and benefits
  - 5 workers: restrictions regarding retirement age
  - 500 workers: childcare system
- Tax system
  - 300 workers/KRW 150 billion revenue: lower R&D investment credit and R&D tax credit; lower tax credit for job creation; no longer income tax deduction for young workers; no longer reduced CIT rate (actually several threshold; further contingency on industry – wholesale, retail, medical industry – and location – in or outside metropolitan area)

The Korean government is aware of the phenomenon and has experimented with policy responses. Korea should monitor and evaluate these policies, in order to ensure that they do not create any new distortive size threshold. In particular, it established the Growth Ladder for Medium-Sized Companies programme in September 2013. Participating companies can keep benefiting from enhanced access to public procurement and from preferential R&D tax credit. The World Class 300 Project specifically aims at developing 300 competitive medium-sized companies by 2020 by supporting their R&D, human resources, finance and global marketing.

Other mechanisms that might indirectly hinder firms' growth come from the taxation of transfers of ownership in private (family-owned) businesses, such as a reduction in the inheritance tax liability. In Korea, there are inheritance tax reductions when the new generation of owners also manages the company for at least ten straight years after inheriting it. This type of family ownership and management transfer across generations might be detrimental to the firm's performance and prevent income redistribution (Bloom and Van Reenen, 2010[62]). Finally, the government involvement in the credit market could be reviewed and evaluated to check that loan guarantees benefiting small firms are not creating disincentives to grow. For example, the Korean Credit Guarantee Fund and the Korea Technology Credit Guarantee Fund provide credit guarantees to SMEs that are otherwise ineligible for regular bank loans. Regulations that request commercial, regional, and foreign banks to devote a specific proportion of their loans to SMEs could also be included in this evaluation exercise.

Support scale up of small firms

Supporting the scaling up of small firms and accelerating technology diffusion from the most productive firms to laggards may also involve redesigning R&D tax credits so that they benefit small (manufacturing) firms and helping service SMEs to invest in intangible assets and knowledge-based capital. Korea is

among the top performers in terms of government support for R&D, both direct and indirect through tax incentives. Direct and indirect support each account for about half of total support. However, R&D tax credits that are not refundable may not be the most adapted to small firms as they might be in a loss position and not be tax liable. Korea could use the experience of other OECD countries with cash refunds or exemptions from the payroll withholding tax that are found to be more favourable to SMEs. R&D support could also be re-balanced towards direct funding, as the latter was shown to increase the catch-up of laggards across European OECD countries (OECD, 2019[63]). Moreover, R&D support mainly benefits R&D performers, and thus sectors that are more R&D intensive, i.e. the manufacturing sector and knowledge-intensive services, such as computer services firms.[20] Helping SMEs in the service sector also requires supporting investment in intangible assets, beyond R&D and innovative property, such as organisational capital and economic competencies.

Reduce the cost of experimenting and venturing in new activities

The last area of policy action to unleash the growth of SMEs deals with reducing the cost of experimenting and venturing in new activities. It can be achieved by promoting competition through regulatory reforms and by strengthening market selection through better insolvency regimes. Market selection through entry and exit is the key feature of the process of "creative destruction" that leads to technological change and productivity growth as is the inherent risk that entrepreneurs face when investing in innovative activities. Regulatory reforms can help promote competition. Overly stringent regulations increase the cost of experimenting, of expanding a product range or venturing into different activities. Korea's positive-type regulatory system, which prohibits everything except what is specifically allowed, may be an obstacle to experimentation. Reforms have started in 2018 to reverse the system towards a negative-type regulatory regime, which allows everything except what is specifically prohibited. These reforms should be extended to a broader set of regulations. Moreover, Korea has started to use "regulatory sandboxes" to test new regulations in selected industries, particularly in the area of digital technologies (e.g. new ICT convergence technology). Moreover, the Regulation-free Special Zone Act from April 2019 has enabled the government to ease regulations in 14 special zones regarding specific innovative technologies, including blockchain (Busan), autonomous driving (Sejong) and biomedical technologies (Daejeon). These are also steps in the right direction.

Finally, insolvency costs and barriers to restructuring are associated with lower productivity growth of laggard firms across the OECD (Adalet McGowan, Andrews and Millot, 2017[64]). Reforms should reduce the relatively long time to discharge bankrupt entrepreneurs from pre-bankruptcy indebtedness, which is three years in Korea as opposed to less than one year in Japan or the US (OECD, 2018[65]).

Policy insight #4: Assessing, evaluating and streamlining existing SME support programmes

The Korean government has been implementing a large number of support measures for start-ups and SMEs (OECD, 2014[45]). More than 1 300 programmes are in place, managed by different institutions at the central and local level in 2017 (Baek, 2017[66]). Helping small businesses as they face relatively high fixed operating costs due to administrative processes, credit market imperfections and other information asymmetries is good policy. However, the multiplication of support programmes can be counter-productive, as it creates a complex and potentially confusing landscape for small businesses. Moreover, the existence of too many programmes could add to information asymmetry and eventually help inefficient businesses escape the market's selection.

Help start-ups and SMEs navigate a complex and potentially confusing landscape

A first step to helping start-ups and SMEs navigate a complex and potentially confusing landscape could be to provide a single "one-stop" shop for SME support. There are currently several places that provide information and guidance to SMEs while it is recommended to have a "one-stop" shop (KIET, 2014[67];

MOTIE, 2019[68]). But on the government side as well, the complexity and overlap between the different programmes must be better understood. In 2015, Korea introduced an "Integrated Management System for SMEs" (SIMS) that can be seen as a first effort to link and integrate existing programmes. SIMS built a database and provides information to policymakers about the overlapping schemes. The system could also be used to identify SMEs participating in multiple programmes, so as to prevent firms from accumulating benefits from different subsidy schemes and reduce the disincentive to grow.

However, addressing the issue requires more fundamental policy action. Research indicates that Korean SMEs accessing government support are on average less productive than SMEs that did not receive public financing (Chang, 2016[69]).

Assess, evaluate and streamline

The performance of supported firms should be carefully monitored and be based on their productivity performance, not on survival. The introduction of a system of graduation from government financing would redirect support to young firms, which face market failures in credit, and would avoid extending the life of inefficient SMEs. SME support should not interfere with incentives to scaling up but be conducive to building a complete ecosystem of small, medium and large firms.

When there is some overlap or duplication in support schemes, streamlining can help improve the efficiency of support. For example, between 2006 and 2010, the UK government reduced the number of support schemes from 3 000 to 100 (Box 3.5). Evaluation of support policy program is also important. Ex-post evaluation and ex-ante strategies for ex-post evaluation should become part of the policy cycle and inform policy decisions. Piloting and randomised experiments could also be valuable tools for estimating the causal impact of policies.

Box 3.5. Streamlining public support for SMEs and start-ups

In most OECD countries, governments have set up schemes to support entrepreneurship and SMEs. The rationale lies both in the idea that start-ups and young (small) firms create most private sector jobs (Birch, 1979[70]; Davis, Haltiwanger and Schuh, 1996[71]; Haltiwanger, Jarmin and Miranda, 2013[72]), and in the fact that small businesses face proportionally high fixed operating costs due to administrative processes, credit market imperfections and other information asymmetries.

Over time, however, support schemes and other policy initiatives typically pile up, possibly overlapping or even duplicating. The proliferation of support schemes eventually decreases overall efficiency, either because it creates a complex and potentially confusing landscape for start-ups and SMEs, or because it adds an extra layer of information asymmetry that entails inefficient, low-productivity businesses to escape market selection and survive.

While there exists no one-size-fits-all criterion with which to assess whether the number of support programmes is excessive, an evaluation and possibly a streamlining of existing schemes is beneficial to achieve coherence in public support. The creation of an inventory that maps businesses to the different programmes from which they benefit can uncover overlaps and inform the streamlining process.

In the United Kingdom, the Business Support Simplification Programme provides an example of such policy. Prior to the launch of the Programme in 2006, the existence of more than 3 000 publicly-funded support schemes reportedly overwhelmed businesses. Often, they found it both too complex and too costly to apply. The government then set about reducing the number of schemes to 100 and simplifying delivery channels. By 2007, it made a single programme, called Business Link, the primary access

route for individuals and businesses seeking support, and started reviewing existing schemes based on the following criteria:

- Rationale: is there a market failure in provision that justifies the intervention?
- Effectiveness: is the intervention likely to reach its objective?
- Need: is there a business demand for the intervention?

Selected programmes were then grouped around a number of common business themes, including finance access, innovation, R&D, training and skills, exporting and overseas trade, and efficient use of natural resources. The process that led to the final "Solutions for Business" package was carried out in collaboration with businesses, and an independently chaired board was set up to maintain the coherence of the package.

By 2010, substantial streamlining was achieved. Finally, an online tool for guidance was set up, the business support and finance finder (https://www.gov.uk/business-finance-support-finder). For details, see OECD (2014[45]) and references therein.

Provide support to all SMEs rather than cherry-picking specific activities or types of firms

A last point, already made with respect to other policy insights, is that past Korean winner-picking and specialisation policies may have weakened competition and protected incumbents, contributing to productivity gaps and low aggregate productivity. Instead of selectively supporting SMEs based on their industry, activity or region, reforms should enhance competition across all industries and provide the same support to all firms.

Re-thinking the global value chain strategy of Korea

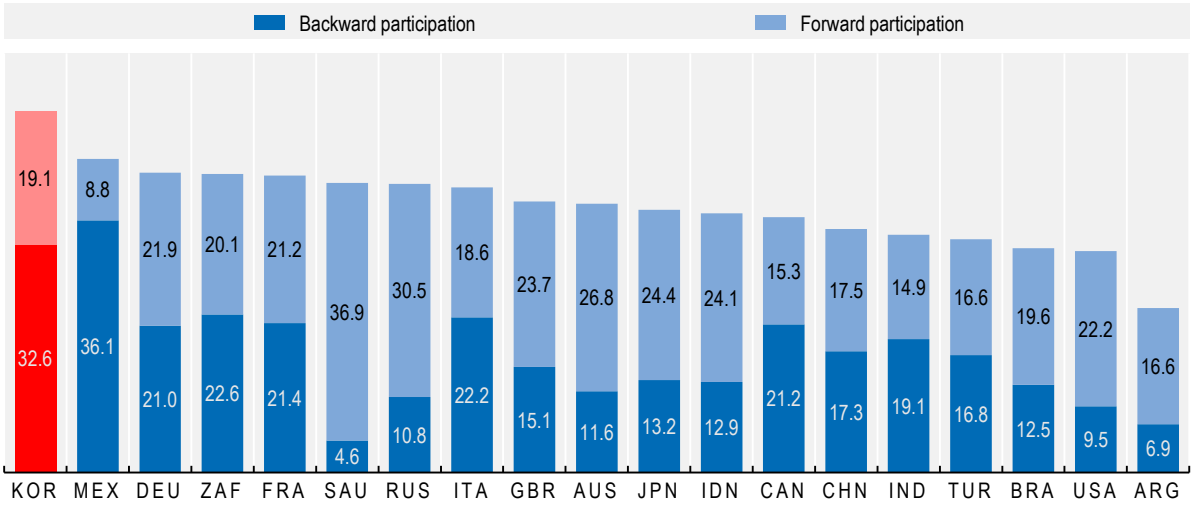
The former strategy of export-led growth in key manufacturing industries and targeted support to a small set of IT sectors can partly explain the observed productivity gaps. This section suggests reconsidering the GVC strategy of Korea, which is also needed in the context of rising protectionism and trade tensions, as well as the digital transformation. The trade policy of Korea can contribute to the policy objectives previously highlighted, in particular the rebalancing of the economy towards services and the growth of SMEs. Participation in GVCs can help firms to scale up and be more productive, particularly service firms, which are also less exposed to tariff wars.

Global value chains in the midst of rising protectionism

In the last three decades, Korea has increased its productivity and income through greater participation in GVCs. The concept of GVCs describes the increasing fragmentation and internationalisation of production and the fact that economic integration now takes place at a more granular level with a specialisation in specific tasks in the value chain rather than in specific industries. In GVCs, companies organise their supply chains across different countries and serve global markets. Among G20 economies, Korea is the country with the highest index of participation in GVCs (Figure 3.25).

Figure 3.25. Korea has the highest GVC participation among G20 economies

GVC participation as a percentage of gross exports, G20 economies, 2015



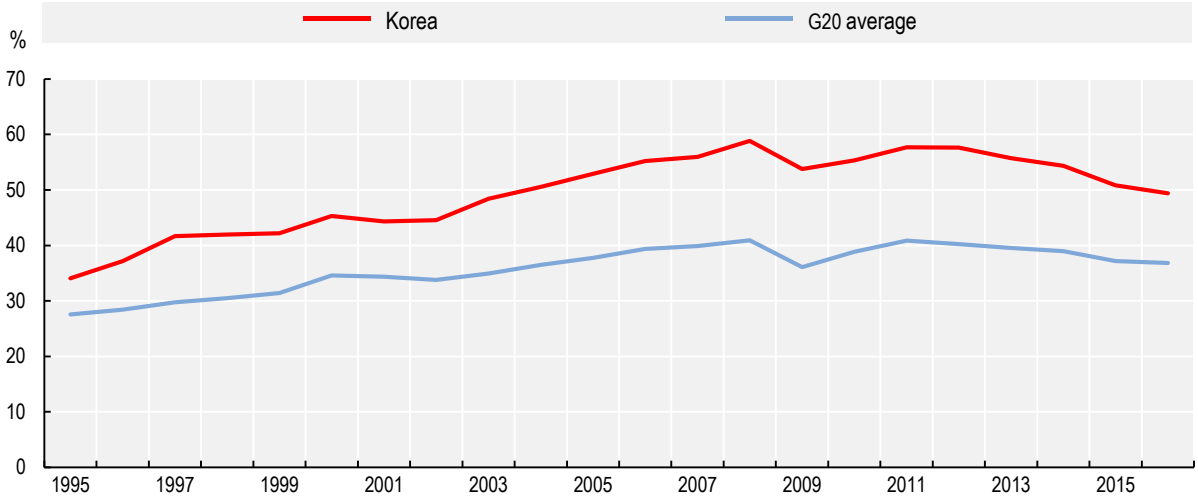
Source: *OECD Trade in Value-Added (TiVA) database*, 2018 edition, https://oe.cd/tiva.

Korea has a very high backward participation in GVCs (32.6% in 2015) indicating that Korean firms source a significant share of their inputs abroad. These inputs come either from foreign affiliates of Korean firms or from foreign firms. International sourcing ensures competitiveness and lower costs of production. Korea also exports inputs used in GVCs of other countries (19.1% of gross exports in 2015) as measured by the forward participation index, highlighting the integration of the country in "factory Asia" and the dependence of part of the economy on exports.

Korea was already more integrated in GVCs than the average of G20 countries in 1995 but has increased its participation index at a higher pace in the 2000s (Figure 3.26). Participation in GVCs reached a peak in 2008 just before the global financial crisis (60%). Although it recovered after the crisis, the index remained below its 2008 level and has declined since 2011. The same trend is observed in the rest of G20 countries. It can be explained by changes in prices of intermediate inputs (in particular the price of oil)[21], new business models that rely less on offshoring (with wages catching up in the developing world), the re-centring of the Chinese economy on its domestic markets and more recently by the rise in protectionism. For Korea, it means that expansion through GVCs might be more limited in the coming years and trade tensions within Asia and in the rest of the world might further reduce exports (Box 3.6). Nevertheless, through its network of free trade agreements (FTAs) and assuming trade tensions are temporary, Korea can still expect productivity gains and opportunities for increased income through its participation in GVCs. What we should see in the coming years is a reorganisation of GVCs rather than a "de-globalisation". The rest of this section looks at such opportunities and the impact on inclusive growth.

Figure 3.26. Korea has the highest GVC participation among G20 economies

GVC participation over time, as a percentage of gross exports, Korea and G20 average, 1995-2016



Source: *OECD Trade in Value-Added (TiVA) database*, 2018 edition, https://oe.cd/tiva.

Box 3.6. The exposure of Korea to protectionism

Current trade tensions between China and the United States indirectly affect Korea through GVCs. Chinese firms source many inputs from Korea and to the extent that tariffs on Chinese products in the United States reduce demand for these products, there are fewer exports from Korea to China. The same happens when US firms exporting to China or producing in China rely on Korean inputs, this time affecting Korean exports to the US or to US firms established in China. Korea then also needs inputs that may be dependent on the US-China trade relationship more upstream in its GVCs.

Table 3.1. Trade exposure to US-China bilateral trade relationship

Trade exposure to US-China bilateral trade relationship

Country	Share of GDP exposed
World	1.0%
China	3.8%
United States	1.2%
Chinese Taipei	1.7%
Korea	0.8%
Malaysia	0.8%
Singapore	0.8%
Thailand	0.5%
Chile	0.5%
Viet Nam	0.5%
Japan	0.2%
EU	0.1%

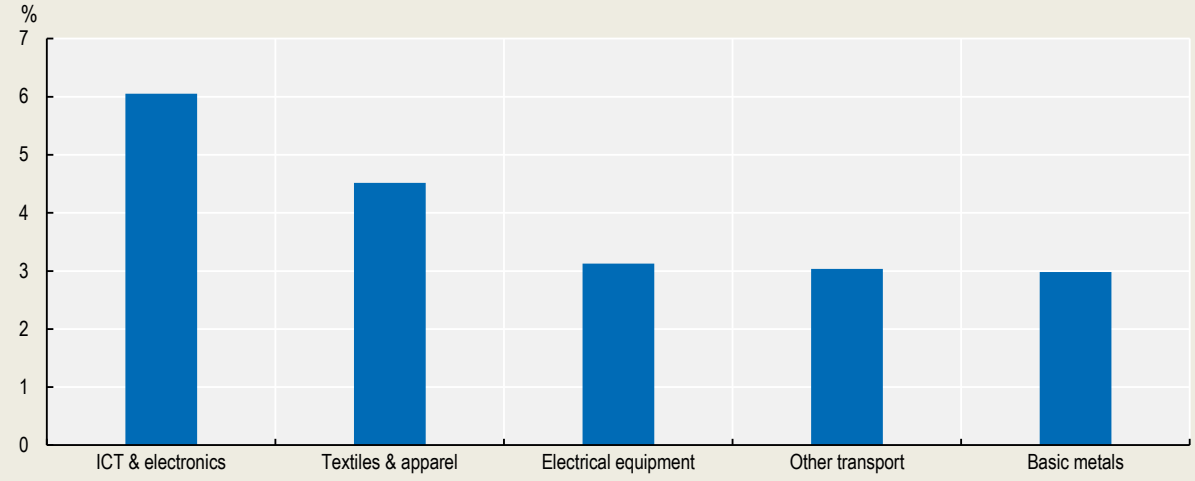
Note: Hypothetical extraction for the year 2015.
Source: Authors' calculations based on the *OECD Inter-Country Input-Output (ICIO) Tables*, https://oe.cd/icio.

Using the OECD Inter-Country Input-Output (ICIO) tables, one can calculate the share of Korean GDP exposed to US-China trade tensions (Table 3.1). Through an hypothetical extraction where bilateral trade between the US and China is set to zero, GDP can be recalculated in a world where there is no trade between the two countries, thus providing an estimate of the share of GDP exposed to protectionist tensions. When doing this exercise, the two countries the most affected are China and the United States. But with 0.8% of its GDP at risk, Korea is the second country the most indirectly impacted. Japan and the EU are less affected than other countries, as their GVCs are less dependent on China.

While 0.8% of GDP may seem to be a small figure, the impact is concentrated in a few industries (Figure 3.27). In addition, the calculations do not take into account how the extra costs to re-organise value chains would further affect trade with third countries.

Figure 3.27. Most exposed Korean industries to bilateral US-China trade

Percentage of value-added that would be lost if there is no trade between the US and China, based on 2015 data



Note: Hypothetical extraction for the year 2015.
Source: Authors' calculations based on the *OECD Inter-Country Input-Output (ICIO) Tables*, https://oe.cd/icio.

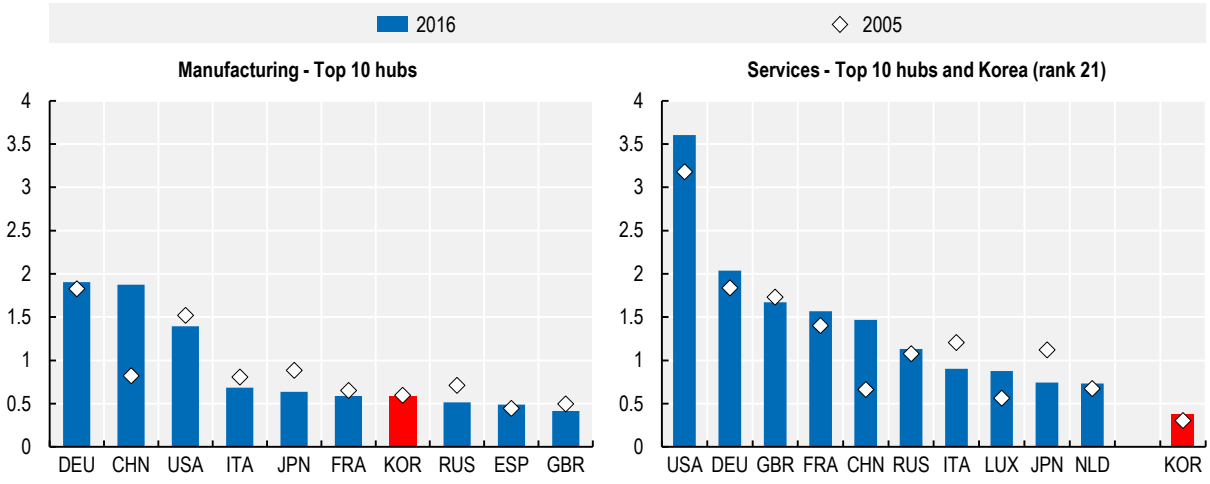
Maintaining the central position of Korea in GVCs

When it comes to manufacturing, Korea is one of the main hubs in international production networks. Based on the calculation of a centrality index (see Box 3.7), Korea is ranked 7th among the top 10 manufacturing hubs in GVCs (Figure 3.28). In Asia, it has the third place behind China and Japan. Between 2005 and 2016, centrality has slightly decreased but less than what is observed in Japan or the United States. Since centrality is a relative concept and China became the main hub in Asia during this period, one can interpret this result as Korea maintaining its competitiveness and leading role in manufacturing GVCs.

However, as it was observed in terms of productivity, there is an important gap when looking at the position of Korea in services GVCs (right panel in Figure 3.28). Korea is not among the top 10 hubs and ranked only 21st. Unlike China or the United States, it has not increased its centrality between 2005 and 2016. There are fewer and bigger hubs for service GVCs, as indicated by the higher values for centrality in the top 10 countries. With the servitisation of manufacturing (Vandermerwe and Rada, 1988[73]) and the increasing role played by services in the digital economy, the future of manufacturing activities may depend more on services. Therefore, rebalancing the participation of Korea in GVCs from manufacturing to service activities may not only be good for inclusiveness but also for productivity growth and for preserving the position of Korea as one of the main manufacturing hubs.

Figure 3.28. Korea is among the main hubs in GVCs for manufacturing

Top 10 manufacturing and service hubs in GVCs, foreign centrality index, 2016 and 2005



Note: Foreign centrality is calculated as the output-weighted average of industry-country centrality indices. See Criscuolo and Timmis (2018[74]) for the methodology.
Source: Authors' calculations based on the *OECD Inter-Country Input-Output (ICIO) Tables*, https://oe.cd/icio.

Box 3.7. GVC centrality

There are different metrics that can be used to analyse GVCs and characterise the position of countries in production networks. The participation index is based on the size of trade in intermediate inputs. It refers to the use of foreign inputs by domestic firms or the use of domestic inputs in exports of third countries downstream in the value chain. However, a high participation index can be achieved by having a single foreign supplier or customer in a very short value chain (but with high value transactions). It does not reflect the number of partners or the complexity and length of the value chain.

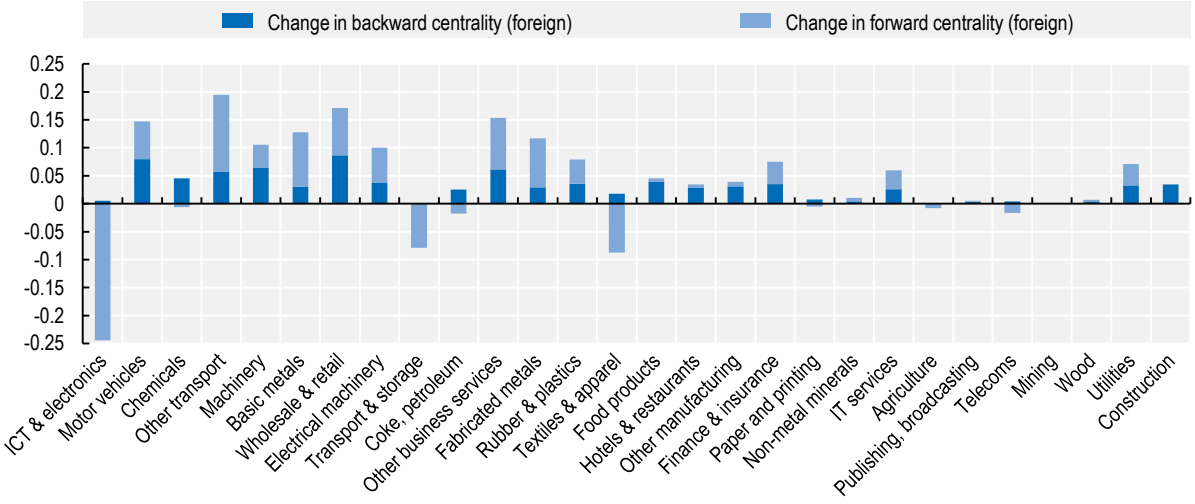
Based on techniques coming from network analysis, the centrality index complements traditional GVC indicators – such as the participation index – by adding information on the complexity of the network and the connectivity and position of countries (Criscuolo and Timmis, 2018[74]). A high centrality is achieved by countries that are connected (directly or indirectly) to many countries and are influential in the value chain. Centrality is a relative concept and can be measured backward (with suppliers) or forward (with customers), with total centrality being the average of the two. Only foreign centrality is taken into account when analysing GVCs. A high centrality indicates that a country is a hub in the value chain, importing inputs from many places that are themselves well connected to other countries, but also supplying these inputs to a large network downstream. These countries downstream form the spokes. A low centrality index means that a country is at the periphery and not well connected to GVCs.

Centrality matters for productivity. A high centrality is associated with faster productivity growth, particularly for small firms and firms that are not on the productivity frontier (Criscuolo and Timmis, 2018[75]). As such, it should be regarded as a useful indicator for policymaking. Connectivity does not only depend on trade and investment liberalisation but also on contract enforcement, access to finance and labour market policies. Participating in GVCs is not only about opening markets but also having the tools to connect to foreign partners and identify business opportunities.

Centrality can also be calculated for industries at the country level, distinguishing backward centrality (i.e. being connected to many suppliers) from forward centrality (i.e. being connected to many customers). Figure 3.29 reveals contrasted outcomes across Korean manufacturing industries (which are ordered from left to right based on their contribution to exports). In the ICT & electronics industry, the centrality of Korea significantly decreased between 2005 and 2016 due to the rise of China. But it is almost exclusively explained by forward centrality, meaning that the output of Korean firms goes to a reduced number of spokes and that there are fewer customers for Korean products. This consolidation in the network may affect productivity, as knowledge is often shared between suppliers of inputs and their customers. Fewer customers translate into a lower level of interactions and opportunities to learn. This concentration can also lead to a higher dependency on key spokes and a higher risk when trade tensions affect those spokes.

Figure 3.29. Contrasted outcomes when looking at the change in GVC centrality for Korean industries

Change in foreign centrality index, backward and forward, Korea, by industry, 2005-2016



Note: Change in foreign centrality calculated as in Criscuolo and Timmis (2018[74]). The bar indicates the change in total centrality with the contribution of backward centrality and forward centrality.
Source: Authors' calculations based on the *OECD Inter-Country Input-Output (ICIO) Tables*, https://oe.cd/icio.

In other manufacturing GVCs where Korea is strong, centrality has however increased, generally both in terms of backward and forward centrality. For some industries, such as motor vehicles, it is the result of further fragmentation of production within Asia with more partners among ASEAN economies. This trend was encouraged by the conclusion of FTAs in the region (such as the ASEAN-Korea FTA signed in 2005 at the beginning of the period considered in Figure 3.29).

When it comes to services, Figure 3.29 highlights that for "other business services", Korea has achieved a higher centrality between 2005 and 2016. This industry includes services such as professional services, management and consulting activities, as well as scientific research and development, advertising and market research. These services are essentially knowledge-based activities that play an important role in productivity growth and the digital transformation. A higher centrality for these activities is a positive outcome but Korea is still ranked only 31st (out of the 64 countries included in the TiVA database) in 2016, suggesting that through services reforms and measures in favour of small services firms the centrality of Korea could be improved.

Increasing income derived from GVCs

The size of economic gains derived from participation in GVCs also matters when looking at inclusiveness and how income can be more equally shared. The best way to analyse the income generated in GVCs is to look at "GVC income" which is all the income generated by sales of final products in a given industry (Timmer et al., 2013[76]). For example, the GVC income of Korea in ICT & electronics is the value-added created by all Korean firms (from any industry) involved in the production of ICT and electronic goods sold anywhere in the world (including in Korea).

Figure 3.30 shows the change in Korean GVC income for manufacturing and services industries between 2005 and 2016. Using input-output techniques, the change is further broken down to see the effect of technological changes (the structure of economies), a change in domestic demand and a change in foreign demand.[22]

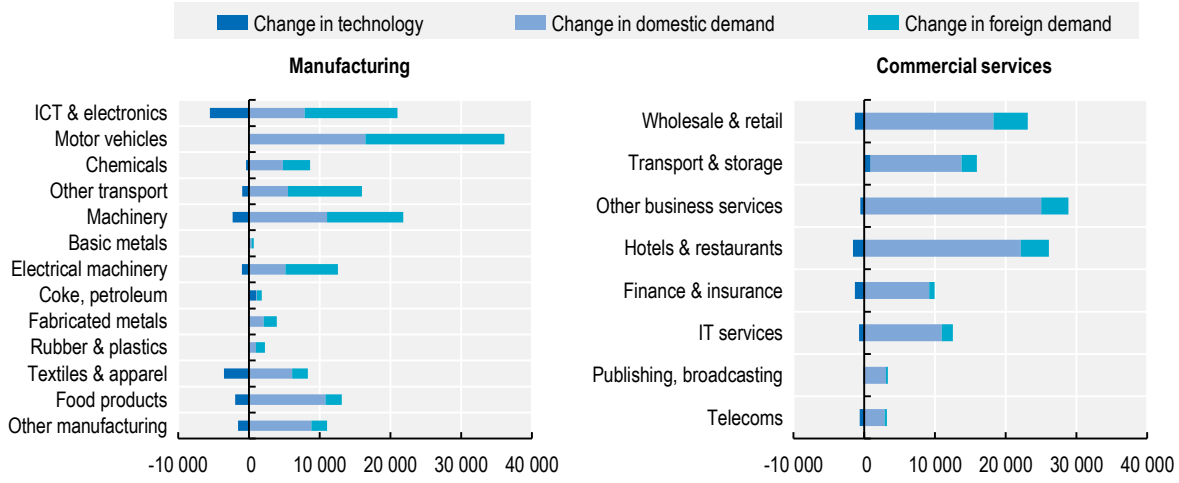
GVC income in Korea increased in all industries (in current prices) between 2005 and 2016 but the size of the increase is not the same across sectors. Industries are ranked again according to their share in exports (from top to bottom). As already seen when looking at centrality, the ICT & electronics sector has moved towards an organisation of production where Korea is less influential and we can see from Figure 3.30 that fewer value-added is created within Korea. However, due to increased demand for ICT & electronics goods, particularly outside Korea, GVC income has continued to increase. Nevertheless, it suggests that the over-dependence of Korea on the ICT & electronics is a risk for the future if the industry continues to move to business models where Korea is less central and generates lower levels of value-added.

A similar pattern is observed in other GVCs, such as chemicals (including pharmaceuticals, an industry that is currently expanding in Korea), other transport (including shipbuilding), machinery and electrical machinery. The contribution of structural change (technology) tends to be negative, although less than in ICT & electronics, while demand has increased (driven by foreign demand). The situation is however different in the motor vehicles industry, which is the industry where GVC income has increased the most. Here, technology had a small but positive contribution.

Interestingly, GVC income has also substantially increased in most service GVCs (right panel in Figure 3.30). But the main difference with manufacturing is that it was mostly driven by domestic demand. A very small share of GVC income comes from sales of services abroad and these services are those mostly associated with sales of goods such as wholesale & retail or transport & storage. Increased GVC income from foreign sales can also be seen in other business services and hotels & restaurants (in relation to tourism). As in the manufacturing sector, technology and the structure of the Korean economy have rather negatively contributed to income growth, with the exception of transport & storage.

Figure 3.30. Korea has generally increased its income in GVCs because of a higher domestic and foreign demand

Change in GVC income in Korea, by industry, 2016 vs. 2005, million USD



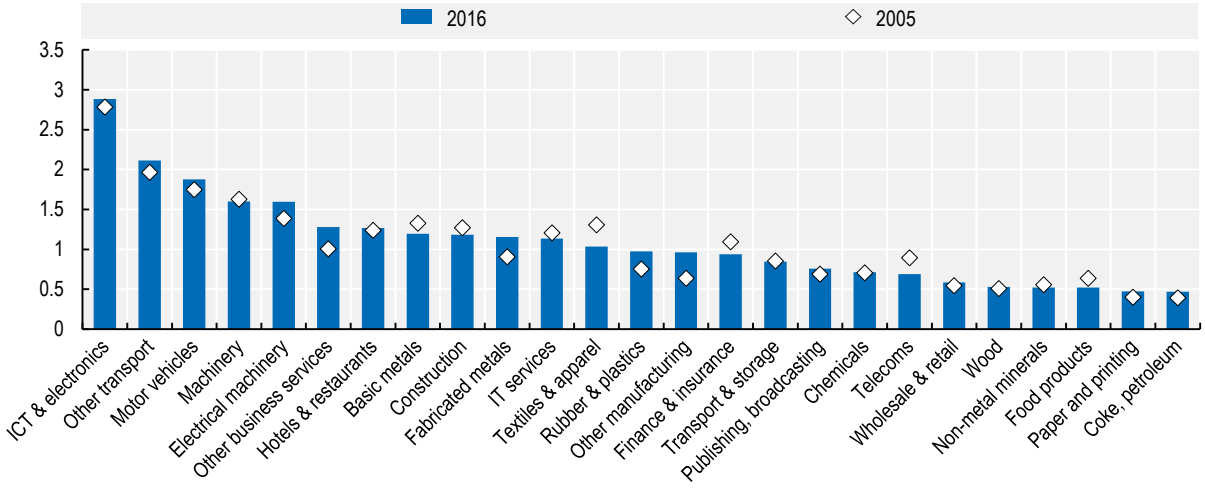
Note: GVC income is the value-added contributed by Korean firms (from any industry) in world sales of products from each industry. Industries are ordered based on their share in gross exports (from top to bottom). Wood, non-metal minerals, paper and printing (manufacturing) and construction (services) are excluded because of low exports. A structural breakdown of GVC income is performed to derive the contribution of technology (change in value-added ratios and input coefficients), domestic final demand (change in the domestic part of the final demand matrix) and foreign final demand (change in the foreign part of the final demand matrix).
Source: Authors' calculations based on the *OECD Inter-Country Input-Output (ICIO) Tables*, https://oe.cd/icio.

Overall, Korea has increased its income derived from GVCs, but results suggest that it is mostly demand-driven. As discussed in relation to productivity, key reforms could allow technology (the structure and organisation of production) to also become a driver of increased GVC income. It would be particularly needed if current international trade tensions dampen foreign demand.

The previous analysis can be complemented by looking at the change in GVC income in Korea relative to other countries. The same way that a "revealed comparative advantage" (RCA) index can be calculated based on trade flows (Balassa, 1965[77]), GVC income can be used to look at industries where Korea has a GVC comparative advantage. The GVC RCA index is the share of Korea in world GVC income of a given industry divided by the share of Korea in world GVC income (Timmer et al., 2013[76]). A RCA above 1 indicates that Korea has a comparative advantage, as it derives relatively more income from this GVC than on average from all GVCs.

Figure 3.31. Korea has a strong GVC comparative advantage in five manufacturing industries

Revealed comparative advantage based on GVC income, Korea, 2016 and 2005



Note: Revealed comparative advantage is calculated as the share of Korea in world GVC income for a given industry divided by the share of Korea in world GVC income.
Source: Authors' calculations based on the *OECD Inter-Country Input-Output (ICIO) Tables*, https://oe.cd/icio.

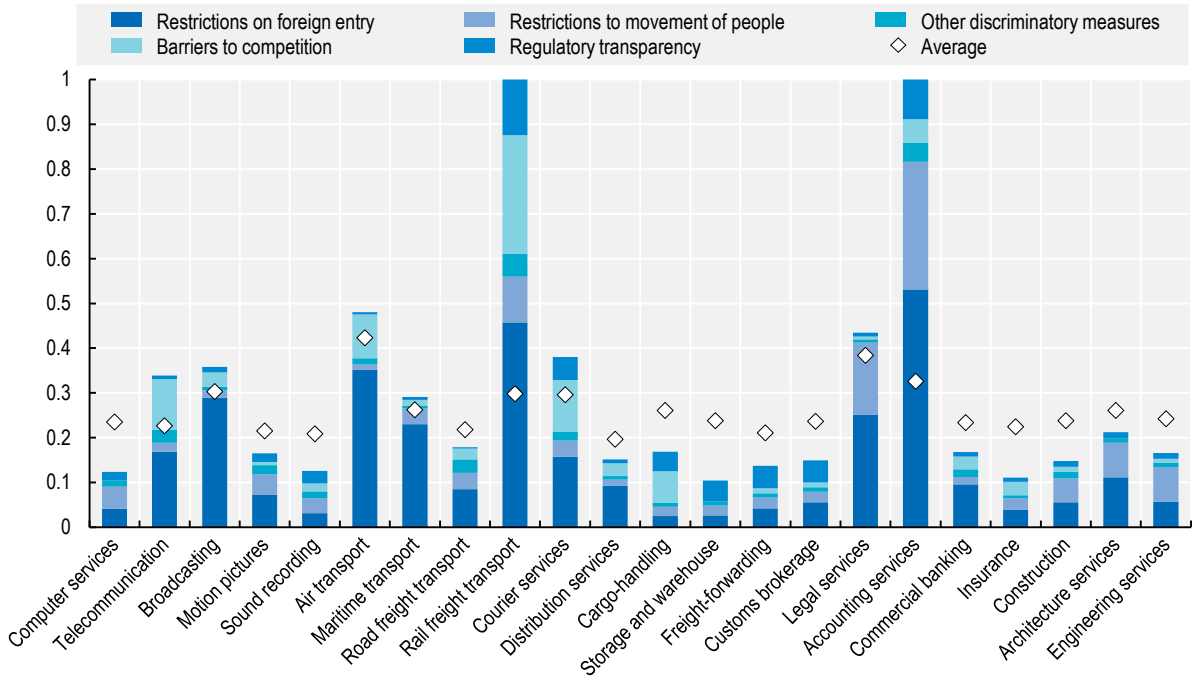
Korea still had, in 2016, a strong comparative advantage in the ICT & electronics GVC and it has only slightly decreased as compared to 2005 (Figure 3.31). Korea has increased its comparative advantage in the other transport, motor vehicles and electrical machinery industries. Comparative advantage has on the contrary almost disappeared (value close to 1) in the textiles & apparel GVC.

Figure 3.31 confirms that Korea has improved its position in other business services. It is now a GVC where there is a significant comparative advantage. With IT services and construction (but construction is mostly for domestic demand), these industries are the only services with a value above 1. In other important service activities, such as finance & insurance or telecoms, not only Korea has no GVC comparative advantage, but also the RCA index decreased between 2005 and 2016. This provides clear evidence that service sector reforms would boost not only productivity but international competitiveness, as well.

If one looks at the OECD Services Trade Restrictiveness Index (STRI) – which summarises all the barriers to trade and investment in services industries –, sectors where Korea has no GVC comparative advantage are also the ones where barriers are relatively higher compared to other countries (Figure 3.32). For example, Korea scores above the average (i.e. is more trade-restrictive) in the telecoms sector or the banking sector (part of financial services). The same is observed in transport services (air, maritime and rail freight with the exception of road freight). Conversely, Korea has a STRI value below the average in computer services (part of IT services) or in engineering services (part of other business services). The type of barriers reported in Figure 3.32 provides further information on the reforms that can improve competitiveness, which are measures aimed at improving foreign entry and the movement of business people, as well as competition reforms.

Figure 3.32. Some service sectors are shielded by high trade restrictions

OECD Services Trade Restrictiveness Index for Korea, 2018



Source: *OECD Services Trade Restrictiveness Index (STRI) database*, https://oe.cd/stri.

Addressing the impact of GVCs on inclusiveness

The increased participation of Korea in GVCs can also be seen as a factor that has contributed to the wage dispersion and duality of the Korean economy. In particular, the literature discusses the impact of offshoring (i.e. backward participation) on the skill premium and on job polarisation (Feenstra and Hanson, 1996[78]; Geishecker et al., 2008[79]; Goos, Manning and Salomons, 2014[80]). In the context of Korea, it was pointed out that GVC participation had a positive impact on the wages of high-skilled workers and a negative impact on the wages of low-skilled workers (Choi, 2016[81]). However, the impact measured was small, confirming that GVC participation tends to have a limited effect on the distribution of wages (Lopez Gonzalez, Kowalski and Achard, 2015[82]).

The difficulty in such analysis if to disentangle the impact of trade and technology. We can observe within GVCs a change in occupations and wages of workers but this change is generally more related to technical progress than to the fact that production has become more international. The relationship between trade and technology then becomes endogenous as trade and participation in GVCs facilitate technology diffusion.

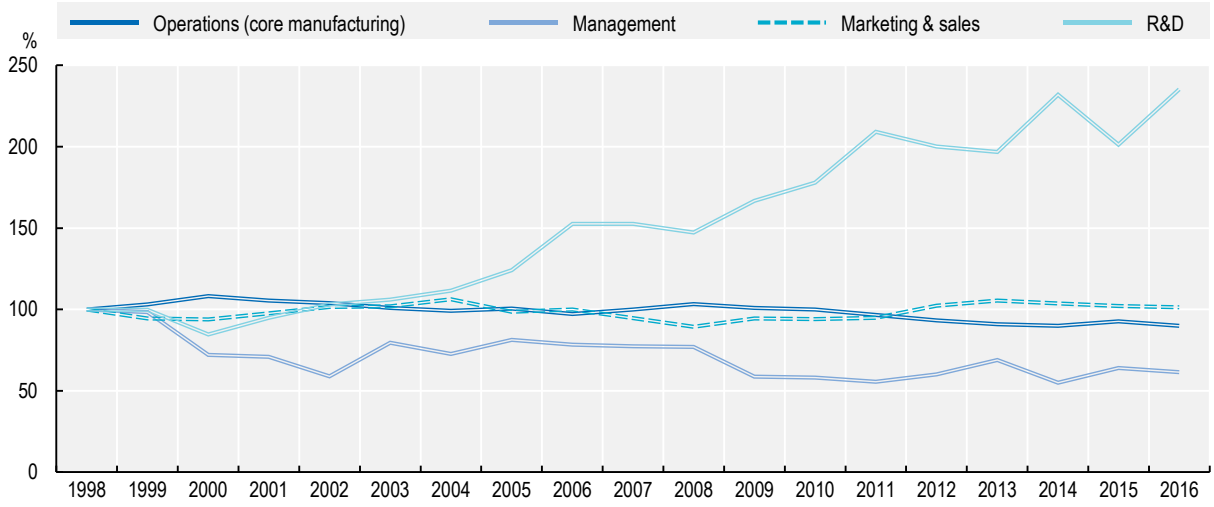
Going beyond the dichotomy between high-skilled and low-skilled workers, Figure 3.33 focuses on the tasks performed by workers within GVCs and provides a breakdown of Korean GVC income in manufacturing industries by business function (Timmer, Miroudot and de Vries, 2019[83]). Within a given industry, the fragmentation of production results in the specialisation of firms in different functions. They are grouped in Figure 3.33 into four generic business functions: management, marketing & sales, operations (i.e. core manufacturing activities) and research & development.

Over time, there are more workers in manufacturing firms in activities related to R&D and fewer directly involved in the manufacturing process. With wages for R&D workers increasing faster than wages for

workers in operations, the share of R&D activities in Korean GVC income has significantly increased while the share of GVC income in operations has decreased. We also observe that the share of GVC income in marketing & sales has slightly decreased and the share of GVC income in management remained relatively stable between 1998 and 2016. Figure 3.33 highlights that the shift in employment and wages in the Korean manufacturing sector is mainly a process where Korea remains competitive by being more innovative and devoting more resources to R&D, while relying more on offshoring or robotisation to compress costs related to operations.

Figure 3.33. Within manufacturing GVCs, Korea specialises in R&D tasks

Share of Korean manufacturing GVC income by business function, in percentage, 1998-2016



Source: Authors' calculations based on data from the Korean Labor & Income Panel Study (KLIPS), https://www.kli.re.kr/klips_eng/index.do and *OECD Inter-Country Input-Output (ICIO) Tables*, https://oe.cd/icio.

Policy insights

The current global environment is characterised by uncertainties and a persistent trade slowdown. For a medium-sized country like Korea with a large share of GDP relying on exports, domestic demand cannot fully compensate for a decrease in foreign demand. Korea will have to re-design its GVC strategy to mitigate the impact of rising protectionism and maintain its position in global trade. This is also an opportunity to use GVCs to support other efforts aimed at reducing the productivity gaps and promote business dynamism.

Policy insight #5: Designing a more inclusive GVC strategy

To support a diversification of exports and allow a broader set of firms in different industries to join GVCs, the first objective of a new GVC strategy would be to improve the connectivity of Korean firms. This can be done by unilateral reforms in Korea as opposed to trade negotiations that take time and depend also on the willingness of trade partners to co-operate. A second set of reforms can be seen as complementary to what has been described in previous policy insights: improving the capacity of SMEs to participate in GVCs and encouraging a rebalancing of GVCs towards services. To mitigate the impact of protectionism and facilitate the restructuring of GVCs in the context of the digital transformation, the third part of the new GVC strategy involves a consolidation and extension of current trade agreements to which Korea is a party. Consequently, this third part can be regarded as a more long-term and challenging policy objective.

Improve the connectivity of Korean firms to diversify exports

A diversification of exports can make GVCs more inclusive but also more resilient in the context of trade tensions. This diversification can be expected from policies previously discussed, in particular product market reforms and a level playing field between manufacturing and services, as well as an industrial policy less focused on the promotion of a narrow set of activities but, instead, aimed at helping firms from all sectors to seize opportunities to become global. Removing barriers to FDI and allowing more foreign multinational enterprises (MNEs) to operate in Korea can play an important role in creating networks between domestic firms and global buyers and suppliers. But strategic partnerships are also increasingly used by firms to co-operate and achieve common goals and do not involve FDI. These partnerships can be used for R&D, the launch of joint products or the use of intellectual property. They require an effective system of contract enforcement and international investment rules covering this type of non-equity relationship among firms. Korea could review the legal regime for these partnerships and ensure that firms benefit from the support of the Korea Trade-Investment Promotion Agency (KOTRA) to identify partners and engage in such partnerships.

In the digital age, working with foreign firms also involves sharing data. Cross-border data regulations are needed to protect privacy and particularly the personal information of consumers. Korea should ensure that its regulations are not too burdensome and do not discourage firms from doing business with foreign partners. In 2018, the IT Networks Act was amended with more constraints on firms seeking to engage in cross-border data exchanges. Korea has also implemented strict data localisation requirements motivated in particular by national security. The low diffusion of cloud computing technologies and e-commerce, particularly in relation to online payments, can be related to such data regulations and can be a substantial obstacle for Korean firms and discourage them from working with foreign partners or serving foreign consumers. There is a need for continuous attention, in order to strike a balance between the benefits of cross-border data flows and privacy and security.

Promote inclusiveness in GVCs by increasing the participation of SMEs and encouraging a rebalancing of GVCs towards services

The second objective of the new GVC strategy would be to complement other policy efforts aimed at boosting the productivity of SMEs and encouraging a rebalancing of productivity growth towards services. There is a very low share of exporters among SMEs in Korea (2.6% according to the Korea International Trade Association) and SMEs account for only 15% of Korean exports (OECD, 2018[84]). The Ministry of SMEs and Startups has already put in place measures aimed at improving the participation of SMEs in GVCs. This includes offering support for education, information on global markets and brand development. Efforts could be extended to provide targeted support and financing to SMEs that do not directly export but supply exporters (particularly in the service sector) and could later become direct exporters or work as suppliers for foreign firms. This support would have to be assessed, evaluated and streamlined as suggested in policy insight #4. Use of digital tools are also means through which SMEs could more easily serve global markets. Another area where support could be reinforced is certification and compliance with foreign regulations. Firms trying to meet the standards of foreign markets are faced with steep costs and it is often seen as one of the main barriers to exports of SMEs.

GVCs can also help services industries to become more productive through internationalisation, complementing efforts to improve the productivity of business in the services industry and the rebalancing of the Korean economy towards services (policy insight #1). This strategy could also play a positive role for the resilience of the economy: service sectors are less affected by the current trade wars (as there are no tariffs on services) and are generally more resilient to macro-economic fluctuations (Borchert and Mattoo, 2010[85]). Moreover, the rebalancing of GVCs towards the export of services would contribute to inclusiveness. In Korea, the participation of women in GVCs is relatively low, even when considering indirect participation (i.e. through services firms supplying inputs to manufacturing exporters). This is the

result of the employment of a significant share of working women in the service sector and of the Korean export specialisation in manufacturing industries. Current measures aimed at helping SMEs in the service sector to become exporters could target female entrepreneurs, as well as firms with a higher share of women in their employment.

Mitigate the impact of protectionism and facilitate the reorganisation of GVCs

The third objective of a new GVC strategy would be to mitigate the impact of protectionism and facilitate the reorganisation of GVCs. Korea has a dense network of FTAs but most of them are bilateral and with different sets of rules, including rules of origin. This prevents products manufactured in GVCs using inputs from different countries from benefiting from trade preferences or common standards. Through mega-regional agreements, such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) – that includes 11 economies in the Asia-Pacific area –, other countries in the region have secured more favourable trade regimes and advanced rules benefitting GVCs. FTAs can be used to secure and expand trade preferences. They are not a perfect guarantee against trade restrictions imposed on the basis of the safeguards they include. But they can offer a framework for solving trade conflicts.

The consolidation of the network of FTAs to which Korea is a signatory and the inclusion of new partners could improve the centrality of Korea in GVCs. The conclusion of the Regional Comprehensive Economic Partnership (RCEP) with ASEAN countries, as well as China, Japan, Australia and New Zealand, or Korea joining the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) would positively affect the capacity of Korean firms to join and upgrade in GVCs. These mega-regional agreements facilitate the creation of a network, as opposed to bilateral deals.

With rising protectionism and new trade barriers, Korean manufacturing firms may have to rely even more on high-skilled jobs and tasks in the value chain related to R&D, marketing and sales, rather than core manufacturing activities, in order to remain competitive in foreign markets. This can potentially aggravate job polarisation but there would be no gain in preventing the adjustment of Korean firms to new barriers on foreign markets. Preventing the reorganisation and consolidation of GVCs would not reverse the trend in favour of workers within the core manufacturing activities. Protectionist measures making Korean firms less competitive would on the contrary reduce income and further exacerbate structural change aimed at reducing costs. Policies directly addressing the needs of workers impacted by the transition to new activities in GVCs are preferable.

As Korean GVCs adjust to lower labour costs in China and other emerging economies, the impact of offshoring is for now skill-biased. But over time, as wages catch up in competing economies, offshoring will become unskill-biased by increasing the demand for unskilled workers in Korea as a result of the complementarity between skilled and unskilled labour, a lower differential in wages and a higher demand for manufacturing goods (Acemoglu, Gancia and Zilibotti, 2015[86]). GVCs could then contribute to inclusiveness, suggesting that the main issue to address is what happens to workers during this transition.

Conclusion and priorities

Based on the premise of strong complementarities between productivity, business dynamism and inclusiveness, this chapter provided five complementary and mutually reinforcing policy insights to reconcile growth and inclusiveness in Korea. The suggested policies constitute a full package of reforms to be implemented together in order to address productivity gaps, promote business dynamism and maintain the country's position in global trade.

Successful structural reforms typically take time, as they require a whole-of-government approach with co-ordination of different ministries and parts of the administration. Moreover, numerous political and economic factors can facilitate or hinder economic reform. Acknowledging the constraints faced by the

Korean government, this concluding section identifies priority reform actions that can be implemented in the short run.

The three main priorities for Korea in the next two years could be:

1. to create a level playing field between manufacturing and services for tax policy and government support;
2. to address size contingencies in schemes supporting firms and in labour laws and start the process of evaluating and streamlining existing SME programmes; and
3. to promote competition through trade and investment liberalisation and by addressing unfair business practices faced by small firms.

The first priority can be seen as a first step towards more ambitious services regulatory reforms but starting with a reasonable objective that could send the signal that services matter as much as manufacturing activities for the government. This process was already initiated in July 2019 with the announcement of such a reform.

The second priority requires looking at some of the laws already discussed in the context of labour market reforms, such as support for young workers, limits on temporary employment or working hours. Since these laws are already under review, the additional action would only be to take into account the role of size thresholds and how they can discourage small firms from growing and graduating from the SME category. Complementary policy action would consist in starting a review of existing SME support schemes to assess and evaluate their effectiveness and whether they are needed or not. Such evaluation would then lead in the medium term to the consolidation and streamlining of these schemes.

The third priority is more challenging in a short-term policy agenda but is essential to improve business dynamism and to have a significant impact on productivity. Foreign competition can not only help to boost the productivity of domestic firms but will also allow small firms to no longer operate in an environment with only dominant Korean firms. In addition, measures could directly address unfair business practices involving large firms, which are also necessary to discipline foreign companies that will enter the Korean market.

References

Acemoglu, D., G. Gancia and F. Zilibotti (2015), "Offshoring and Directed Technical Change", *American Economic Journal: Macroeconomics*, Vol. 7/3, pp. 84-122, http://dx.doi.org/10.1257/mac.20130302. [86]

Adalet McGowan, M., D. Andrews and V. Millot (2017), "Insolvency Regimes, Technology Diffusion and Productivity Growth : Evidence from Firms in OECD Countries", *OECD Economics Department Working Papers*, No. 1425, OECD Publishing, Paris, https://dx.doi.org/10.1787/36600267-en. [64]

Aghion, P. and R. Griffith (2005), *Competition and Growth. Reconciling Theory and Evidence*, The MIT Press. [38]

Andrews, D., C. Criscuolo and P. Gal (2016), "The Best versus the Rest: The Global Productivity Slowdown, Divergence across Firms and the Role of Public Policy", *OECD Productivity Working Papers*, No. 5, OECD, Paris, http://dx.doi.org/10.1787/24139424. [6]

Andrews, D., C. Criscuolo and P. Gal (2016), "The Best versus the Rest: The Global Productivity Slowdown, Divergence across Firms and the Role of Public Policy", *OECD Productivity Working Papers*, No. 5, OECD Publishing, Paris, https://dx.doi.org/10.1787/63629cc9-en. [15]

Baek, H. (2017), *효율적인 중소기업 지원사업체계 구축 방안*, KOSBI, https://www.kosbi.re.kr/kosbiWar/front/functionDisplay?menuFrontNo=3&menuFrontURL=front/focusDetail?dataSequence=J170525K01. [66]

Balassa, B. (1965), "Trade Liberalisation and "Revealed" Comparative Advantage", *The Manchester School*, Vol. 33/2, pp. 99-123, http://dx.doi.org/10.1111/j.1467-9957.1965.tb00050.x. [77]

Bartelsman, E., J. Haltiwanger and S. Scarpetta (2013), "Cross-country differences in productivity: The role of allocation and selection", *American Economic Review*, http://dx.doi.org/10.1257/aer.103.1.305. [11]

Berlingieri, G. et al. (2017), "The Multiprod project: A comprehensive overview", *OECD Science, Technology and Industry Working Papers*, No. 2017/04, Organisation for Economic Co-operation and Development, https://ideas.repec.org/p/oec/stiaaa/2017-04-en.html. [1]

Berlingieri, G., P. Blanchenay and C. Criscuolo (2017), "The Great Divergence(s)", *OECD Science, Technology and Innovation Policy Papers*, No. 39, Organisation for Economic Co-operation and Development, Paris, https://www.oecd-ilibrary.org/science-and-technology/the-great-divergence-s_953f3853-en. [5]

Berlingieri, G., S. Calligaris and C. Criscuolo (2018), "The productivity-wage premium: Does size still matter in a service economy?", *OECD Science, Technology and Industry Working Paper*, OECD Publishing, Paris, https://www.oecd-ilibrary.org/docserver/04e36c29-en.pdf?expires=1570022600&id=id&accname=guest&checksum=95C7D4CC720BE49E2EF9291395DA3071. [8]

Berlingieri, G. et al. (2020), "Laggard firms, technology diffusion and its structural and policy determinants", *OECD Science, Technology and Industry Policy Papers*, No. 86, OECD Publishing, Paris, https://dx.doi.org/10.1787/281bd7a9-en. [9]

Birch, D. (1979), *The Job Generation Process*, MIT Program on Neighborhood and Regional Change. [70]

Bloom, N. and J. Van Reenen (2010), "Why Do Management Practices Differ across Firms and Countries?", *Journal of Economic Perspectives*, Vol. 24/1, pp. 203-224, http://dx.doi.org/10.1257/jep.24.1.203. [62]

Borchert, I. and A. Mattoo (2010), "The crisis-resilience of services trade", *The Service Industries Journal*, Vol. 30/13, pp. 2115-2136, http://dx.doi.org/10.1080/02642060903289944. [85]

Bouis, R., R. Duval and J. Eugster (2016), "Product Market Deregulation and Growth : New Country-Industry-Level Evidence", *IMF Working Paper*, No. 16/114, IMF, https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Product-Market-Deregulation-and-Growth-New-Country-Industry-Level-Evidence-43951 (accessed on 14 October 2019). [31]

Chang, W. (2016), *Is Korea's Public Funding for SMEs Achieving Its Intended Goals?*, KDI, https://doi.org/10.22740/kdi.focus.e.2016.63. [69]

Choi, H. (2016), “Global Value Chains and the Skill-Biased Effects on Wages in Korea”, *KIET Industrial Economic Review*, Vol. 21/1, pp. 39-51. [81]

Choi, L. (2018), *우리나라 기업간 생산성 격차 확대의 배경과 총생산성 및 임금격차에 대한 시사점*, Bank of Korea, https://www.bok.or.kr/portal/bbs/B0000257/list.do?menuNo=200327. [13]

Cho, J. et al. (2017), “Job Creation and Destruction: New Evidence on the Role of Small Versus Young Firms in Korea”, *The Japanese Economic Review*, Vol. 68/2, pp. 173-187, http://dx.doi.org/10.1111/jere.12133. [56]

Christiansen, L. et al. (2016), “Gender Diversity in Senior Positions and Firm Performance: Evidence from Europe”, *IMF Working Papers*, Vol. 16/50, p. 1, http://dx.doi.org/10.5089/9781513553283.001. [27]

Coad, A. et al. (2014), “Whom do high-growth firms hire?”, *Industrial and Corporate Change*, Vol. 23/1, pp. 293-327, http://dx.doi.org/10.1093/icc/dtt051. [53]

Connolly, M. and K. Yi (2015), *How much of South Korea’s Growth Miracle Can Be Explained by Trade Policy?*, pp. 188-221, http://dx.doi.org/10.1257/mac.20120197. [89]

Conway, P. et al. (2007), “Product market regulation and productivity convergence”, *OECD Economic Studies*, Vol. 2006/2, https://dx.doi.org/10.1787/eco_studies-v2006-art9-en. [30]

Conyon, M. and L. He (2017), “Firm performance and boardroom gender diversity: A quantile regression approach”, *Journal of Business Research*, Vol. 79, pp. 198-211. [26]

Criscuolo, C., P. Gal and C. Menon (2015), “dynemp: A routine for distributed microdata analysis of business dynamics”, *Stata Journal*, Vol. 15/1. [3]

Criscuolo, C., P. Gal and C. Menon (2014), “The Dynamics of Employment Growth: New Evidence from 18 Countries”*, OECD Science, Technology and Industry Policy Papers*, No. 14, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jz417hj6hg6-en. [52]

Criscuolo, C. and J. Timmis (2018), “GVC centrality and productivity: Are hubs key to firm performance?”*, OECD Productivity Working Papers*, No. 14, OECD Publishing, Paris, https://dx.doi.org/10.1787/56453da1-en. [75]

Criscuolo, C. and J. Timmis (2018), “GVCS and centrality: Mapping key hubs, spokes and the periphery”*, OECD Productivity Working Papers*, No. 12, OECD Publishing, Paris, https://dx.doi.org/10.1787/d4a9bd6f-en. [74]

Davis, S., J. Haltiwanger and S. Schuh (1996), “Small business and job creation: Dissecting the myth and reassessing the facts”, *Small Business Economics*, Vol. 8/4, pp. 297-315, http://dx.doi.org/10.1007/BF00393278. [71]

Decker, R. et al. (2017), “Declining Dynamism, Allocative Efficiency, and the Productivity Slowdown”, *American Economic Review*, Vol. 107/5, pp. 322-326, http://dx.doi.org/10.1257/aer.p20171020. [51]

Dernis, H. et al. (2019), *World Corporate Top R&D investors: Shaping the Future of Technologies and of AI. A joint JRC and OECD report*, Publications Office of the European Union, http://dx.doi.org/10.2760/472704. [18]

Desnoyers-James, I., S. Calligaris and F. Calvino (2019), "DynEmp and MultiProd: Metadata", *OECD Science, Technology and Industry Working Papers*, No. 2019/03, OECD Publishing, Paris, https://dx.doi.org/10.1787/3dcde184-en. [2]

DeStefano, T., R. Kneller and J. Timmis (2019), "Cloud computing and firm growth", *Discussion Papers*, https://ideas.repec.org/p/not/notgep/2019-09.html (accessed on 7 October 2019). [17]

Elnaga, A. and A. Imran (2013), "The effect of training on employee performance", *European Journal of Business and Management*, Vol. 5/4, pp. 137-47. [24]

Feenstra, R. and G. Hanson (1996), "Globalization, Outsourcing, and Wage Inequality", *The American Economic Review*, Vol. 86/2, pp. 240-245. [78]

FSS (2018), *자본시장 혁신과제*. [59]

Garicano, L., C. Lelarge and J. Van Reenen (2016), "Firm Size Distortions and the Productivity Distribution: Evidence from France", *American Economic Review*, Vol. 106/11, pp. 3439-3479, http://dx.doi.org/10.1257/aer.20130232. [61]

Geishecker, I. et al. (2008), "Winners and losers: a micro-level analysis of international outsourcing and wages", *Canadian Journal of Economics*, Vol. 41/1, pp. 243-270, https://econpapers.repec.org/article/cjeissued/v_3a41_3ay_3a2008_3ai_3a1_3ap_3a243-270.htm (accessed on 13 August 2019). [79]

Goos, M., A. Manning and A. Salomons (2014), "Explaining Job Polarization: Routine-Biased Technological Change and Offshoring", *American Economic Review*, Vol. 104/8, pp. 2509-2526, http://dx.doi.org/10.1257/aer.104.8.2509. [80]

Haltiwanger, J., R. Jarmin and J. Miranda (2013), "Who Creates Jobs? Small versus Large versus Young", *Review of Economics and Statistics*, Vol. 95/2, pp. 347-61, http://dx.doi.org/10.1162/REST_a_00288. [72]

Hsieh, C. and P. Klenow (2009), "Misallocation and Manufacturing TFP in China", *Quarterly Journal of Economics*, Vol. 124/4, pp. 1403-48, https://www.jstor.org/stable/pdf/40506263.pdf?refreqid=excelsior%3Ae0aa25b8c2359d64bf2b5e77ed269a60. [12]

Jones, R. (2018), "Reforming the large business groups to promote productivity and inclusion in Korea", *OECD Economics Department Working Papers*, No. 1509, OECD Publishing, Paris, https://dx.doi.org/10.1787/9e9052b5-en. [10]

Jones, R. and J. Lee (2018), "Enhancing dynamism in SMEs and entrepreneurship in Korea", *OECD Economics Department Working Papers*, No. 1510, OECD Publishing, Paris, https://dx.doi.org/10.1787/ced4b0e9-en. [47]

Keller, W. and S. Yeaple (2009), "Multinational Enterprises, International Trade, and Productivity Growth: Firm-Level Evidence from the United States", *Review of Economics and Statistics*, Vol. 91/4, pp. 821-831, http://dx.doi.org/10.1162/rest.91.4.821. [40]

Khan, M. (2012), "The impact of training and motivation on performance of employees", *Business Review*, Vol. 7/2, pp. 84-95. [23]

KIET (2014), *중소기업 수출지원체계 효율화 방안*. [67]

Kim, C. (2018), *서비스 산업 육성 및 발전과제*. [55]

Lassébie, J. et al. (2019), "Levelling the playing field: Dissecting the gender gap in the funding of start-ups", *OECD Science, Technology and Industry Policy Papers*, No. 73, OECD Publishing, Paris, https://dx.doi.org/10.1787/7ddddd07-en. [29]

Lee, S. (2018), *Government R&D Support for SMEs: Policy Effects and Improvement Measures*, https://doi.org/10.22740/kdi.focus.e.2018.89. [48]

Link, A. and J. Scott (2015), "Research, science, and technology parks", in *The Chicago handbook of university technology transfer and academic entrepreneurship*. [44]

Lopez Gonzalez, J., P. Kowalski and P. Achard (2015), "Trade, global value chains and wage-income inequality", *OECD Trade Policy Papers*, No. 182, OECD Publishing, Paris, https://dx.doi.org/10.1787/5js009mzrqd4-en. [82]

Lucas, R. (1993), "Making a Miracle", *Econometrica*, Vol. 61/2, pp. 251-272, http://dx.doi.org/10.2307/2951551. [88]

Miller, R. and P. Blair (2009), *Input-output analysis : foundations and extensions*, Cambridge University Press. [87]

MOEF (2019), *18th Ministerial Meeting on Boosting the Economy*. [33]

MOEF (2019), *제2벤처 붐 확산 전략*. [58]

MOEF (2017), *혁신창업 생태계 조성방안*. [57]

Monteiro, G., A. Fontoura Gouveia and S. Santos (2017), "Product markets' deregulation: a more productive, more efficient and more resilient economy?", *OECD Productivity Working Papers*, No. 9, OECD Publishing, Paris, https://dx.doi.org/10.1787/86cc3b5e-en. [34]

MOTIE (2019), *수출 플러스 전환 위해 범정부적 역량 집중*, http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=161537&bbs_cd_n=81. [68]

OECD (2020), *The Role of Education and Skills in Bridging the Digital Gender Divide: Evidence from APEC Economies*, OECD Publishing, Paris, http://www.oecd.org/going-digital/education-and-skills-in-bridging-the-digital-gender-divide-evidence-from-apec.pdf (accessed on 17 May 2020). [91]

OECD (2019), *In-Depth Productivity Review of Belgium*, OECD Publishing, Paris, https://dx.doi.org/10.1787/88aefcd5-en. [63]

OECD (2019), *Measuring the Digital Transformation: A Roadmap for the Future*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264311992-en. [19]

OECD (2019), *Strengthening SMEs and Entrepreneurship for Productivity and Inclusive Growth: OECD 2018 Ministerial Conference on SMEs*, OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, https://dx.doi.org/10.1787/c19b6f97-en. [60]

OECD (2018), *Economic Policy Reforms 2018: Going for Growth Interim Report*, OECD Publishing, Paris, https://dx.doi.org/10.1787/growth-2018-en. [65]

OECD (2018), *Economic Surveys Korea*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-kor-2018-en. [84]

OECD (2018), *Inclusive Growth in Seoul, Korea*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264290198-en. [7]

OECD (2018), *OECD Economic Surveys: Korea 2018*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_surveys-kor-2018-en. [14]

OECD (2018), *Opportunities for All: A Framework for Policy Action on Inclusive Growth*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264301665-en. [4]

OECD (2017), *Entrepreneurship at a Glance 2017*, OECD Publishing, Paris, https://dx.doi.org/10.1787/entrepreneur_aag-2017-en. [54]

OECD (2017), *OECD Digital Economy Outlook 2017*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264276284-en. [28]

OECD (2017), *OECD Digital Economy Outlook 2017: Spotlight on Korea*, https://www.oecd.org/korea/digital-economy-outlook-2017-korea.pdf (accessed on 7 October 2019). [16]

OECD (2017), *OECD Science, Technology and Industry Scoreboard 2017: The digital transformation*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264268821-en. [20]

OECD (2017), *OECD Skills Outlook 2017: Skills and Global Value Chains*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264273351-en. [22]

OECD (2017), *OECD Skills Strategy Diagnostic Report: Korea 2015*, OECD Skills Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264300286-en. [21]

OECD (2017), *OECD Telecommunication and Broadcasting Review of Mexico 2017*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264278011-en. [36]

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

OECD (2016), *Competitiveness in South East Europe: A Policy Outlook*, Competitiveness and Private Sector Development, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264250529-en. [46]

OECD (2015), *OECD Science, Technology and Industry Scoreboard 2015: Innovation for growth and society*, OECD Publishing, Paris, https://dx.doi.org/10.1787/sti_scoreboard-2015-en. [49]

OECD (2014), *Industry and Technology Policies in Korea*, OECD Reviews of Innovation Policy, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264213227-en. [45]

OECD/EU (2016), *Inclusive Business Creation: Good Practice Compendium*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264251496-en. [50]

Park, J. et al. (2014), *Impact of Regulation and Regulatory Reform on Service Industries*, https://www.oecd.org/sti/inno/2102514.pdf (accessed on 18 December 2020). [32]

Saia, A., D. Andrews and S. Albrizio (2015), "Productivity Spillovers from the Global Frontier and Public Policy: Industry-Level Evidence", *OECD Economics Department Working Papers*, No. 1238, OECD Publishing, Paris, https://dx.doi.org/10.1787/5js03hkvxhmr-en. [39]

Schoar, A. (2010), "The divide between subsistence and transformational entrepreneurship", *Innovation Policy and the Economy*, Vol. 10/1, pp. 57-81, http://dx.doi.org/10.1086/605853. [90]

Sohn, S. (2017), *중소기업 IP 경쟁력 강화방안 연구*, http://www.prism.go.kr/homepage/entire/retrieveEntireDetail.do?research_id=1710000-201700032. [41]

Squicciarini, M. (2009), "Science Parks, Knowledge Spillovers, and Firms' Innovative Performance. Evidence from Finland", *Economics Discussion Papers*, No. 2009-32, Kiel Institute for the World Economy, http://www.economics-ejournal.org/economics/discussionpapers/2009-32 (accessed on 18 October 2019). [43]

Squicciarini, M. (2008), "Science Parks' tenants versus out-of-Park firms: who innovates more? A duration model", *The Journal of Technology Transfer*, Vol. 33/1, pp. 45-71. [42]

Squicciarini, M., L. Marcolin and P. Horvath (2015), "Estimating Cross-Country Investment in Training: An Experimental Methodology Using PIAAC Data", *OECD Science, Technology and Industry Working Paper*, No. 09, Organisation for Economic Co-operation and Development, https://www.oecd-ilibrary.org/docserver/5jrs3sftp8nw-en.pdf?expires=1570479554&id=id&accname=ocid84004878&checksum=E3FBF7A1172807CFA4343ED0817A7489. [25]

The World Bank, IRU (2017), *Road Freight Transport Services Reform. Guiding Principles for Practitioners and Policy Makers*, The World Bank and IRU. [37]

Timmer, M. et al. (2013), "Fragmentation, incomes and jobs: an analysis of European competitiveness", *Economic Policy*, Vol. 28/76, pp. 613-661, http://dx.doi.org/10.1111/1468-0327.12018. [76]

Timmer, M., S. Miroudot and G. de Vries (2019), "Functional specialisation in trade", *Journal of Economic Geography*, Vol. 19/1, pp. 1-30, http://dx.doi.org/10.1093/jeg/lby056. [83]

Vandermerwe, S. and J. Rada (1988), "Servitization of business: Adding value by adding services", *European Management Journal*, Vol. 6/4, pp. 314-324, http://dx.doi.org/10.1016/0263-2373(88)90033-3. [73]

Notes

[1] The expression "the Miracle on the Han River" comes from Korea's Prime Minister Chang Myon who used it in a speech in 1961, referring to the rapid recovery of West Germany after the Second World War,

which was described as “the Miracle on the Rhine River”. It was later used to describe the rapid growth of Korea between the 1960s and 1990s (Lucas, 1993[88]; Connolly and Yi, 2015[89]).

[2] Productivity analyses typically use the 90-10 productivity ratio to describe the overall productivity dispersion, defined as the ratio of the productivity level of firms located at the 90th percentile of the productivity distribution to the productivity level of firms located at the 10th percentile. However, this chapter uses the inverse of the 90-10 productivity ratio for the sake of consistency with the measurement of other productivity gaps. In all cases, a low ratio is indicative of a large gap between low and high productivity performance.

[3] The observed dispersion of productivity across Korean firms tends to be underestimated since the Korean data do not include firms with fewer than 10 employees. However, robustness checks based on comparable samples of firms with at least 10 employees in both Korea and in other countries confirm that productivity dispersion has increased substantially more in Korea than elsewhere.

[4] For example, suppose that the average worker at top firms makes USD 100k PPP per year, whereas the average worker at bottom firms makes USD 20k PPP. If wages grow at the same yearly rate of 2% at both top and bottom firms, the average worker at top firms gets an earnings increase of USD 2k PPP after one year, while the average worker at bottom firms only gets an increase of USD 0.4k PPP.

[5] Cloud computingand big data figures for Korea are based on 2016 and 2017 data, respectively 2018 data, unavailable at the time of drafting, may show that diffusion has increased.

[6] While it is a well-known fact that it is relatively harder to measure R&D investment in services than in manufacturing industries, such a problem would concern all countries considered and would not affect rankings.

[7] Even the introduction in 2013 of treble damages against firms that violate subcontracting laws is insufficient to incentivise small firms to co-operate with the KFTC.

[8] Both SCK and PRIME were recently consolidated into a Junior College Innovation Support Project and a University Innovation Support Project, respectively.

[9] See https://www.foreigner.fi/articulo/work-and-study/finland-prepares-new-strategy-to-attract-talented-foreign-students/20190409163338001660.html.

[10] The recent OECD report on *The Role of Education and Skills in Bridging the Digital Gender Divide* further discusses successful gender policy initiatives implemented in APEC economies (OECD, 2020[91]).

[11] Affirmative action also applies to regional state-owned enterprises and public corporations under 300 workers.

[12] Development in Korea, Key Figures of Korea R&D Activities (Ministry of Science and ICT, KISTEP, 2018) https://www.kistep.re.kr/c3/sub2_5.jsp?brdType=R&bbIdx=12801.

[13] The difference between Korea and other countries may partly arise from the fact that the Korean data is at the establishment level, while it is at the firm level for other countries. However, the general picture of a skewed size distribution is confirmed in studies that aggregated establishment data at the firm level (Cho et al., 2017[56]).

[14] Large businesses indirectly account for a larger share of jobs because of input-output linkages.

[15] As previously mentioned, the difference between Korea and other countries in the reference group may partly arise from the fact that Korean data is at the establishment level, while it is at the firm level for other countries.

[16] The employer enterprise birth rate corresponds to the number of births of employer enterprises as a percentage of the population of active enterprises with at least one employee (OECD, 2017, p. 72[54]).

[17] The *DynEmp* data exclude firms with one worker in order to improve cross-country comparability and abstract from issues related to legal definitions of employer and non-employer businesses.

[18] Subsistence entrepreneurship refers to entrepreneurship as a means of providing subsistence income, as opposed to transformational entrepreneurship, which refers to the creation of large, vibrant businesses that grow much beyond the scope of an individual's subsistence needs and provide jobs and income for others (Schoar, 2010[90]).

[19] Until 2015, companies with more than 300 regular workers did not qualify as SME either, irrespective of their revenue, hence were excluded from support as well.

[20] Eurostat aggregates services into knowledge-intensive services (KIS) and less knowledge-intensive services (LKIS) based on the share of tertiary educated persons at NACE 2-digit level. For a list, see https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Knowledge-intensive_services_(KIS).

[21] TiVA statistics are in current prices. In the absence of detailed price information for traded inputs, there is no robust methodology to convert data into constant prices.

[22] The contribution of these different factors is calculated using a structural breakdown analysis. See Miller and Blair (2009[87]), Chapter 13, for the methodology. Data are in millions of USD in current prices. As previously emphasised, a limitation when using the *TiVA database* is that data are not in constant prices and the change over time also reflects fluctuating prices.

Inclusive Growth Review of Korea

CREATING OPPORTUNITIES FOR ALL

In recent years Korea has stepped up efforts to reduce inequalities in recognition that a fairer economic model is also the most sustainable one. In order to support this new policy direction, the OECD has carried out novel analysis of inclusive growth building on its *Framework for Policy Action,* developed by the OECD to improve the prospects of the groups left behind. The Inclusive Growth Review of Korea applies, for the first time, the *Framework* at the national level. Using a dashboard of indicators, the *Framework* presents policy recommendations to sustain and more equitably share the gains of economic growth by investing in people left behind, supporting business dynamism and inclusive labour markets, and building efficient and responsive governments. In addition, the Inclusive Growth Review of Korea finds that digitalisation risks to compound the disparities of Korean labour markets, and calls for renewed efforts to reduce the lack of opportunities for up- and re-skilling of the working-age population (Chapter 2). To improve the business environment, Korea should address the unbalanced growth across sectors and firm size and unequal distribution of productivity gains across population groups (Chapter 3).

PRINT ISBN 978-92-64-95091-7
PDF ISBN 978-92-64-49003-1