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This *Survey* is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.
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The previous *Survey* of Israel was issued in March 2018.
Information about the latest as well as previous Surveys and more information about how *Surveys* are prepared is available at http://www.oecd.org/eco/surveys.

BASIC STATISTICS OF ISRAEL, 2019*

(Numbers in parentheses refer to the OECD average)**

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million, 2018)	9.1		Population density per km² (2018)	410.5	(38.0)
Under 15 (%, 2018)	27.9	(17.9)	Life expectancy at birth (years, 2017)	82.8	(80.1)
Over 65 (%, 2018)	12.2	(17.1)	Men (2017)	80.9	(77.5)
Foreign born (%, 2017)	20.8		Women (2017)	84.8	(82.8)
Latest 5-year average growth (%)	2.0	(0.6)	Latest general election		March-2020
ECONOMY					
Gross domestic product (GDP)			Value added shares (%, 2018)		
In current prices (billion USD)	394.8		Agriculture, forestry and fishing	1.3	(2.6)
In current prices (billion NIS)	1 406.7		Industry including construction	21.5	(26.8)
Latest 5-year average real growth (%)	3.3	(2.2)	Services	77.2	(70.5)
Per capita (000 USD PPP, 2018)	42.1	(48.3)			
GENERAL GOVERNMENT (% of GDP)					
Expenditure (2018)	40.3	(40.4)	Gross financial debt (2018, OECD: 2017)	60.9	(108.9)
Revenue (2018)	36.7	(37.5)	Net financial debt (2018, OECD: 2017)	57.4	(69.0)
EXTERNAL ACCOUNTS					
Exchange rate (NIS per USD)	3.6		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	3.7		Manufactured goods	28.1	
In per cent of GDP			Machinery and transport equipment	26.6	
Exports of goods and services	29.3	(54.2)	Chemicals and related products, n.e.s.	25.6	
Imports of goods and services	27.4	(50.5)	Main imports (% of total merchandise imports)		
Current account balance	3.4	(0.3)	Machinery and transport equipment	36.8	
Net international investment position	41.0		Manufactured goods	17.2	
			Mineral fuels, lubricants and rel. materials	11.9	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate (aged 15 and over, %)	61.1	(57.5)	Unemployment rate, Labour Force Survey (aged 15 and over, %, OECD: 2018)	3.8	(5.4)
Men	65.1	(65.6)	Youth (aged 15-24, %, OECD: 2018)	6.7	(11.7)
Women	57.3	(49.9)	Long-term unemployed (1 year and over, %, 2018)	0.2	(1.4)
Participation rate (aged 15 and over, %, 2018)	63.5	(61.1)	Tertiary educational attainment (aged 25-64, %, 2017, OECD: 2018)	50.9	(36.9)
Average hours worked per year, 2018)	1 898.1	(1726)	Gross domestic expenditure on R&D (% of GDP, 2017)	5.0	(2.6)
ENVIRONMENT					
Total primary energy supply per capita (toe, 2018)	2.6	(4.0)	CO2 emissions from fuel combustion per capita (tonnes, 2018)	7.0	(8.6)
Renewables (%, 2018)	2.6	(10.5)	Water abstractions per capita (1 000 m³, 2016)	0.1	
Exposure to air pollution (more than 10 g/m³ of PM 2.5, % of population, 2017)	100.0	(58.7)	Municipal waste per capita (tonnes, 2017)	0.7	(0.5)
SOCIETY					
Income inequality (Gini coefficient, 2018, OECD: 2016)	0.35	(0.31)	Education outcomes (PISA score, 2018)		
Relative poverty rate (%, 2018, OECD: 2016)	16.9	(11.6)	Reading	470.4	(487.1)
Median disposable household income (000 USD PPP, 2018, OECD: 2016)	22.3	(23.9)	Mathematics	463.0	(489.3)
Public and private spending (% of GDP)			Science	462.2	(488.7)
Health care (2018)	7.5	(8.8)	Share of women in parliament (%)	23.3	(30.7)
Pensions (2017, OECD: 2015)	5.4	(8.5)	Net official development assistance (% of GNI, 2017)	0.1	(0.4)
Education (public, 2017)	5.3	(4.5)			

* The year is indicated in parenthesis if it deviates from the year in the main title of this table. ** Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 80% of member countries.
Source: Calculations based on data extracted from databases of the following organisations: OECD, International Energy Agency, International Labour Organisation, International Monetary Fund, World Bank.

Executive Summary

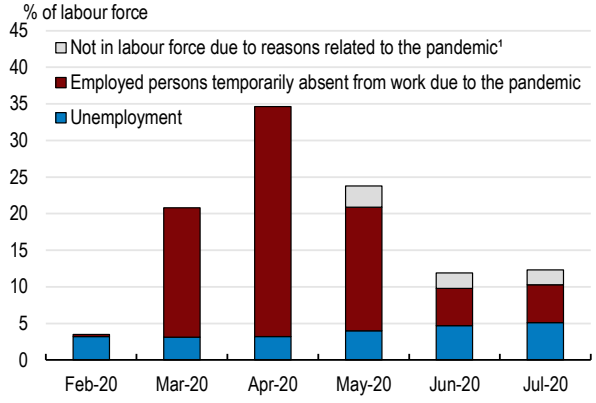
The economy is facing a deep shock

The coronavirus pandemic has had profound effects. Lockdown measures and high uncertainty have led to a sharp contraction in output. Large numbers of workers have been put on leave, unwinding some of the employment gains of the past. The downturn hit at a time when the economy was performing well, with GDP growth close to potential, record-low unemployment, and relatively low public debt. However, the crisis threatens to aggravate Israel's underlying challenges of high poverty, large income gaps and wide productivity disparity between its vibrant high-tech sector and lagging sheltered sectors.

Confinement measures were introduced swiftly and, together with additional steps to strengthen the health care system capacity, helped limit the number of new infections during the first wave of the pandemic. However, a second outbreak, after the economy had largely reopened, has been more difficult to contain. The government and central bank put in place wide-ranging measures to protect people and firms from the economic consequences of the shutdowns.

The labour market has suffered a severe shock. As businesses were shut down, more than a million workers have been temporarily laid-off (Figure 1). Many have regained employment as the economy reopened, supported by government subsidies to rehire workers. However, the severity of the shock and possible restructuring of the economy will leave many looking for jobs. Government policies to retrain workers and support job search will be crucial.

Figure 1. The labour market has weakened substantially



1. Data not available before May 2020.
Source: Israel Central Bureau of Statistics.
StatLink https://doi.org/10.1787/888934152115

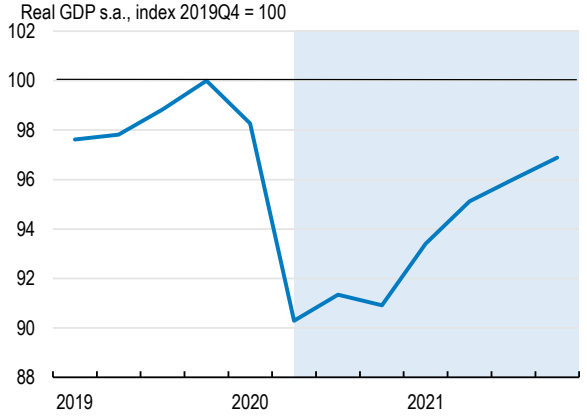
The recovery will be slow (Table 1**,** Figure 2**).** The economy started to reopen in late-April. However, a second lockdown in September, high uncertainty, unemployment and new distancing regulations will weigh on the recovery of consumer demand and business investment. Weak global demand will hold back export growth.

Table 1. Output will only recover gradually

	2019	2020	2021
Gross domestic product	3.4	-6.0	2.9
Unemployment rate[1]	3.8	6.1	6.5
Fiscal balance (% of GDP)	-3.9	-13.8	-10.3
Public debt (gross, % of GDP)	60.0	77.0	84.7

1. Narrowly defined according to the Labour Force Survey
Source: *OECD Economic Outlook: Statistics and Projections database*.

Figure 2. The second virus outbreak will delay the recovery



Source: *OECD Economic Outlook: Statistics and Projections database*.
StatLink https://doi.org/10.1787/888934152134

Monetary policy reacted decisively. Quantitative easing was started, the policy rate lowered from 0.25%-0.1%, liquidity provided, and a credit facility for SMEs via banks established. If financial conditions were to tighten, the existing programmes could be further expanded. Inflation will likely continue to undershoot the target range in the near-term.

The banking system entered the crisis in a robust state, and thanks to regulatory and monetary easing as well as government loan guarantees the initial impact on credit supply was limited. Nonetheless the quality of bank balance sheets may deteriorate quickly as liquidity support is withdrawn and firm failures increase. The banks' heavy exposure to the real estate sector is another risk. Creating a deposit insurance system and a bank resolution framework could further enhance financial stability.

Tax reform can alleviate fiscal challenges and support more inclusive growth

Fiscal policy responded forcefully to the crisis and provided welcome support to the most vulnerable people and struggling firms. Fiscal support should be maintained and targeted to strengthen the recovery**.** The resulting substantial budget deficits will add to the debt stock.

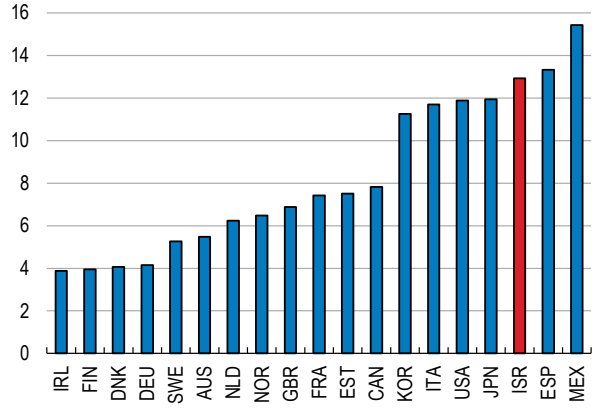
Additional social and infrastructure spending may be needed to enhance the authorities' capacity to tackle large socio-economic disparities, boost productivity and support the recovery of aggregate demand. Allowing for this spending while maintaining budget control, will require improved spending efficiency and sustainable increases in tax revenues.

The tax mix is reasonably growth- and employment-friendly but there is scope to improve the efficiency and equity of the tax system. The tax burden on labour is relatively low, and the corporate income tax rate has been cut in recent years, while taxes on consumption, which are less distortive, are relied on more heavily. Nevertheless, ample room exists to simplify the tax system by abolishing inefficient tax expenditures and broadening tax bases.

The share of the working poor is high (Figure 3**).** Israel's earned income tax credit is an effective redistribution measure with positive employment effects for low-skilled workers. Further expanding the programme would support the poor while maintaining strong incentives to work.

Figure 3. The number of working poor is high

Share of workers in poverty, per cent, 2017



Note: Workers with income below the poverty line, living in households with a working-age head and at least one worker. 2018 data for Australia and Israel.

Source: *OECD Income Distribution database*.

StatLink https://doi.org/10.1787/888934152153

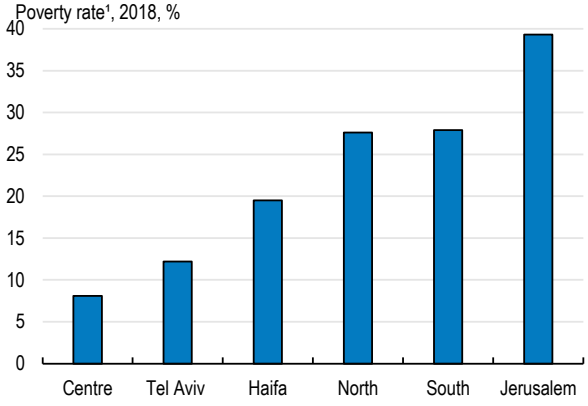
The business tax system provides large benefits to internationally competitive and high-tech firms. This preferential treatment should be reviewed with a view to better targeting the scheme to ensure net benefits to society and reduced distortions. Better targeting could create room for broader business and innovation support that underpins the economy more widely**.**

Excise taxes should be adjusted in line with environmental goals. Introducing congestion charging would reduce traffic flows and pollution, and would prepare Israel for the planned phase-out of petrol- and diesel-fired cars starting in 2030. Gradually increasing taxes on gas and coal or introducing an economy-wide carbon tax would lower CO_2 emissions in a cost-minimising way and protect the tax base as energy generation and use shift to natural gas.

Reducing income disparities between municipalities will strengthen social cohesion

Income inequalities between municipalities are among the highest in the OECD, despite Israel being one of the smallest OECD countries. Poverty rates vary significantly between different areas (Figure 4), as ethnic and religious groups with weak labour market outcomes are concentrated in separate cities or neighbourhoods.

Figure 4. Poverty rates differ significantly across districts



1. Poverty threshold is 50 % of the national median equivalised disposable income.

Source: National Insurance Institute (2019).

StatLink https://doi.org/10.1787/888934152172

The quality of schools and the attractiveness of the local labour market differ considerably between municipalities. Increasing the quality of education by moderating the differences between the various school streams would improve the employability of the labour force. The core subjects should be strengthened in the curriculum of the

Haredi stream. Post-secondary vocational programmes should be expanded to target those adults who left school without proper skills.

Improving public transportation and coordination between central government and local authorities in infrastructure projects may help connect vulnerable groups to job opportunities. Establishing metropolitan transport authorities could promote integrated transport networks and pricing systems and ensure stable financial support for public transport.

Poorer municipalities do not have enough resources to finance adequate public services for their residents, which further widens the gaps between municipalities. This calls for changes in the local fiscal framework. Stronger equalisation through higher compensation from wealthier municipalities should be considered. The government could also merge municipalities and promote regional clusters to improve efficiency.

The property tax is the main source of municipal income but suffers from several major deficiencies. The current system is opaque, and large differences in rates between residential and non-residential properties and among non-residential properties contribute to revenue disparities between municipalities, housing shortages and locational distortions.

Strengthening product market competition and promoting renewable energy to boost and green the recovery

Stark differences in productivity exist between sectors. While productivity in high-tech sectors is already internationally high, the more traditional sectors lag significantly behind. Enhancing aggregate productivity will involve not only removing barriers that prevent resources from shifting into the high-tech sector, whose expansion has slowed, but also lifting the productivity of the long tail of lagging sectors. This will require developing human capital, improving infrastructure and fostering competition and regulatory reform in sheltered sectors.

Despite progress, regulations in a number of areas are more restrictive than in other OECD countries. For instance, price regulations are still widespread, and barriers to foreign trade and investment remain high, with Israel's foreign trade exposure lower than in other small OECD nations. Further lowering tariff and non-tariff barriers as well as streamlining trade procedures will boost competition and productivity in sheltered sectors.

Tariffs and regulations remain particularly distorting in the agricultural sector. The authorities signed a welcome agreement with farmers in 2018 to undertake a comprehensive reform of the dairy sector, which would improve the functioning of this market if legislated and implemented. The agricultural reform process should continue in other areas, notably through the replacement of quotas, price guarantees and customs tariffs by non-distorting direct payments to farmers.

Poor air quality remains a concern for well-being. The transition to natural gas has the potential to reduce CO_2 emissions and pollution in the near term. To achieve deeper cuts and take advantage of falling costs, the share of renewables in electricity generation must rise.

The electricity market reform of 2018 will increase competition in electricity generation, providing an opportunity to expand renewables. The reform also foresees the transfer of transmission system operations to a separate but also government-owned company. It will be important to avoid any discrimination in grid access through effective regulation and to further develop a wholesale electricity market and high-resolution electricity pricing. The government can also promote the expansion of large-scale solar plants through tenders integrating land-use rights and by making more public land available for tenders.

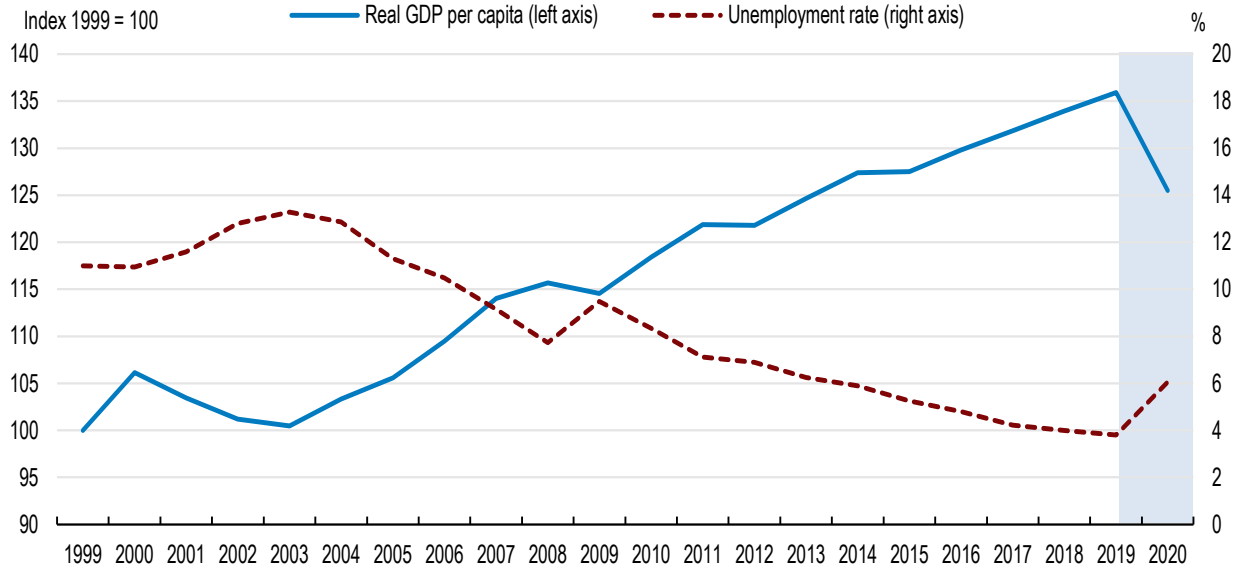
MAIN FINDINGS	KEY RECOMMENDATIONS
Setting monetary and financial policies to promote stability	
Monetary policy has responded decisively to the crisis to provide liquidity and ensure an orderly functioning of financial markets. Inflation remains subdued and below the target band of 1-3%.	Maintain a supportive monetary policy stance, and stand ready to further expand existing programmes, if financial conditions tighten.
Financial risks have increased as more firms face an uncertain future. Banks' exposure to the real estate sector is heavy.	Continue providing temporary liquidity support to firms as long as needed to avoid widespread bankruptcies. Create a deposit insurance system and a bank resolution framework to further enhance financial stability.
Implementing budget and tax policies to support an inclusive recovery	
Fiscal policy has reacted forcefully to the crisis to cushion income losses for the most vulnerable people and firms. Employment has fallen significantly.	Continue to provide fiscal support to buttress the recovery and enhance active labour market policies to help the unemployed transition to new jobs.
As a result of the exceptional fiscal support the budget deficit will surge from an already elevated structural level and public debt will increase substantially. The government has recently strengthened its medium-term fiscal framework. However, there is scope to further strengthen compliance with the existing fiscal rules.	Formulate a medium-term fiscal strategy to bring the debt-to-GDP ratio back onto a downward trajectory, while ensuring adequate spending on infrastructure, education and poverty reduction. Establish an independent fiscal council.
There is scope to reduce inefficient tax expenditures, which complicate the tax system and introduce distortions.	Consider reducing tax breaks on savings in "advanced training funds", taking into account effects on income distribution and work incentives. In the medium term, streamline VAT exemptions and offset any regressive effects with an increase in existing welfare programmes
The share of working poor is high.	Make the temporary changes to the earned income tax credit permanent. Evaluate and consider expanding the programme further.
The business tax system provides large benefits to internationally competitive and high-tech firms. This may have attracted FDI but also creates distortions, tax planning opportunities, and raises the costs of tax administration.	Review the preferential tax treatment under the Law for the Encouragement of Capital Investment with a view to better targeting the scheme.
Pollution is well above recommended levels, and road traffic intensity is the highest in the OECD. Congestion causes the loss of both work and leisure hours and more air pollution and road accidents. Israel plans to end the sale of petrol and diesel-fired cars in 2030. Effective carbon tax rates on coal and natural gas are low. Higher rates would lower CO_2 emissions in a cost-minimising way, make renewable energy generation more competitive and further reduce air pollution.	Introduce congestion charges, accompanied by significant improvements in the quality of public transport services and higher parking fees. Either introduce an economy-wide carbon tax or gradually increase the existing excise tax on primary fuels to levels that reflect estimated emissions externalities. Offset real income losses, in particular of low-income households, through transfers.
Reducing differences between municipalities to strengthen social cohesion	
Localities in Israel differ considerably in the skill levels of their labour force. Many adult Haredi men left schools without labour market relevant skills and have few options to acquire these skills afterwards.	Expand post-secondary vocational training targeted at groups with weak attachment to the labour market such as Haredi and Arab-Israelis.
The existence of multiple school streams in Israel reinforces geographic disparities in education, along religious/community lines. Student streaming has a significant impact on equity, contributes to the wide dispersion in skills in Israel and creates additional fiscal costs.	Promote teacher exchanges. Increase Hebrew courses in the Arab stream. Strengthen the core subjects in the curriculum of the Haredi stream.
Public transportation is inadequate, and coordination between central government and local authorities in infrastructure projects is one of the least effective in the OECD. Large projects require the consent of the relevant local authorities, which often leads to lengthy negotiations that slow project advancement.	Establish metropolitan transport authorities in the Tel Aviv area and perhaps other areas to promote integrated transport networks and pricing systems, and ensure stable financial support for public transport.
There are large differences in public services provision between poorer and wealthier municipalities. Differences in resources mean that poorer municipalities can find it difficult to provide adequate services levels for their residents.	Strengthen fiscal equalisation within municipalities mainly through higher compensation from wealthier municipalities.
The municipal property tax system is opaque. Non-residential property tax rates are substantially higher than residential rates, which provides incentives for municipalities to assign land for commercial use at the expense of residential housing and has contributed to large revenue differences across municipalities.	Reduce the difference between non-residential and residential property tax rates. Replace the area-based property tax with a transparent and uniform system based on property values.

Boosting competition and promoting renewable energy to deliver better product market outcomes	
Despite progress, competition in some markets remains weak. The economy is less open to foreign trade than most other small OECD countries.	Further cut tariffs and non-tariff barriers, and streamline trade regulations.
The cost of generating solar electricity may fall below that of gas in the medium term, especially for large-scale plants. Solar expansion is held back by transmission grid constraints and a lack of available land. Expanding renewable energy and dual land usage would avoid GHG emissions and pollution.	Use tenders integrating private and public land-use rights to attract investment into large-scale solar electricity generation and transmission networks, and make more public land available for tenders.
Electricity market reforms foresee the transfer of transmission system operations to a separate but also government-owned company and an electricity wholesale market. Any discrimination in grid access could hold back renewables. Electricity markets need to adapt to intermittent renewables supply.	Further develop the wholesale market as planned, with high-resolution electricity pricing across time and space, competitive determination of market prices and effective regulation to prevent discrimination against new entrants.

1 Key Policy Insights

The coronavirus pandemic is threatening to reverse some of the achievements made over the last decade in boosting standards of living (Figure 1.1). After the virus outbreak reached Israel, stringent confinement measures were swiftly introduced and helped limit the number of new infections during the first wave of the pandemic. This included an early closure of borders as well as strict mobility, gathering and workforce restrictions (Box 1.1). However, after the economy was largely reopened in June the pandemic resurged, requiring renewed tightening of some confinement measures and eventually a second nationwide lockdown in September. The government and financial authorities introduced a wide range of measures to cushion the shock for households and firms. Nevertheless, prospects are now less certain.

Figure 1.1. The COVID-19 crisis threatens to reverse progress made in boosting living standards



Note: The GDP and unemployment figures for 2020 are forecasts.
Source: *OECD Economic Outlook: Statistics and Projections database*.

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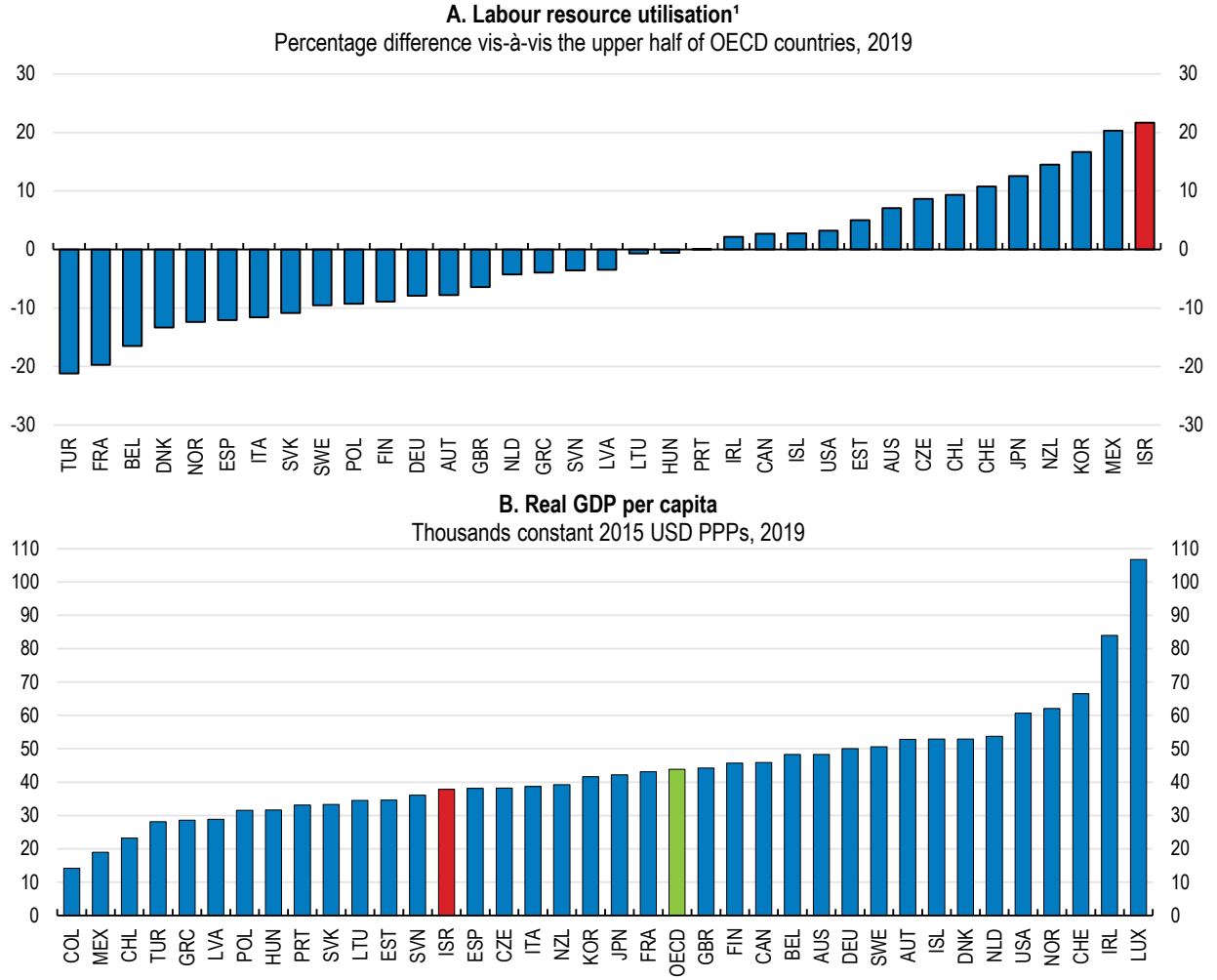
Box 1.1. Key policy responses to the COVID-19 pandemic

Israel reacted swiftly to the first wave of the coronavirus pandemic by adopting strict containment measures as well as a wide range of fiscal, monetary and financial measures to cushion income losses and provide liquidity to households and firms. However, the pandemic resurged after the economy was largely reopened, requiring some retightening of containment measures and the extension of government support in July. A second nationwide lockdown was announced in September.

- **Containment**: Israel closed its borders to foreign visitors in early March. Schools were closed by mid-March. On 20 March the government adopted emergency regulations including the closure of non-essential shops, strict mobility, gathering and workforce restrictions that limited the number of workers in each workplace to 30% in the public and private sector, and were further tightened to 15% in the private sector in the first half of April. Containment measures were broadly lifted and the economy was largely reopened in May. Amid rapidly resurging infections some containment measures were tightened in July. In September, the government announced a second nationwide lockdown for 3 weeks, including movement restrictions, gathering limits and closures of schools and non-essential businesses that receive customers.
- **Testing and tracing**: Israel expanded its testing capacity, including by setting up several 24/7 drive-through testing stations, with the number of tests in relation to its population among the highest in the OECD (OECD, 2020a). Mobile data was used to trace infected people, to inform those who may have been in contact with them, and to enforce quarantine orders.
- **Monetary and financial policy:** the Bank of Israel launched a programme to purchase government and corporate bonds, lowered the policy rate from 0.25% to 0.1% and established a credit facility for SMEs via banks. It also injected liquidity and reduced the capital adequacy ratio for banks by 1 percentage point.
- **Support to individuals and households:** Eligibility to unemployment benefits was broadened for example to workers on unpaid leave and extended until June 2021. The government also provided direct payments to vulnerable groups including the self-employed, older employees (over 67 years) who lost their employment during the crisis, and families with children. Banks were encouraged to allow a postponement of mortgage and other household credit repayments.
- **Support to firms:** Small and medium sized firms hard-hit by the crisis can receive grants as well as reimbursements for property taxes until June 2021. Loan funds with state guarantees for small and large firms were established. Payments of VAT, social security and government fees were deferred for small businesses. Grants were made available to firms for every person they rehire.

Before the coronavirus pandemic, Israel's economy enjoyed low unemployment and living standards had risen close to the OECD average (Figure 1.2), thanks to effective macroeconomic management and ongoing structural reforms (Box 1.2). It achieved remarkable employment gains, notably by Haredi and Arab-Israelis, owing to reforms that strengthened work incentives (Figure 1.2). In addition, Israelis enjoyed good health outcomes and remained on average more satisfied with their lives than most other OECD residents (Figure 1.3). However, Israel remains a two-speed economy, with its vibrant high-tech sector offset by lagging sheltered sectors, which employ most of the workforce. In addition, a large infrastructure deficit and a lack of domestic and external competition contribute to duality in productivity between sectors. As a result, aggregate productivity gains have been slow and income gaps have remained large (Figure 1.4). Poverty is widespread especially among Arab-Israelis and Haredim. This reflects a lack of the skills needed for them to get high-productivity and well-paid jobs. For the Haredim it also reflects an explicit choice to focus on non-material benefits and engage in life-long religious studies (Box 1.3; Machlica, 2020). At the same time, air pollution remained a major concern as well as housing supply and affordability (Figure 1.3).

Figure 1.2. The economy performed well prior to the COVID-19 crisis thanks to high rates of labour utilisation

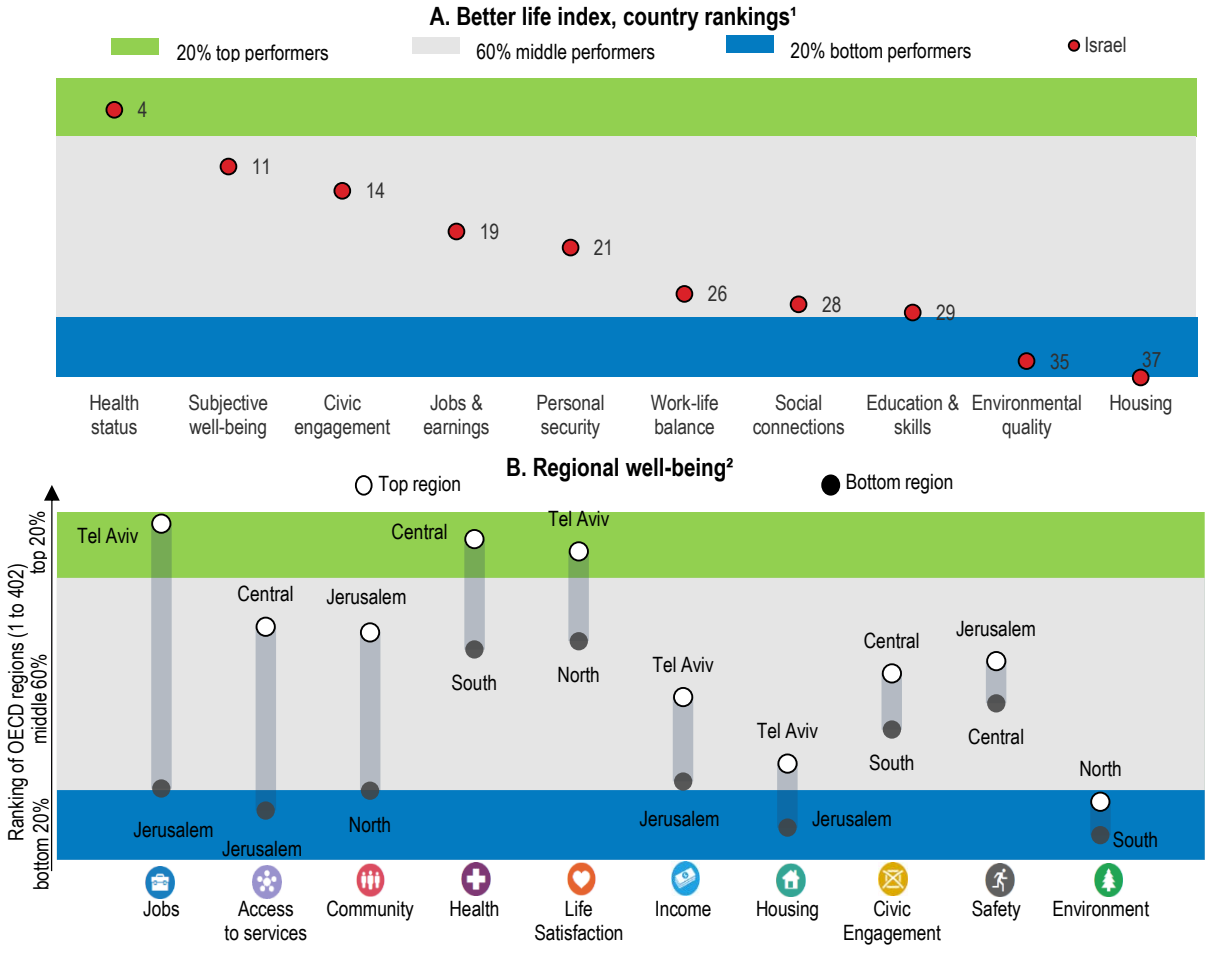


1. Calculated as follows: (average hours worked per person employed * total employment) / population aged 15-74.
Source: OECD, *Going for Growth*; and *OECD Economic Outlook: Statistics and Projections database*.

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Due to the COVID-19 pandemic the economy experienced an unprecedented downturn in the first half of 2020. At the height of the crisis, over a million employees have been temporarily laid off. As containment measures have been lifted, businesses have reopened and many workers have returned to work. However, the second lockdown will weigh on activity and employment in the near-term. In addition, with uncertainty still high, business failures expected to increase and sectoral shifts in output likely, economic activity is set to pick up only gradually and unemployment to remain above pre-crisis levels at the end of 2021.

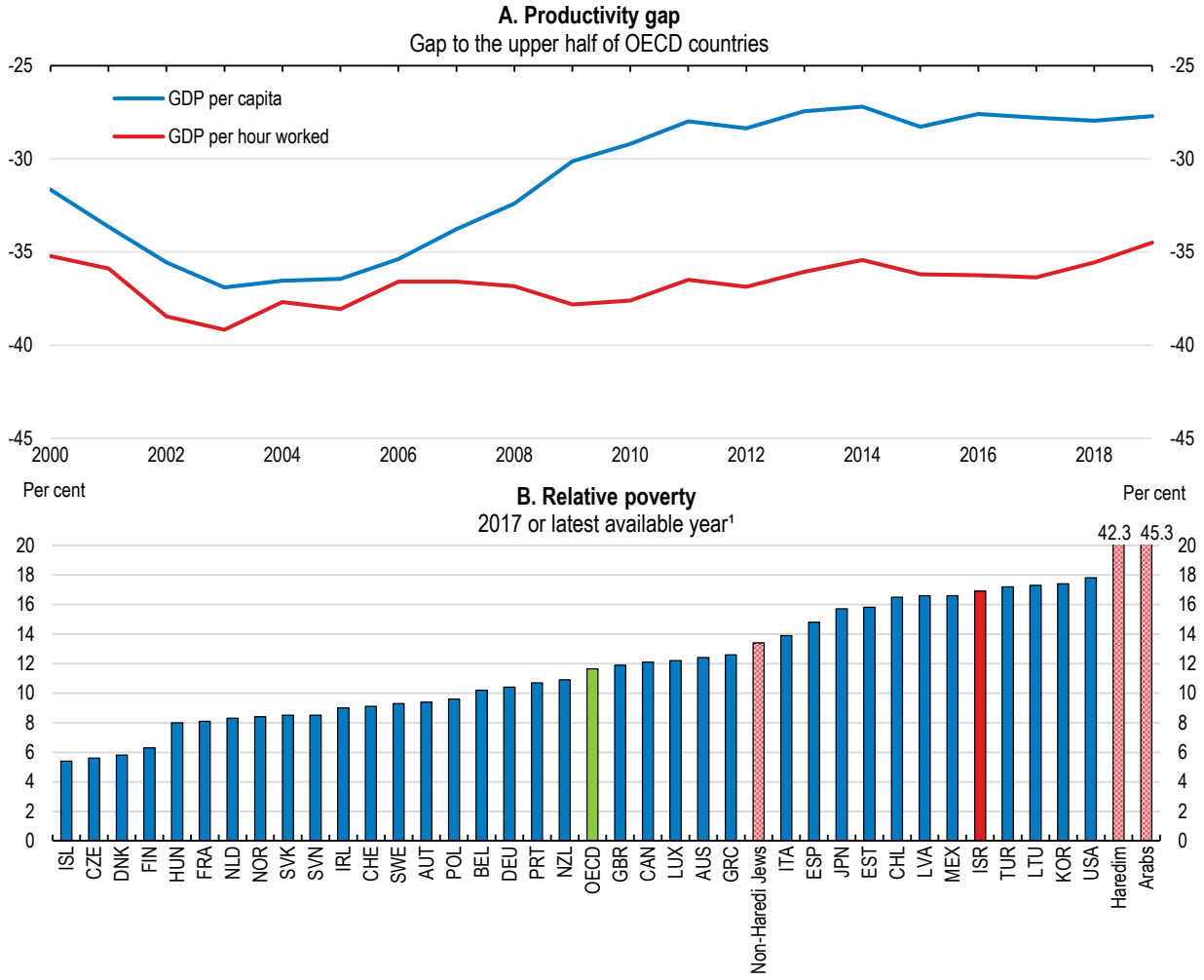
Figure 1.3. Before the crisis, well-being outcomes were mixed, with wide regional disparities



1. Each well-being dimension is measured by one to four indicators from the OECD Better Life Index set. Normalised indicators are averaged with equal weights. Country rankings from 1 (best) to 37 (worst), with the exception of the Work-life balance dimension for which the ranking is out of 36 countries. Data for the Income & wealth dimension are not available for Israel in the BLI database.
2. Relative ranking of the regions with the best and worst outcomes in the 11 well-being dimensions, with respect to all 402 OECD regions. The 11 dimensions are ranked according to the size of regional disparities in the country.
Source: *OECD Better Life Index database; OECD Regional Well-being database*, 2018.

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Figure 1.4. Slow productivity gains and high poverty are Israel's long-standing challenges



1. Percentage of persons living with less than 50% of median equivalised disposable income. 2018 data for Australia and Israel.
Source: OECD, Going for Growth; OECD Income Distribution database; National Insurance Institute (2019), Poverty and Social Gaps Report, 2018, Table 7.

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Box 1.2. Key recent reforms

Taxation: The statutory corporate income tax rate was cut in several steps from 26.5% in 2015 to 23% in 2018. In 2017 Israel introduced new preferential corporate income tax rates for IP-related activities in line with the nexus approach under BEPS Action 5. In 2017 the surtax for high-income earners was increased from 2% to 3%.

Welfare: In 2017 the government approved the "Net Family" programme, with the aim of supporting working families with children. As part of the programme, the earned income tax credit and tax credits for children under the age of 6 were increased.

Competition: Competition in the banking sector has been strengthened, notably by separating two credit card companies from banks in 2018, as well as by the establishment of a central credit registry and the granting of a new licence to an online bank in 2019. The electricity-sector reform approved in 2018 requires the state-owned Israel Electric Corporation *inter alia* to sell part of its electricity generation capacity, which is expected to bring down its market share form 80% in 2017 to 40% in 2025. In 2018 exposure to parallel imports via the Internet was increased and import tariffs reduced on several products, including foodstuffs.

Education: The government is strengthening its programmes to boost the number of students in tech-related studies to counteract increasing sectoral shortages. In 2018 engineering became the most widely studied major in Israel. The share of high school students studying mathematics and English at the highest level has almost doubled since 2012.

Financial Stability: In late 2018 a Financial Stability Committee, comprising the Bank of Israel, the Ministry of Finance, the Securities Authority and the Capital Markets Insurance and Saving Authority, was established to foster oversight and enhance supervisory co-ordination.

Box 1.3. The Ultra-Orthodox population in Israel

Integrating the Arab-Israeli and Haredim into the labour market remains one of the key challenges for the Israeli economy. This is particularly important in the case of Haredim due to demographic trends. While the fertility rate of Arab-Israelis has fallen and is now only slightly higher than that of the non-Haredi Jewish population (3.1 vs 2.5), Haredi families still have on average seven children. Their share in the population is expected to increase from today's 12% to 32% in 2065.

Haredi men are encouraged by their communities to engage in life-long religious studies in yeshiva schools rather than work. Men enrolled in religious studies are exempt from military service, which is compulsory for other Jewish citizens. Those who seek jobs are often unprepared for the labour market, because Ultra-Orthodox boys' study a very limited core curriculum of secular subjects. Consequently, almost half of all Haredi men are out of the labour force. Most of those that do work tend to earn close to the minimum wage and therefore pay no or very little income tax. Almost half of the Haredi population lives in material poverty. Ultra-Orthodox communities in the United States or in the United Kingdom have much more favourable employment outcomes.

Despite their low incomes and high officially measured poverty, few Haredi consider themselves poor: less than 8% in fact, which is comparable to non-Haredi Jews. Life satisfaction of the Haredim is also higher than in the rest of the population. This may be explained by the high level of community activity, including high rates of volunteerism and donations, mutual aid and other economic support frameworks (Kasir and Romanov, 2018). It is noteworthy that more than 90% of the Haredim donate to charities, compared to 60% of secular Israelis.

Against this background, the main messages of this Survey are:

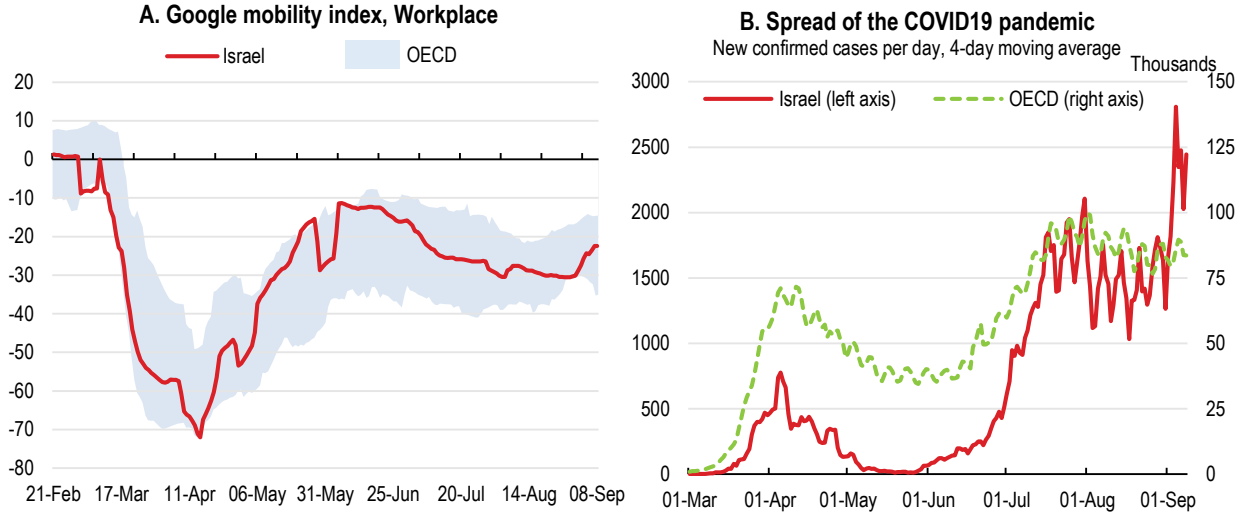
- Macroeconomic policy needs to remain supportive in the near term to support the recovery and should stand ready to expand support as needed. Further structural reforms and additional public investment to enhance training and education, improve infrastructure and foster product market competition are key to strengthening the recovery.
- The government should reduce wide differences in resources between municipalities to promote equal opportunities for everyone.
- Reforms to improve the efficiency and equity of the tax system can help strengthen an inclusive recovery from the crisis and improve health and environmental outcomes while durably generating additional revenues.

The economy experienced an unprecedented downturn

Israel's first case of the coronavirus was detected in late February and the virus spread quickly thereafter. Strict confinement measures were introduced swiftly, the health capacity expanded, and Israel was among the first countries to close its borders to foreign visitors in early March. Confinement measures helped limit the number of new cases in the first phase of the outbreak. The daily number of new infections trended down in April and May, but there has been a surge in new infections since June (Figure 1.5). In response, the government tightened confinement measures again and eventually announced a second, somewhat milder, nationwide lockdown in September. Infection rates have been higher in several Ultra-Orthodox and Arab towns and neighbourhoods. The death toll in Israel has been lower than in the hardest-hit OECD countries. The immediate policy priority must be to continue with distancing, testing, tracking, and treatment programmes and maintaining adequate health capacity.

Figure 1.5. Israel is facing a second outbreak of the pandemic

2020

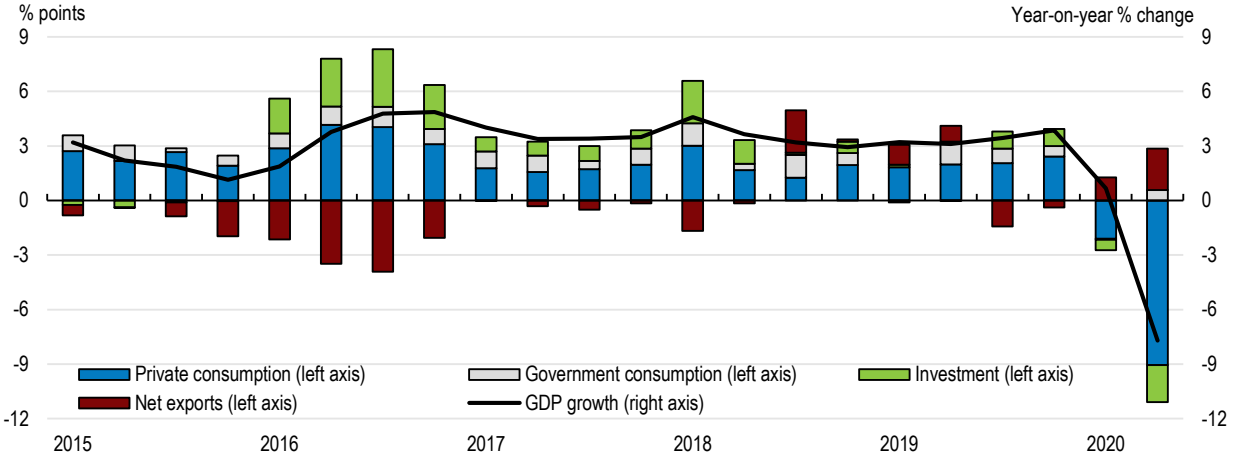


Notes: The figure depicts the ratio between mobility to workplace at all points in time and the level during the baseline period (7-day moving average). The shaded area represent the range between the OECD's 90th and 10th percentile. The level during the baseline period was established based on the median value of the volume of visits for each day of the week during the period January 3–February 6, 2020
Source: OECD calculations based on Google Community Mobility Report and on Ourworldindata.

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Lockdown measures and heightened uncertainty led to a sharp contraction of domestic supply and demand in the first half of 2020 (Figure 1.6). Entire sectors have been closed down or forced to operate at a fraction of their normal capacity. During the peak of the first lockdown from end-March to mid-April, around a third of the economy was shut down. At the same time consumer and business confidence plummeted (Figure 1.7).

Figure 1.6. Domestic demand contracted sharply



Note: Contribution from stockbuilding not shown.
Source: *OECD Economic Outlook: Statistics and Projections database.*

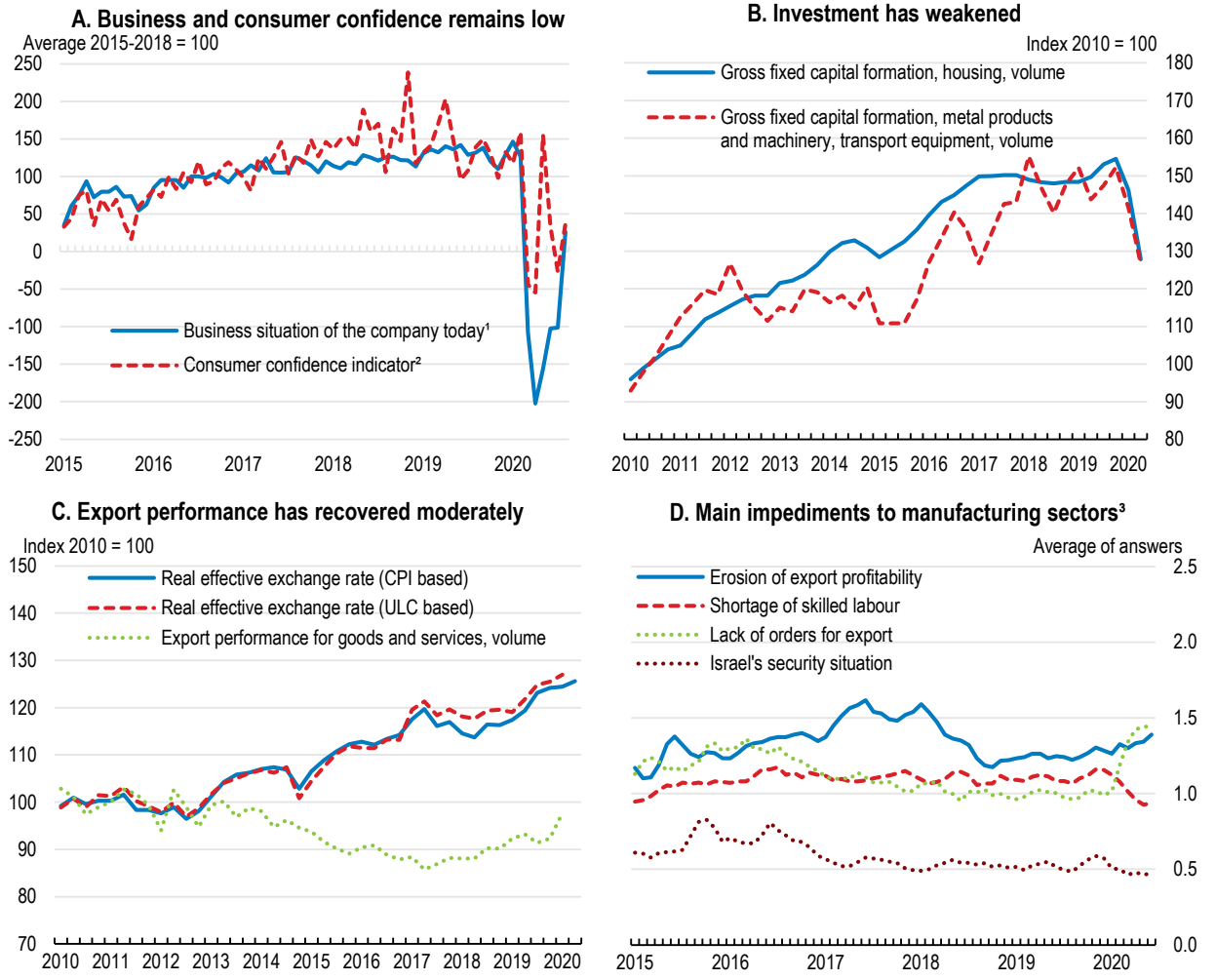
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Economic activity picked up relatively rapidly as the economy reopened and government support cushioned income losses, but the pace of the recovery has slowed more recently. High-frequency data from credit card purchases and business revenues suggest a relatively quick rebound in activity in May and June in sectors where the restrictions were lifted early. However, in other sectors, especially tourism, expenditure remained depressed. More recent data suggest a slowdown of the recovery amid the renewed outbreak of the virus and the tightening of some containment measures and business closures such as bars and night clubs.

The labour market suffered severely. At the height of the first lockdown in April, more than a million persons were laid-off or put on unpaid leave. Many people have returned to work since the economy reopened, helped by government subsidies to firms to rehire workers. However, the unemployment rate, broadly defined to include temporarily absent workers (mainly due to unpaid leave) and employees, who have left the labour force or have been discouraged to enter the labour force due to the pandemic, remains high at around 12% (Figure 1.8). Job vacancies remain depressed. Moreover, the severity of the crisis is likely to increase firm bankruptcies, despite government support to firms, forcing worker to find new jobs. In addition, a reallocation of labour across sectors might be required during the recovery, as activities requiring face-to-face contact, such as hospitality and food services (accounting for 2.5% of GDP) may face extended low demand, while other sectors, such as health and digital services, will benefit from rising demand. Reallocation will take time and require retraining especially since about a third of employees who have been on furlough or laid-off in June have been low-skilled workers (MoF, 2020).

The decline of exports has been somewhat more moderate in the first half of 2020, thanks to the resilience of the high-tech sector and the start of gas exports to Jordan and Egypt (Box 1.4). Almost half of services exports emanates from the high-tech sector (Figure 1.9). In contrast, tourism exports have plummeted as visitor arrivals from abroad halted. The shekel depreciated strongly at the onset of the crisis but has quickly regained pre-crisis levels. As the manufacturing sector is more sensitive to shekel appreciation (BoI, 2017), a strong shekel will weigh on goods exports. Accordingly, the erosion of export profitability is still a main concern of manufacturing firms, together with the lack of export orders (Figure 1.7, Panel D).

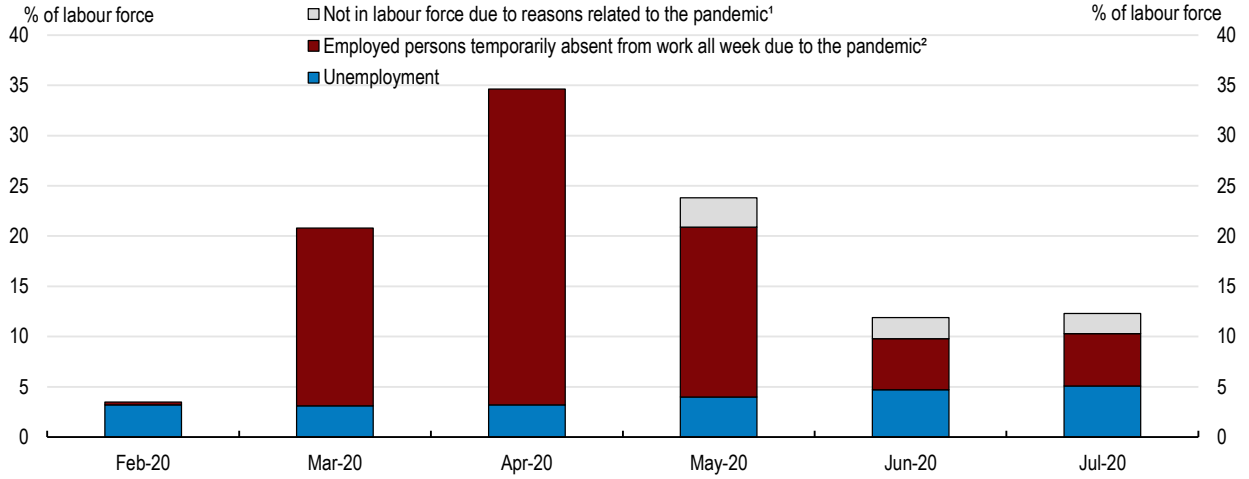
Figure 1.7. Macroeconomic developments



1. Net balance of companies responding with "increase" minus those that responded "decrease" of the business situation.
2. The Consumer Confidence Indicator of the CBS is the arithmetic mean of expected changes over the next 12 of a) in financial situation of household; b) expected changes in general economic situation; c) expected changes in unemployment months; d) expected changes in household savings.
3. Data are from the Business Tendency Survey of the CBS and refer to the weighted average of companies' answers (3-month moving average) on the degree of limitations from certain phenomena. The answers are coded from 0 (no limitations) to 3 (severe limitations).
Source: *OECD Economic Outlook: Statistics and Projections database*; Israel Central Bureau of Statistics.

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Figure 1.8. The labour market has weakened substantially



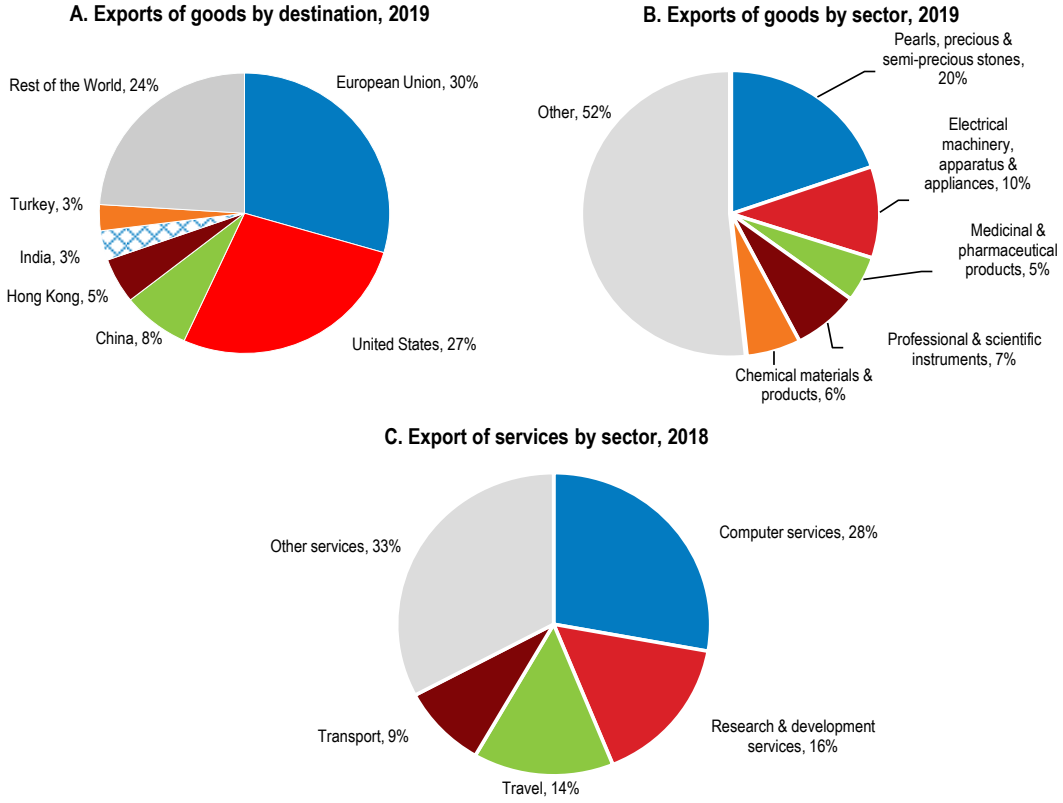
1. Series includes: persons not in the labour force who stopped working due to dismissal or closure of the workplace in March-July 2020 and persons not in the labour force who stopped working due to other reasons or not working in past and interest to work now, but did not look for job in last month due to coronavirus pandemic. Data not available before May 2020.
2. This includes employees on unpaid leave, employees who were absent during the week due to reduced workload, work stoppage or other reasons related to the pandemic and excludes quarantined persons.
Source: Israel Central Bureau of Statistics.

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The recovery from the global pandemic will be slow (Table 1.1). The second nationwide lockdown will weigh on activity in the near-term. In addition, as long as there is no vaccine or effective treatment for the virus, uncertainty in the economy will remain high. This together with health and distancing regulations for businesses will weigh on consumer demand and investment. In contrast, the government's aid programmes will support demand. Weakness of global demand will hold back export growth. Assuming a gradual reopening of the economy after the second lockdown, the economy is expected to decline by around 6% in 2020 and to grow by 2.9% in 2021. Unemployment will be significantly higher in 2020 compared to 2019 and fall only slowly in 2021.

The projections are subject to substantial uncertainty and risks as the world continues to grapple with the coronavirus pandemic. A further deterioration of the health situation requiring extending or renewing nationwide lockdowns would delay the recovery further with more severe and persistent effects on activity, due to a higher number of insolvencies and longer unemployment spells. Growth could also be weaker in case of heightened geopolitical tensions or renewed internal political uncertainty. If financial conditions were to tighten, businesses may find it more difficult to obtain the necessary liquidity. This could lead to a large number of insolvencies of otherwise viable firms. The effects of more extreme shocks are discussed briefly in Table 1.3. In this environment of high uncertainty, macroeconomic policy should remain supportive and flexible to adapt to changing health conditions.

Figure 1.9. Exports are fairly diversified



Source: *OECD* International *Trade by Commodity Statistics database; OECD International Trade in Services Statistics database*.

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Table 1.1. Macroeconomic indicators and projections

Annual percentage change, volume (2010 prices)			
	2019	2020	2021
Gross domestic product (GDP)	3.4	-6.0	2.9
Private consumption	3.8	-11.6	6.0
Government consumption	2.8	6.0	3.4
Gross fixed capital formation	2.4	-11.8	-0.8
Final domestic demand	3.3	-7.7	3.9
Stockbuilding[1]	0.2	0.6	-0.4
Total domestic demand	3.5	-7.2	3.4
Exports of goods and services	4.0	-4.3	3.2
Imports of goods and services	4.1	-9.0	6.1
Net exports[1]	0.0	1.2	-0.6
Other indicators			
Unemployment rate (narrowly defined according to the Labour Force Survey, annual average)	3.8	6.1	6.5
GDP deflator (annual average)	2.3	0.6	0.8
Consumer price index (annual average)	0.8	-0.7	0.2
Core consumer prices (annual average)	0.7	-0.2	0.2
Current account balance[2]	3.4	4.1	3.7
General government fiscal balance[2]	-3.9	-13.8	-10.3
General government gross debt[2]	60.0	77.0	84.7

1. Contribution to changes in real GDP.
2. As a percentage of GDP.
Source: *OECD Economic Outlook: Statistics and Projections database.*

Box 1.4. The economic impact of natural gas discoveries in Israel

Israel has discovered several major offshore natural gas reserves in the past decade. These include the two big fields of Tamar (305 billion m^3) and Leviathan (605 billion m^3) in 2009-10 as well as several smaller fields such as Tanin (23 billion m^3) and Karish (32 billion m^3). The Tamar field has been exploited since 2013 and almost fully meets local demand (around 11.5 billion m^3 in 2019), mainly for electricity generation. This had a positive impact on GDP of about 1.4% thanks to lower energy imports. The start of production from the Leviathan field at the beginning of 2020 allowed Israel to export natural gas. Export deals have been signed with Jordan and Egypt. Gas exports to these two countries are estimated to amount to about 6.5 billion m^3 in 2020 and are expected to grow to 8.7 billion m^3 in 2023 (Table 1.2). Gas exports are estimated to boost GDP growth by around 0.3 percentage points in 2020 and by further 0.2 percentage points between 2021 and 2023. Preliminary discussions are also ongoing to export gas to the EU. However, this will require further investment in technologies to liquefy gas or pipeline connections and the resolution of topographic and geopolitical issues.

Table 1.2. Gas export projections

Year	2020	2021	2022	2023
Expected gas exports to Egypt (BCM)	3.3	4.0	4.5	5.5
Expected gas exports to Jordan (BCM)	3.2	3.2	3.2	3.2
Total expected gas exports (BCM)	**6.5**	**7.2**	**7.7**	**8.7**

Source: Ministry of Finance

Besides positive effects on GDP, the gas discoveries will also contribute slightly to government revenues from royalties and corporate income taxes. Royalties from Tamar exploitation have so far amounted to around NIS 4.4 billion since 2013 (less than 0.1% of GDP per year). The gas industry is also liable for a special levy of 20-50% on profits over normal returns on investment. First proceeds from this levy are expected in 2020-21 and will be placed in a dedicated sovereign wealth fund to share with future generations. By law, the sovereign wealth fund will begin operating once NIS 1 billion have been accumulated. The proceeds will be invested abroad to reduce the risks of Dutch disease.

Table 1.3. Possible extreme shocks affecting the Israeli economy

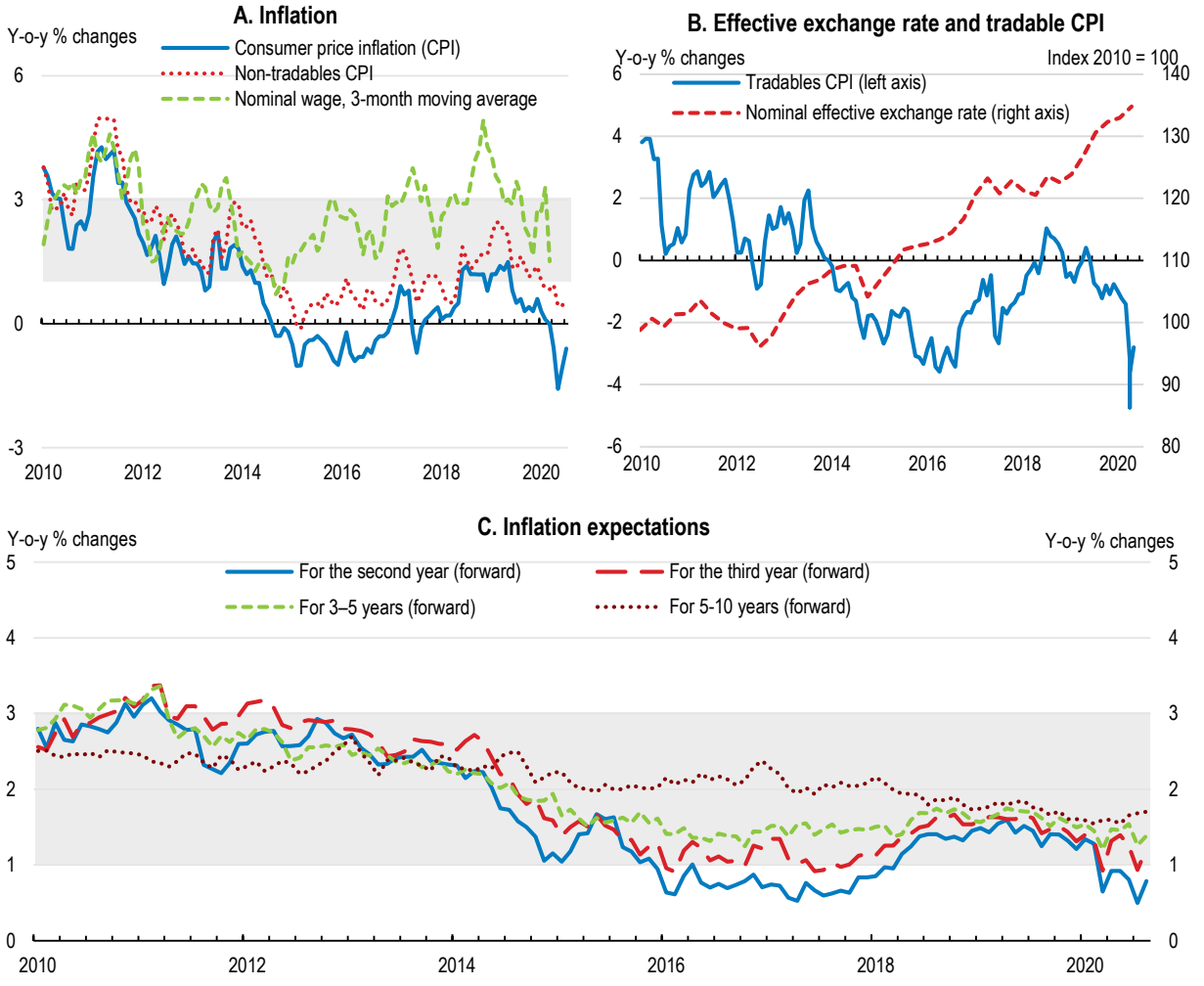
Shock	Possible Impact
Major house price correction	A large fall in house prices would adversely affect residential investment and consumption through wealth effects with possible spillovers to the labour market creating feedback loops. This would expose vulnerabilities in the banking sector due to its strong exposure to the real estate market.
Heightened geopolitical tensions	Geopolitical instability in the region would increase uncertainty and weaken both domestic and external demand, with negative budgetary repercussions. A likely rise in military spending would crowd out more productive spending or force the government to hike taxes.
International debt crisis	Amid record-high levels of global corporate debt and declining debt quality, a substantial repricing would reverberate through the global financial markets and have significant ramifications on Israeli financial asset prices and reduce the willingness to take financial risks.
Increase in global protectionism	A new wave of isolationist foreign economic policies and protectionism would lower global trade and would be particularly harmful for countries without a large domestic market, such as Israel.

Monetary policy is appropriately accommodative

Amid plummeting energy prices and weak domestic demand, inflation has fallen into negative territory at the onset of the crisis (Figure 1.10). Even before the COVID-19 outbreak inflation was subdued and below the lower bound of the 1-3% inflation target range mainly due to sharply declining tradable goods prices

owing to strong shekel appreciation in 2019, particularly energy prices, and volatile fruit and vegetable prices. Inflation is set to remain weak and below the target range in the near-term as demand recovers only slowly and a weakening labour market puts downward pressure on wages. However, there are upside risks. Longer lasting supply disruptions, cost pressure from new hygiene and distancing rules, and possibly weaker competitive pressures as firm bankruptcies increase could push up inflation in the medium term. Medium-to long-term inflation expectations remain within the target band (Panel C).

Figure 1.10. Inflation has fallen into negative territory



Note: Shaded area is the Bank of Israel's inflation target range (i.e. 1%-3%).
Source: Bank of Israel; *OECD Economic Outlook: Statistics and Projections database*.

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In reaction to the COVID-19 outbreak, the Bank of Israel used a range of instruments to increase the extent of monetary accommodation, provide liquidity and ensure an orderly functioning of financial markets. It launched a programme to buy government bonds of up to NIS 50 billion (3.5% of GDP), three times as large as during the global financial crisis. In addition, the Bank of Israel lowered the policy rate from 0.25% to 0.1% in April, established a credit facility for SMEs via banks and injected liquidity, including foreign exchange liquidity via swap transactions. In July, amid a deterioration of the health situation, the central bank announced a new programme to buy corporate bonds up to NIS 15 billion. These measures helped

to restore calm in financial markets. The shekel recovered close to pre-crisis levels, after it depreciated sharply by around 10% against the dollar and euro in mid-March. Government and corporate bond markets also stabilised although corporate bond spreads remain elevated compared to pre-crisis levels. In the low inflation environment, monetary policy should remain accommodative to support the recovery. If the recovery proves more sluggish than expected or financial conditions tighten, the central bank could further expand its existing programmes, including its asset purchase programmes.

Ample foreign exchange reserves (around 34% of GDP in early 2020) allowed the central bank to swiftly provide foreign exchange liquidity to banks during a short bout of dollar liquidity distress at the onset of the crisis. Sharp declines in global equity prices led to margin calls and a temporary shortage of US dollar liquidity in the domestic financial sector. In response, the Bank of Israel provided shekel/US dollar swap lines of around USD 7.5 billion. As the shekel recovered, the central bank resumed foreign exchange purchases. This is consistent with the central bank's pre-crisis practice of operating in the foreign exchange market if the shekel deviates substantially from values justified by fundamentals, or in cases of excessive exchange market volatility. Past foreign exchange purchases have been shown to be effective in moderating currency appreciation, at least in the short term (Caspi et al., 2018). As Israel's economy is strongly affected by monetary policy decisions by major central banks and is exposed to volatile international financial markets, using targeted foreign exchange interventions as an additional monetary policy tool is appropriate.

Financial market regulation was eased

Financial market regulators have taken a suite of measures to ensure sufficient liquidity and avoid a credit crunch. The regulatory capital requirements for banks were lowered by 1 percentage point. At the same time banks were encouraged to suspend dividend payments to shareholders to maintain capital buffers. A number of regulatory leniencies were introduced, including an increase of the limit to banks' loan portfolio for credits to the construction and real estate sector and of the loan-to-values limits of consumer credits backed by real estate. In addition, the Bank of Israel formulated a common framework, which was adopted by all banks, to enable the deferral of loan payments on mortgages, and consumer and SME business credits. By mid-August, banks approved payment deferrals on loans accounting for about 16% of the total credit portfolio of the banking sector. These measures together with monetary easing and loan guarantee programmes of the government helped to limit the initial impact of the crisis on liquidity and credit supply and should be continued as needed to avoid widespread bankruptcies. Once the recovery gains strength, the easing of prudential regulation will have to be gradually reversed to rebuild capital and liquidity buffers.

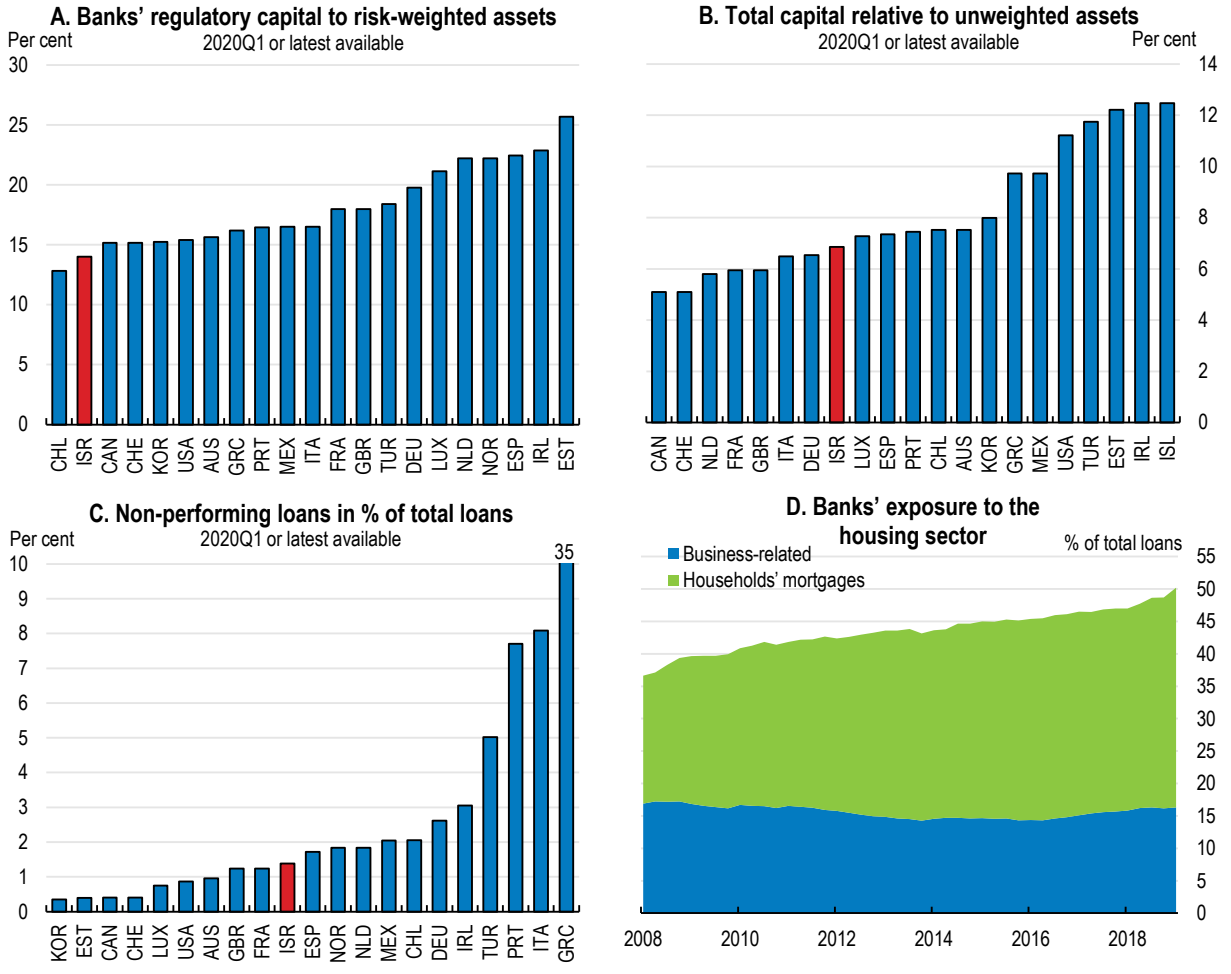
The banking sector appeared sound at the onset of the COVID-19 pandemic (BoI, 2020), but the crisis raises risks. Since the global financial crisis Israel's banks have increased capital ratios, which comfortably surpass Basel III regulatory capital requirements (Figure 1.11). Bank funding relies mainly on deposits, and their liquidity is adequate. Moreover, banks have improved their efficiency, including by adopting new technologies and digitalisation. The share of non-performing loans, at around 1% in 2019, was low by international comparison (Panel C), and banks' profitability was robust. However, this situation could deteriorate rapidly. A sluggish recovery could heighten credit repayment problems or firm insolvencies especially once some of the liquidity measures, such as payment deferrals, are withdrawn. Small and medium-sized enterprises and firms in sectors such as hospitality may be particularly vulnerable to financial stress. Banks should therefore build up sufficient loan loss provisions. In addition, risks remain from banks' heavy exposure to the housing market. The share of credits for housing and the construction and real estate sectors rose from around one-third of total credits in 2008 to around one-half in 2019 (Panel D).

The crisis may put downward pressure on house prices, but measures taken in the past have reduced the risks to financial stability from the real estate sector. After strong increases between 2007 and 2017, house

prices have stabilised since 2018. The steadying of house prices in 2018 reflected the expansion of supply in the preceding years and government policies to reduce investor demand, such as the increase in the purchase tax on second (or multiple) homes (BoI, 2019a). Housing sales and investment dropped significantly at the onset of the crisis. Since 2009, the authorities have taken extensive measures to reduce risks to financial stability from the real estate sector. This included higher capital provisions and risk weights for high-risk loans, limits to mortgage loan-to-value ratios (75%) and payment-to-income ratios (50%) and limits to the exposure to certain loans and sectors. The share of higher-risk mortgages with loan-to-value ratios from 60-75% edged up from around 30% to 37% of all new mortgages in 2019 but 67% of new mortgages had a payment-to-income ratio below 30%.

Sensitivity analysis carried out in mid-2020 suggest that in a scenario of medium severity the simulated credit losses would bring capital ratios of banks close to the regulatory minima but would not endanger the stability of the banking sector. The analysis also points to a particular sensitivity of banks' capital ratios to credit losses in the household and small and mid-sized business segments (BoI, 2020). As recommended in previous *Surveys*, creating a deposit insurance system and a bank resolution framework would further enhance financial stability.

Figure 1.11. The banking sector appeared healthy before the crisis, but its exposure to real estate raises risks



Source: *IMF Financial* Soundness *Indicators database*; Bank of Israel, *Information on the* Banking Corporations – Credit, Table IV-4.1.

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Household debt has been growing fast over the past decade, but it remains low by international standards at slightly above 40% of GDP. Household debt increased quickly in recent years on the back of rising house prices, low interest rates and the enhanced supply of credit resulting from new financial institutions (Shami, 2019). Non-banks now account for around 20% of consumer credit, up from around 13% in 2014. Poorer households tend to use non-bank credit more than higher-income households and the share of household debt held by those in the lowest income quintiles has increased (Shami, 2019; BoI, 2019c). For example, the share of new mortgages provided to the two lowest quintiles has increased from around 20% to 30% between 2010 and 2017 (BoI, 2019c). While this eases credit constraints facing low-income households, the positive social implications could be offset by increased vulnerabilities in the financial system if these households have a permanently lower repayment ability. Shami (2019) shows that in 2016 the median debt–to-gross-annual-income ratio for those in the lowest income decile was 2.8 compared to less than one on average. Debt-to-income ratios are highest among the Haredim. The authorities should continue to monitor debt developments of low-income households and risks in the non-bank sector closely and ensure that there are no gaps in financial system oversight. The late-2018 establishment of the new Financial Stability Committee, comprising the Bank of Israel, the Ministry of Finance, the Securities Authority and the Capital Markets Insurance and Saving Authority, is a welcome step to foster oversight and enhance supervisory co-ordination.

Promoting an inclusive recovery while addressing fiscal challenges

In response to the COVID-19 crisis, fiscal policies have aimed to cushion income losses for the most vulnerable people and firms, provide liquidity to the business sector, and support the recovery (Box 1.5). The government's initial aid package included spending and revenue measures amounting to around 4.5% of GDP. In addition, liquidity measures, such as loan guarantees and tax payment deferrals, were adopted, amounting to around 2.5% of GDP. The main measures included broadened eligibility to unemployment benefits (for example for furloughed workers), grants to firms that rehire (temporarily) laid-off workers and to the self-employed, direct payments to vulnerable groups such as the elderly and families with children, as well as a temporary reduction in property taxes and grants to small- and medium-sized businesses to cover fixed costs. Amid resurging infection rates and tightened confinement measures, the government approved the extension of some support measures until June 2021 in July, including unemployment benefits and grants for the self-employed and small and medium sized businesses, and the expansion of loan guarantees (Box 1.5). These measures will help reduce uncertainty. Budgetary costs are estimated at around 3.5% in 2020-21, if the economic situation does not improve significantly. In addition, the government approved further one-time cash payments for adults and families with children, excluding high-income earners (0.5% of GDP).

As in other OECD countries, the measures taken to respond to the crisis together with substantially lower tax revenues will lead to a surge in the budget deficit in the short-term in Israel and may raise public debt by around 25% of GDP by 2021.

Fiscal policy should remain supportive in the near term. The relatively low level of public debt before the crisis provides some fiscal space. In particular, fiscal policy should allow the automatic stabilisers to operate freely.

However, as the recovery progresses it will be important to shift policy from broad income and liquidity support to more targeted measures that facilitate efficient reallocation of capital and labour from sectors facing extended lower demand (e.g. travel, hospitality and part of the retail sector) to expanding sectors. In this respect, Israel has scope to step up active labour market policies, such as retraining and job search support (see below). As some emergency measures are phased out, there is also an opportunity to channel funds into areas that help boost growth and productivity and narrow Israel's large socio-economic gaps. In particular, social and infrastructure expenditures remain internationally low, despite recent increases. (Figure 1.12, and below).

Box 1.5. Fiscal policy response to the COVID-19 shock

On 8 April parliament approved an initial package worth NIS 80 billion (5.6% of GDP) to increase the health capacity and shield households and firms from the impact of the crisis. On 2 June parliament approved an expansion of the package to NIS 100 billion (7% of GDP). Around NIS 65 billion are spending and revenue measures and NIS 35 billion liquidity measures. Main measures include:

- **Health and civic capacity:** Around NIS 10 billion were allocated to the immediate health response including for increasing isolation capacity in hospitals and hotels, testing capacity, ventilators, medicine and protective gear. An additional NIS 1 billion was earmarked for measures to reduce the exposure of high-risk populations.
- **Individual support:** Broadened eligibility to unemployment benefits including for people on unpaid leave and employees after employment of at least 6 instead of 12 months (NIS 15.4 billion); grants for the self-employed up to NIS 10 500 (NIS 3.8 billion); one time payments of NIS 500 to families for each child up to the fourth child, people receiving pensions, disability and income support (NIS 2.3 billion); grants of NIS 4000 for elderly employees (over 67 years) who were laid-off during the crisis (NIS 1.6 billion).
- **Firm support:** Grants up to NIS 400 000 to small- and medium-sized businesses most affected by the crisis to cover fixed expenses such as rent and utilities (NIS 5.2 billion); the deferral of VAT, social security and utility payments for SMEs (NIS 9 billion); a 25% discount in local property taxes for firms that were shut down during the lockdown (NIS 2.7 billion); a NIS 22 billion loan fund with state guarantees for SMEs and a NIS 6 billion loan fund with state guarantees for large firms .
- **Recovery support**: A package of measures including the acceleration of infrastructure investment projects (NIS 1.1 billion), financing support for SMEs in the high-tech sector (NIS 1.5 billion) and acceleration of the digitalisation of government services and distant learning (NIS 0.3 billion). A grant of NIS 7500 to firms for each employee they rehire from 1 June, paid in four monthly instalments if the employee is on the payroll (NIS 6 billion).

On 29 July the parliament approved a second aid package to extend the economic safety net to mid-2021. The budgetary cost is estimated at around NIS 50 billion (3.5% of GDP) in 2020-21. Additional liquidity measures amount to around NIS 30 billion (2.1% of GDP). Main measures include:

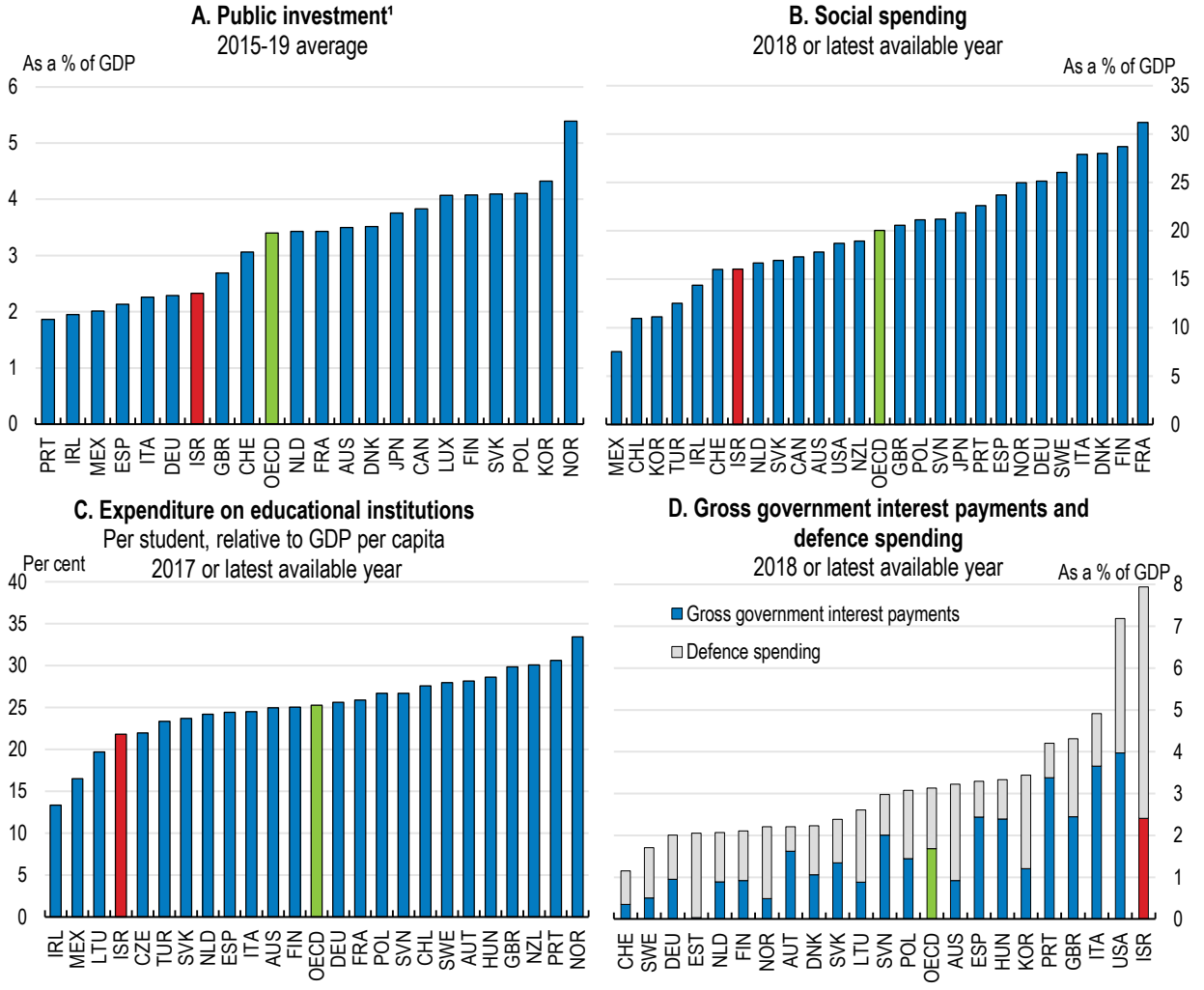
- **Individual support:** Extension of unemployment benefits, including for people on furlough, until June 2021 or until the unemployment rate falls below 10% (broadly defined to include employed persons temporarily absent from work due to the coronavirus crisis). Unemployment benefits are reduced if the unemployment rate falls between 7.5% and 10%. Extension of monthly grants up to NIS 4000 to for people aged 67 and above until June 2021.
- **Firm support:** Grants to self-employed and SMEs that were particularly hard-hit during the crisis until June 2021. Grants to small new businesses until June 2021. Extension of property tax reimbursement for small businesses particularly hard-hit by the crisis until June 2021. Expansion of the loan fund with state guarantees for SMEs by NIS 28 billion to 50 billion.

On 29 July the parliament also approved one one-off cash payments for adults and families with children, excluding high earners (NIS 6.7 billion, 0.5% of GDP).

In the medium-term, a key challenge will be to reduce the structural budget deficit while enhancing spending aimed at addressing Israel's large socio-economic disparities and supporting productivity growth. The fiscal position started to weaken prior to the crisis. Despite robust growth and near full employment, the general government budget deficit increased markedly from 0.9% of GDP in 2015 to around 4% of GDP in 2019. Abstracting from cyclical and one-off effects, the estimated structural general government budget deficit has been continuously deteriorating since 2015, cumulatively by 3.4 percentage points, as

strong increases in expenditure coincided with the lowering of some tax rates (e.g. VAT and corporate income). The extra spending was largely allocated to boost civilian expenditure, especially welfare, education, health care and infrastructure investment. Extra spending in these areas is welcome, as it is likely to help narrow Israel's large socio-economic gaps and help foster productivity growth. To enable continued spending in these areas while reducing the structural deficit will require sustainably increasing tax revenues and further efforts to improve spending efficiency.

Figure 1.12. Public spending in some areas is still low



1. In Israel some infrastructure investment is executed by state-owned enterprises, which is not included in public investment, but instead recorded as government capital transfers in National Accounts. Adding capital transfers paid by the government to public investment for all countries would bring Israel closer to the OECD average.
Source: OECD National Accounts Statistics database; OECD Social Expenditure database; OECD Education at a glance database.

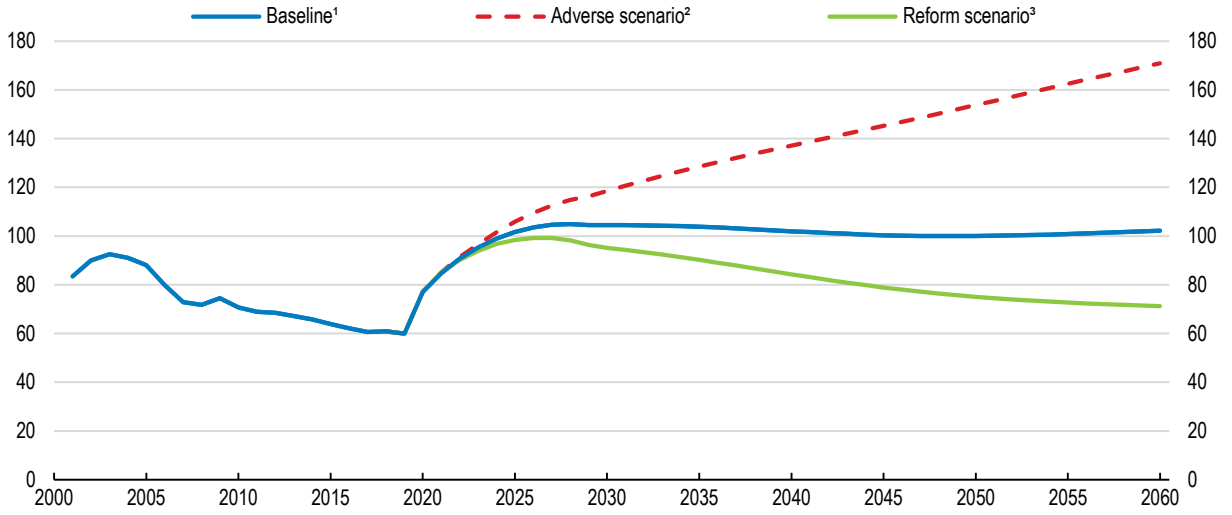
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Long-run debt sustainability will depend on the capacity to continue integrating Israel's young and growing population into the labour market, especially the Haredim and Arab-Israelis whose combined share in the total working-age population will increase to a projected 50% by 2065. The increase in deficits incurred in response to the coronavirus response will add to the debt stock. In a baseline scenario that assumes some reduction in the primary deficit over the next decade due to the cyclical normalisation and the phasing out of temporary crisis measures as well as a continuation of pre-crisis trends of labour market integration of vulnerable groups, debt would stabilise at around 100% of GDP in the medium term (Figure 1.13, Baseline

scenario). Such a debt level would make fiscal sustainability more vulnerable to interest rate shocks and significantly reduce fiscal space if another shock hits the economy. Implementing a reform programme as suggested in this *Survey* (Box 1.6) would boost growth, speed up labour market integration and help put the debt on downward path (Figure 1.13, Reform scenario). A halt in the progress of labour market integration of the Haredim and Arab-Israelis would seriously curb tax revenues and raise social spending (e.g. on unemployment benefits or welfare), and the debt trajectory would become unsustainable (Figure 1.13, Adverse scenario).

Figure 1.13. Illustrative debt paths

General government debt, as a percentage of GDP



1. The baseline scenario is based on the *OECD Economic Outlook: Statistics and Projections database* and the OECD Long-Term Economic Model. The scenario assumes a gradual improvement of the primary budget deficit of about 6.5 percentage points of GDP in the next decade as the cyclical position improves and temporary support measures are phased out. Thereafter the primary balance will decrease further by 0.8. percentage points by 2045 thanks to favourable demographic developments and will remain on average around 1.5% of GDP. GDP is assumed to grow slightly above potential in the next decade and then to converge to potential growth of around 3%. Inflation is assumed to converge to the midpoint of the inflation target (2%) by 2024.
2. In the "Adverse scenario" scenario the labour force participation rates of Haredi, Arab-Israeli and non-Haredi women remain at their current level. Based on Argov and Tsur (2019), this scenario implies that the aggregate labour participation rate will be 4 percentage points lower compared to the baseline, potential growth 0.2 percentage points per year lower and the average primary balance 2.1 percentage points higher.
3. The "Reform scenario" is based on reform scenario outlined in Box 1.6 and assumes higher average potential economic growth of about 0.3 percentage points per annum and an average primary balance lower by 0.7 percentage points compared to the baseline thanks to improved labour force participation.
Source: OECD calculations based on Y. Guillemette and D. Turner (2017), "The fiscal projection framework in long-term scenarios", OECD Economics Department Working Papers, No. 1440, OECD Publishing, Paris.

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Enhancing the fiscal framework

The government operates a solid fiscal framework including spending and multi-year budget-deficit targets, which has helped bring down debt in the past. Currently, the annual real spending-growth ceiling is set at 2.8%, and the central government deficit targets are 2.5% and 2.25% of GDP in 2020 and 2021. These targets should be lifted in the near-term to avoid an overly contractionary fiscal policy stance that may endanger the recovery. At the same time a clear medium-term fiscal strategy should be formulated to bring debt back on a declining path while ensuring adequate resources for infrastructure, education and poverty reduction.

The government has recently strengthened its medium-term fiscal framework. The so-called “numerator rule" came into effect in 2017; it restricts fiscal commitments outside of the budgetary process that are not in line with the fiscal rules. According to the rule, any new commitment with future budgetary implications must fall within the deficit and expenditure ceilings for the next three years or immediate adjustments must be made by cutting other expenditures or raising revenues. The government publishes this three-year budgetary plan twice a year. The new tool enhances transparency and improves medium-term fiscal planning.

However, the government has at times resorted to measures to circumvent fiscal rules (BoI, 2018). For instance, expenditure programmes with essentially long-term fiscal implications, such as the “Net Family” programme (see Box 1.2), have been classified as temporary, one-year measures so that the requirements of the “numerator” do not apply. In addition, accounting practices have been used to keep expenditures and their funding outside the budget framework, including land sales to fund housing projects. Finally, alongside the 2019 budget the government also committed to future across-the-board budget cuts to fund future expenditure obligations while deferring decisions on which projects to eliminate (BoI, 2018). Across-the-board cuts carry the risk that they focus on easier-to-cut but potentially productivity-enhancing discretionary spending such as infrastructure projects.

To strengthen compliance with the fiscal rules, the government could consider in the long term setting up an independent fiscal council. This would enhance the authorities’ commitment to sound fiscal policy. Empirical evidence from other OECD countries suggests that independent fiscal councils can buttress a government’s capacity to comply with numerical rules (Hagemann, 2011). The majority of OECD countries have established an independent fiscal council. Over the past decade, the number of fiscal councils in the OECD has more than tripled. It is also important that all tax policy reforms and legislation be carefully assessed in close cooperation between the Ministry of Finance’s Chief Economist department, which is responsible for shaping, initiating and evaluating tax policy, and the tax authority, which is in charge of tax collection, initiating and implementing tax policy, as well as proposing tax reforms. This is key to ensure that their impact is appraised both in terms of revenue, macroeconomic and social impacts and from an operational point of view, as is required for a sound and evidence-based decision-making process.

Tax reform to enhance equity and efficiency

The overall tax burden, at 31% of GDP, is somewhat below the OECD average (34%). Israel’s tax mix is reasonably growth- and employment-friendly, but there is ample room to simplify the tax system by removing inefficient tax expenditures and broadening tax bases (Chapter 3, Table 1.5).

In particular, differences in tax rates across saving vehicles are large and distort saving decisions. For example, tax benefits for medium-term savings in “advanced training funds” should be reduced, as these funds are generally not used for training purposes. Reducing these benefits should take into account effects on saving and work decisions of higher-income earners, who are the main beneficiaries of these tax exemptions. Moreover, tax and reporting exemptions for landlords’ rental income below NIS 5100 per month should be removed to help tackle tax evasion on such income, which seems particularly high. This should be combined with steps to minimise the administrative burden associated with paying and enforcing taxes. Extra revenues could be partially used to lower purchase taxes on residential property, which may hamper household mobility. Furthermore, the local property tax in Israel suffers from several deficiencies, which create distortions, and should be reformed as discussed below.

Once the economy has fully recovered, the government should also strive to eliminate VAT exemptions to improve efficiency and generate extra revenues that can be used to finance the inclusive growth-enhancing reforms recommended in this Survey (Box 1.6). This includes the VAT exemption threshold on online purchases, and exemptions on tourism services (including in Eilat) and on fruits and vegetables. To offset potentially regressive effects, existing more targeted transfers could be increased. Removing still high tariffs on certain fruits and vegetables along with other tariffs on agricultural products would help offset

price increases (see below). If necessary, the government could also consider raising the VAT rate to generate additional revenue. Taxes on consumption are generally less distortive (e.g. Arnold et al. 2011). Increasing the VAT rate by 1 percentage point to 18% could raise additional revenues of around NIS 5.5 billion (0.4% of GDP), similar to the revenue gain from abolishing VAT exemptions. However, raising VAT revenues through base broadening instead of rate increases tends to be more growth-friendly (Acosta-Ormaechea and Morozumi, 2019).

There is also room to adjust environmental taxes to improve environmental outcomes. Introducing congestion charges would help better reflect the external costs of car use such as congestion, air pollution, accidents, noise and infrastructure cost. Revenues from congestion charges could be used to enhance the public transport infrastructure. Their introduction should be accompanied by improvements in the quality of existing transport services and by allowing municipalities to set higher parking fees. In addition, coal and natural gas are taxed very lightly (Chapter 3). The excise tax on wholesale primary fuels (heavy oil, natural gas and coal) should be gradually increased or a carbon tax introduced to better reflect externalities. This would lower CO_2 emissions in a cost-minimising way, make renewable energy generation more competitive and help to further reduce air pollution. Part of the extra revenues from higher carbon taxation could be used to avoid real income losses, in particular of low-income households. For example, in British Columbia in Canada part of the carbon tax revenues were used for lump-sum transfers to households and cuts in other taxes.

Box 1.6. Quantifying the impact of selected policy recommendations

Table 1.4 presents estimates of the fiscal effects of the suggested reform package. The quantification is merely indicative and does not allow for behavioural responses.

In the short run, the government should continue to provide adequate fiscal support. Once the recovery strengthens and uncertainty is reduced, the government should gradually reduce budget deficits by ensuring that temporary crisis schemes, such as liquidity support measures and expanded unemployment insurance, are phased out.

In the medium to long term, additional fiscal resources are needed to finance the recommended reform package while safeguarding fiscal sustainability. The reform package focuses on three main areas: (i) education and labour policies; (ii) business regulation; and (iii) infrastructure. This could be funded by additional increases in tax revenues and by savings in the pension system. In addition, the reform package generates extra public revenues associated with the estimated expansion of GDP and employment.

Table 1.4. Illustrative fiscal impact of recommended reforms

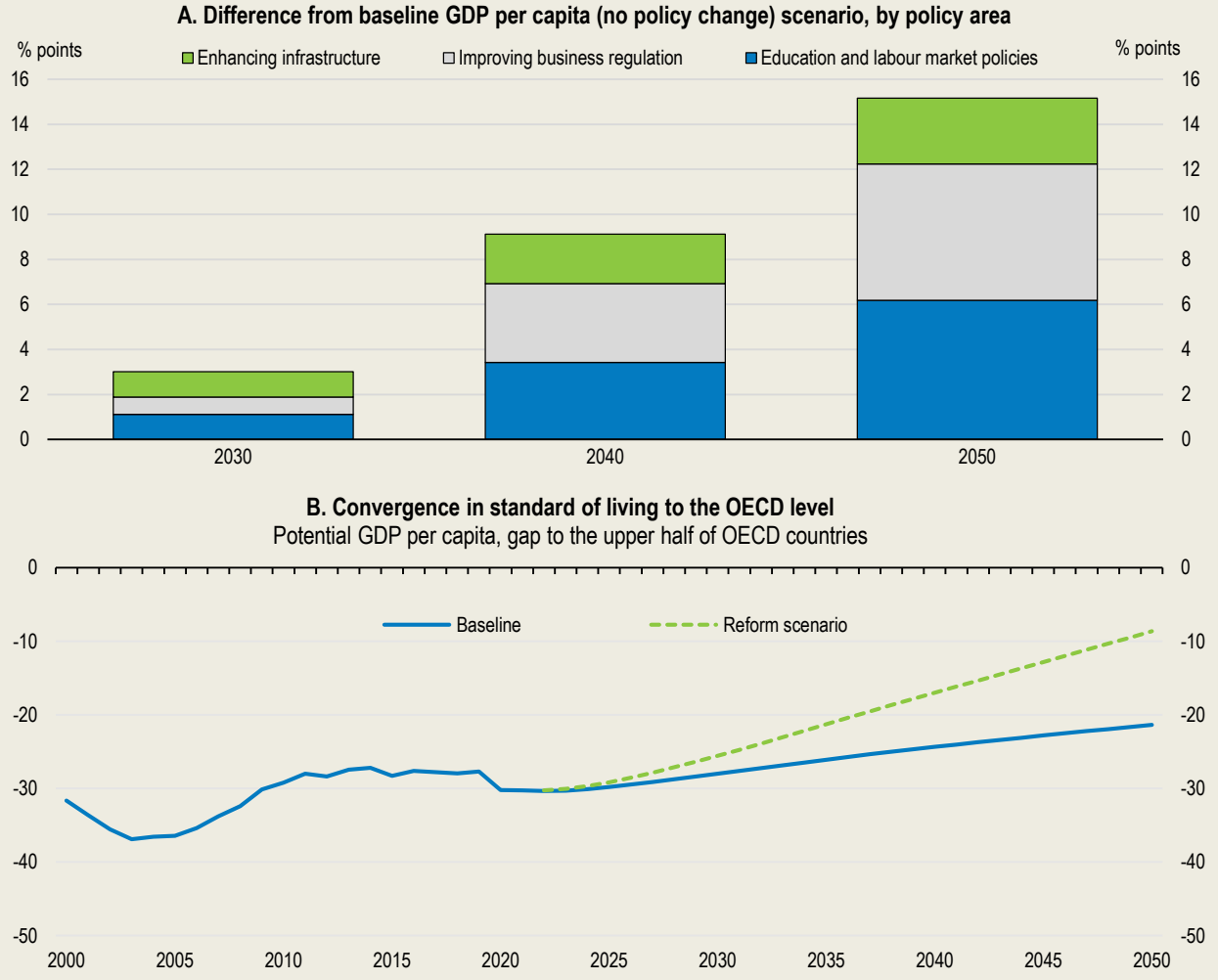
Fiscal savings (+) and costs (-) after 10 years, % current year GDP

	2030, % of 2019 GDP
Costs of reforms	**-1.6**
Strengthening education, active labour market policies and in-work benefits	-1.1
Improving business regulation	0
Enhancing infrastructure	-0.6
Raising pension age of women to the level of men	0.1
Revenue measures	**1.0**
Reducing tax inefficiencies	0.6
Environmental taxation	0.4
Revenue gain from recommended reform package	**0.6**

Note: 1) Education and labour market policies: (i) increase in spending of pre-school education to the OECD average to close half of the gap vis-à-vis the OECD countries in spending per child under the age of 5 as a share of GDP per capita (0.4% of GDP); (ii) increase in spending in primary and secondary schools to close quarter of the gap vis-à-vis the OECD countries in spending per student as a share of GDP per capita (0.3% of GDP); (iii) increase spending on active labour market programmes to the OECD average in terms of spending per unemployed as a share of GDP per capita (0.2% of GDP); (iv) increase in spending on in-work benefits to the level of US (0.2% of GDP).
2) Improving business regulation: improvement of PMR indicator to the level of the five best performing countries.
3) Enhancing infrastructure: increase in public infrastructure investment needed to lift infrastructure capital stock relative to GDP to the average level in the OECD.
4) Reducing tax inefficiencies: (i) abolishing VAT exemptions (0.4% of GDP) (ii) reducing tax benefits on medium-term savings (Keren Hishtalmut) (0.2% of GDP)
5) Environmental taxation: (i) NIS100 per tonne tax on coal (0.1% of GDP); (ii) phasing out diesel tax rebates for selected users (0.2% of GDP), introducing congestion charges and higher parking fees (0.1% of GDP).
6) Impact of reforms: The reforms will increase GDP by 0.4 p.p. annually and employment rates by 1.2 percentage points by 2030. The change in employment rates would translate into a 0.6 percentage point improvement in the primary budget balance (a 1% change in employment rates is estimated to improve the primary balance by around 0.5 point (OECD, 2010)).
Source: OECD calculations; Ministry of Finance; Bank of Israel.

Figure 1.14 quantifies the impact on growth of the aforementioned reform package. Its main effects will materialise over the medium-term horizon. Introducing ambitious reforms can improve the standard of living of the average Israeli citizen by some 15% by 2050 (Panel A) and will help reduce the gap in living standards vis-à-vis the upper half of the OECD countries (Panel B).

Figure 1.14. Illustrative impact of structural reforms on GDP growth



Note: The model used for these simulations is a supply-side model focusing on the long run. As such, it is not well suited to incorporating the implied increased tax revenues highlighted in this box, partly because these are funded by recommended tax base broadening measures that are more likely to impact demand in the short to medium-term.
Source: OECD simulations based on OECD Economics Department Long-term Model.

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Table 1.5. Past recommendations on fiscal policies

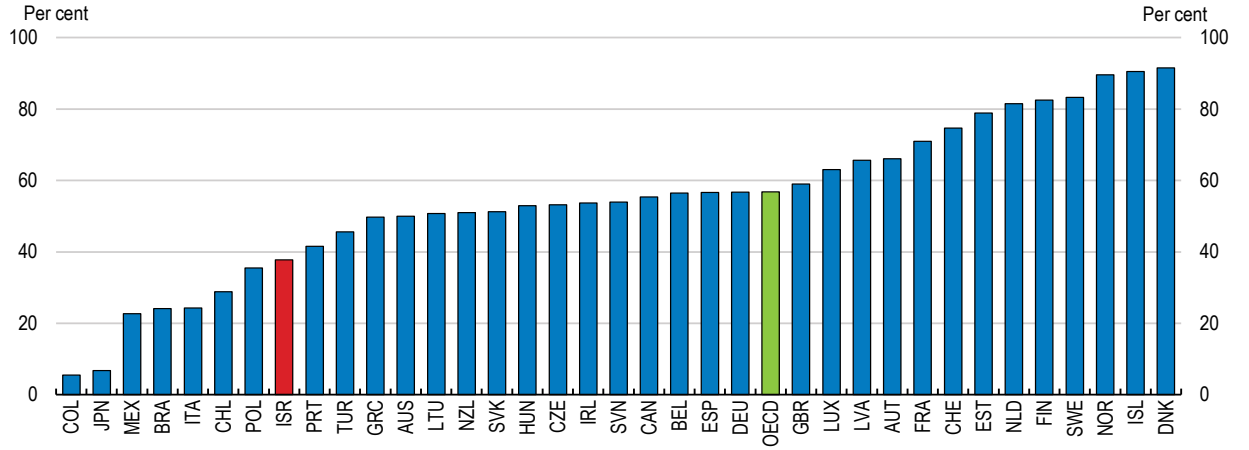
Recommendations in previous *Survey*	Actions taken since March 2018
Raise the spending-growth ceiling to make room for higher expenditure on education, infrastructure and poverty reduction	The 2019 budget included an increase in the expenditure ceiling as well as higher social and infrastructure spending.
Abolish inefficient tax preferences on fresh fruits and vegetables, medium-term saving in so-called "advanced training funds" and services in Eilat.	No action taken.
Raise more revenue by taxing carbon in the form of fossil fuels. Shift car taxes substantially from ownership to vehicle use to reduce pollution.	A planned excise hike on coal from NIS 45 to NIS 102 (USD 30) in 2018 was postponed to 2021. A gradual phasing out of diesel rebates for trucks, taxis and buses over 8 years started in 2018. The effective vehicle purchase tax rate was increased in 2018 and 2019.
Further exploit available databases to improve tax collection. Pursue plans to reduce tax compliance costs for business by simplifying the tax code so as to reduce the number of payments required.	An electronic system for filing and paying value added tax and social security contributions was introduced, which helped reduce the number of tax payments.

Strengthening public sector efficiency

There is scope to raise public sector efficiency and achieve savings on the expenditure side. For instance, the government should better leverage its impressive technological capacity by promoting the digitalisation of the government and e-government services. Relatively few Israelis interact with public authorities online (Figure 1.15). Providing public services digitally can raise public-sector productivity and boost private-sector adoption of digital technologies (Andrews et al., 2018).

Figure 1.15. Online interaction with public authorities is low

Individuals who used the internet to interact with public authorities, as a percentage of population, 2018



Source: OECD (2019), *Measuring the Digital Transformation: A Roadmap for the Future*, OECD Publishing, Paris.

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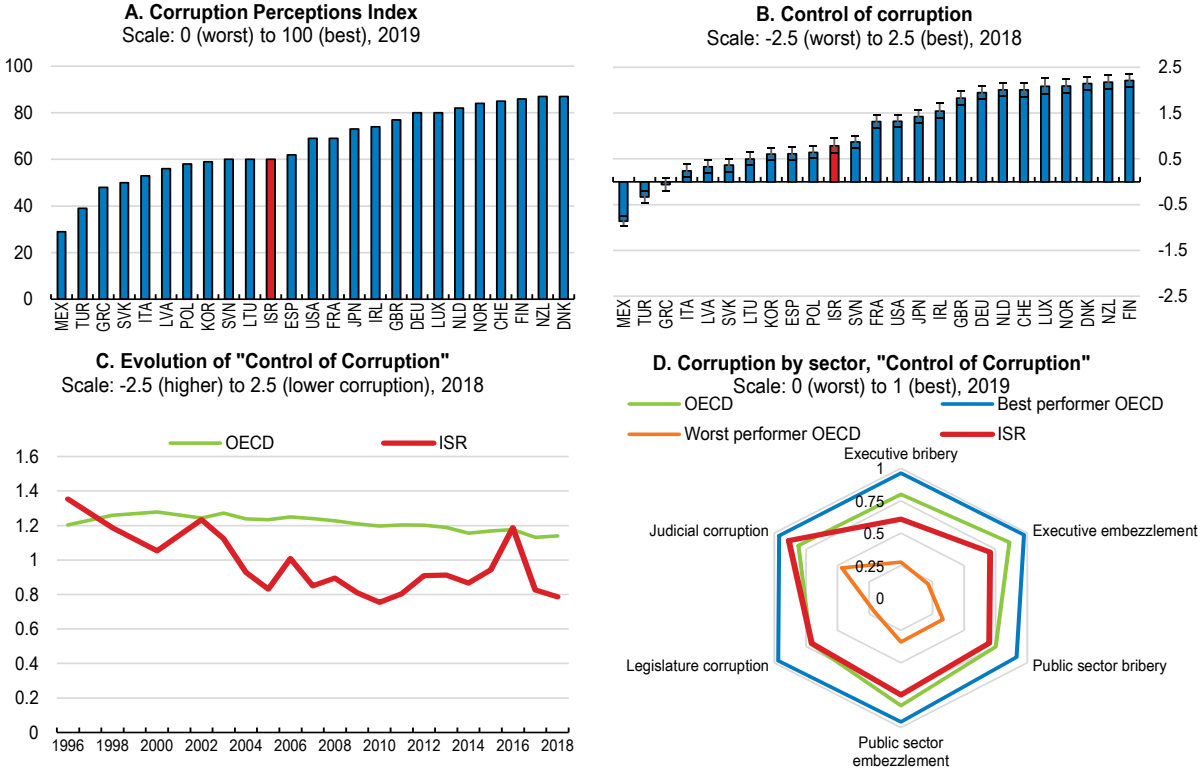
In addition, savings can be achieved by raising the retirement age of women to that of men. The normal retirement age for women is 62 years compared to 67 years for men. Israel is one of only a few OECD countries that currently does not have legislation to close this gender gap in the future, implying one of the lowest retirement ages for women in the OECD in the future. In 2016 a public committee comprised of representatives from the government, employers, employees and civil society, recommended to gradually raise the retirement age of women. This recommendation has recently evolved into a legislative proposal. Raising women's retirement age would strengthen incentives to stay in the labour force, boost women's pension income and reduce budgetary pressures.

Better transparency and a lower level of corruption are key to boosting public-sector efficiency. Corruption is costly because it diverts public resources available to support productivity. Indeed, OECD research shows that high levels of perceived corruption are associated with lower spending on social services, including health and education (OECD, 2015a; OECD, 2018a). In addition, corruption can impose additional adverse effects on the income distribution.

The perception of corruption in Israel is slightly worse than in other OECD countries (Figure 1.16). Opinion surveys show that Israeli citizens are concerned about corruption and that about 40% of respondents have personally encountered it (Herman et al., 2018; SGI, 2018).

Israel's anti-corruption policy framework is relatively effective (Figure 1.17). A legal and ethical framework to guide civil servants and the courts has already been established. Israel has also fully implemented a number of recommendations of the OECD Working Group on Bribery related to the detection, investigation and prosecution of foreign bribery (OECD, 2017a). For example, it has designated the Tel Aviv Taxation and Economic District to handle foreign bribery prosecutions. The authorities have also fostered better detection of allegations through media sources and the anti-money laundering authority (OECD, 2017a).

Figure 1.16. Perception of corruption is slightly higher than in other OECD countries



Note: Panel B shows the point estimate and the margin of error. Panel D shows sector-based subcomponents of the "Control of Corruption" indicator by the Varieties of Democracy Project.

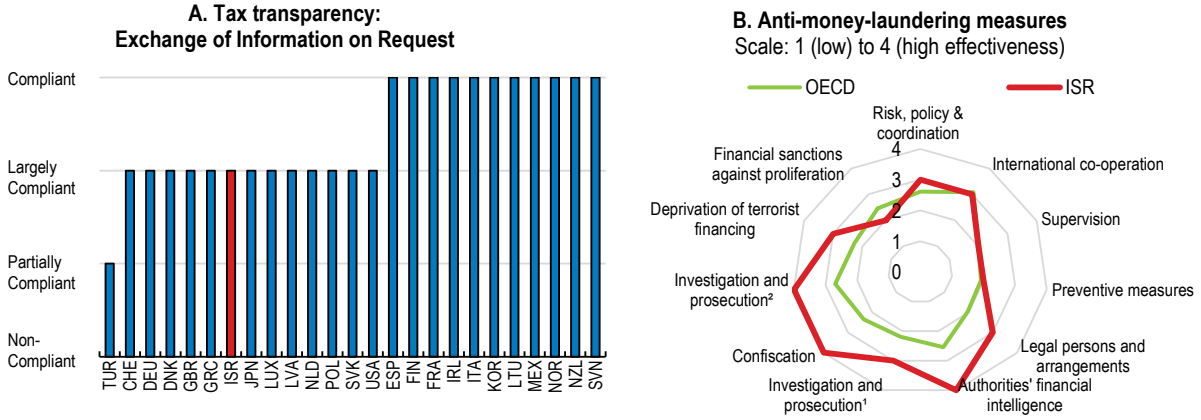
Source: Panel A: Transparency International; Panels B & C: World Bank, Worldwide Governance Indicators; Panel D: Varieties of Democracy Institute; University of Gothenburg; and University of Notre Dame.

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Despite progress, Israel should step up its efforts to prevent corruption, particularly in the area of public procurement. More competition in public tenders would promote efficiency, lower prices, improve quality and increase innovation. In 2013 Israel undertook procurement reforms to streamline and standardise tender procedures, introduce centralised e-procurement and encourage staff professionalisation. However, still only about one-fourth of total public procurement at the central government level is processed in accordance with the programme (IMF, 2017). There are also a relatively large number of exemptions for selective public tendering (IDA, 2015).

In order to enhance its anti-corruption framework, the government should limit exceptions to competitive tendering. At the same time it could create a register of companies with criminal records. This would help procurers to verify potential suppliers electronically. For example, Germany recently introduced such a competition register, which enables contracting authorities to obtain information online, helping them to prevent and fight economic crimes more efficiently (OECD, 2019a). In this regard, Israel has still not adopted an express policy permitting procurement authorities to deny contracts on the basis of foreign bribery convictions. Hence, companies found guilty of foreign bribery can still participate in future tenders (OECD, 2017a). The government should also allot a period of time to submit a bid that is proportionate to the size and complexity of the tender. This is particularly important in technically complex projects where it may take time to develop more accurate cost estimates. Other OECD countries adjust their bidding periods more flexibly than does Israel (OECD, 2018c). These efforts to strengthen the anticorruption framework should be accompanied by measures to streamline the regulatory burden and reduce bureaucracy (see below).

Figure 1.17. The policy framework to detect corruption is relatively effective



Note: Panel A summarises the overall assessment on the exchange of information in practice from peer reviews by the Global Forum on Transparency and Exchange of Information for Tax Purposes. Peer reviews assess member jurisdictions' ability to ensure the transparency of their legal entities and arrangements and to co-operate with other tax administrations in accordance with the internationally agreed standard. The figure shows first round results; a second round is ongoing. Panel B shows ratings from the FATF peer reviews of each member to assess levels of implementation of the FATF Recommendations. The ratings reflect the extent to which a country's measures are effective against 11 immediate outcomes. "Investigation and prosecution¹" refers to money laundering. "Investigation and prosecution²" refers to terrorist financing.
Source: OECD Secretariat's own calculation based on the materials from the Global Forum on Transparency and Exchange of Information for Tax Purposes; and OECD, Financial Action Task Force (FATF).

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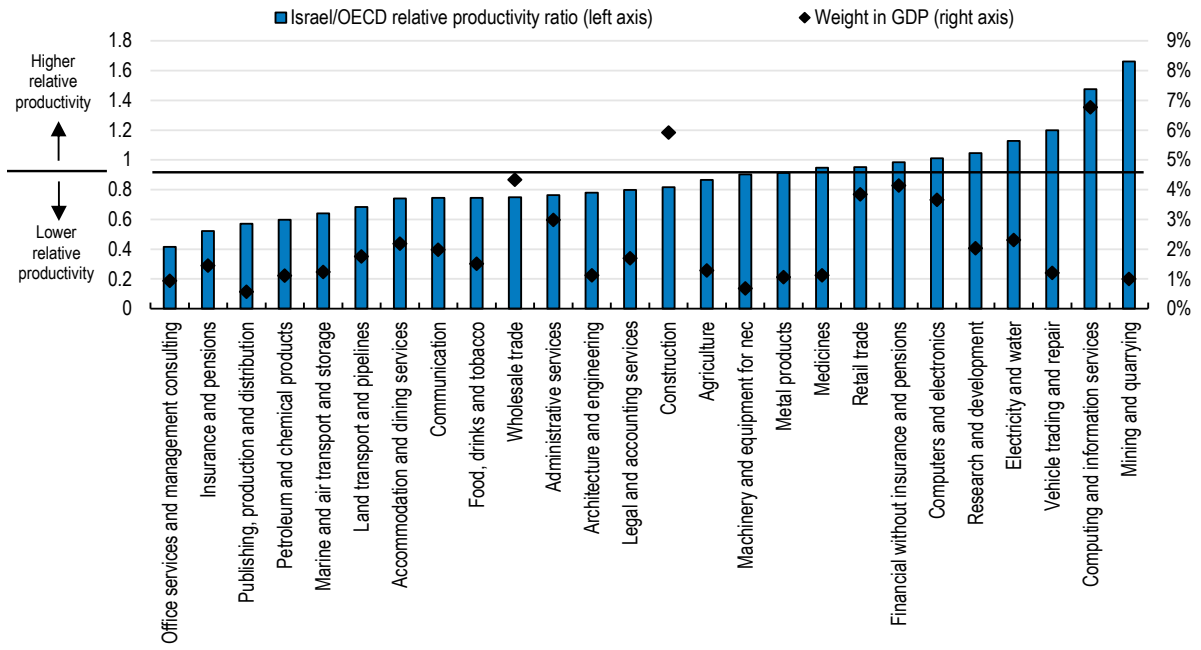
Boosting productivity to make growth work for all

Israel's productivity convergence with the most advanced countries remains slow. As a result of the COVID-19 crisis weakened consumer demand and heightened uncertainty will depress business investment, which is likely to weaken productivity growth. Looking beneath the aggregate trend shows a stark heterogeneity across sectors (Figure 1.18). Productivity levels in high-tech sectors such as information and communication services, scientific research and development, and computer and electronics manufacturing are higher than on average in the OECD. In contrast, more traditional sectors, including wholesale trade, construction, transportation, accommodation and food, account for most of the productivity shortfall. The COVID-19 crisis may further exacerbate this disparity as the high-tech sectors were less affected and better able to cope with the crisis. In order to boost aggregate productivity barriers that hinder the high-tech sectors' expansion, mainly skills shortages, need to be removed (Chapter 2). At the same time, it is equally important to lift the productivity of the long tail of poorly performing sectors, which employ the majority of the workforce.

The productivity gaps between sectors are closely intertwined with the broader social gaps in Israel. The Haredim and Arab-Israelis often work in low-productivity sectors with low wages. Therefore, policies that boost lagging sectors' productivity and help low skilled workers to move to higher productivity, high-tech jobs are win-win opportunities to tackle the twin challenges of low productivity and widespread poverty.

The slow productivity convergence reflects longstanding weaknesses in educational outcomes, a lack of infrastructure investment and barriers to competition but the crisis will bring new challenges related to the likely surge in business insolvencies. Effective insolvency procedures will be crucial to minimise barriers to corporate restructuring and spur productivity-enhancing capital reallocation (OECD, 2020; Adalet McGowan et al., 2017). Israel's insolvency framework appears to work effectively (Adalet McGowan and Andrews, 2018; World Bank, 2019) and a recent reform may further improve the framework. In September 2019, a new insolvency law came into force, aiming to promote the debtor's financial rehabilitation; maximise the return to creditors; increase the certainty and stability of the law, and shorten procedures and reduce the bureaucratic burden, including by strengthening out-of-court procedures.

Figure 1.18. Relative labour productivity varies widely across sectors



Source: Bank of Israel (2019), "Increasing the Standard of Living in Israel by Increasing Labor Productivity".

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The government should continue to focus on closing the education gap

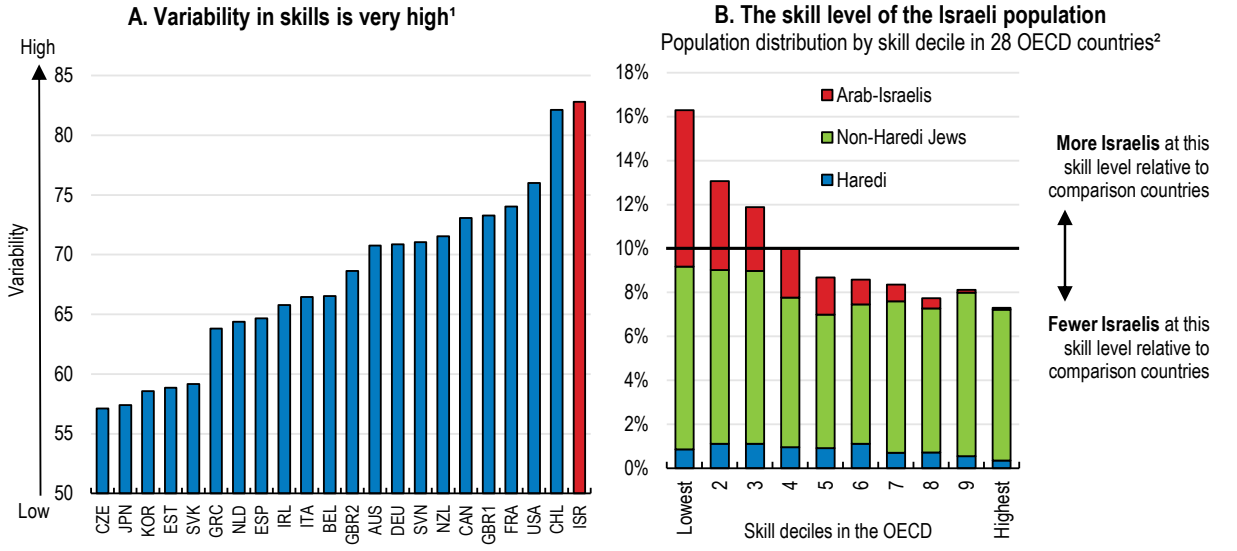
Improving the skills of the workforce is fundamental to boosting productivity and to enhancing opportunities in the labour market during the crisis recovery. As the COVID-19 pandemic has shown once again, the low-skilled are often the first to lose their job in a crisis. The skills of Israel's adult population, as measured by PIAAC, are relatively weak in international comparison (OECD, 2018b). Moreover, there is a wide variation, as some Israelis have outstanding skills, while a large number are comparatively low-skilled (Figure 1.19, Panel A). This contributes to severe labour market duality, with high-wage jobs in the highly productive high-tech sector and low-quality, low-wage jobs in low-productivity, often non-tradable sectors. The share of high-tech employees in total employment has been hovering around 9% since the mid-2000s, because of significant skills shortages, as more than 15% of all job openings in high-tech sectors go unfilled. Empirical evidence suggests that fewer and fewer low-skilled people are finding jobs in high-tech industries (Brand and Regev, 2015). More worryingly, low-skilled adults are concentrated among the Haredi and Arab-Israeli populations (Panel B), which contributes significantly to Israel's socio-economic divide.

Improving educational outcomes of these groups, as highlighted in the 2018 *Survey*, is therefore crucial for the expansion of the high-tech sectors or productivity catch-up of lagging sectors in order to reduce significant income disparities. The government is aware of the problem and has been increasing education funding significantly in the last couple of years (Table 1.6). There are also some signs of improving participation among Arab-Israelis. For example, Arab-Israeli women have greatly boosted their average educational attainment, and many now study in science tracks (Blass, 2017). Nevertheless, international assessments of Israeli 15 year-olds' outcomes (PISA) show significant differences among youth as low-performing students are clustered in certain schools to a greater extent than in other OECD countries (OECD, 2019b). The government should therefore continue with its efforts to upgrade education, focussing in particular on: (i) enhancing the quality of pre-school education; (ii) reducing the differences between different streams; and (iii) improving teacher quality.

Moreover the government should prepare for possible continuous disruptions of school and university attendance due to renewed outbreaks of the virus. Every week of school closure will imply a substantive loss in the development of human capital with significant long-term economic and social implications. Contingency plans should include training for teachers and school principals to work remotely, the deployment of online classes at scale and the setting and training of task forces of counsellors and teachers to support parents and students (OECD, 2020c).

Additional funding to build new childcare capacity and improving its quality, particularly in lagging regions, is needed. Empirical evidence suggests that participation in high-quality early childhood education and care can significantly improve children's development (OECD, 2018b). The number of children enrolled in public pre-schools and afternoon programmes has increased since 2012-13 when Israel introduced compulsory education from the age of 3-4. However, one-fifth of Arab-Israeli children in that age group still do not participate. In addition, the implementation of compulsory pre-school education for 3-4 year-olds has led to over-crowded classrooms and poor quality. Moreover, access to daycare centres for children aged 0-3 is still limited (Shavit et al., 2018). Although funding on new daycare centres has increased in recent years (Table 1.6), they are still lacking in the poorer municipalities. Pre-school funding per child is only around half the level of the average OECD country (Figure 1.20).

Figure 1.19. The dispersion in skills is the highest in the OECD



1. The measure of variability used is the inter-quartile range (difference between the third and first quartiles) of *the* distribution of numeracy scores (in the Survey of Adult Skills, PIAAC 2015). Data for Belgium corresponds to Flanders; GBR1 = England and GBR2 = Northern Ireland
2. Ages 16-65 (age adjusted).
Source: OECD (2016), *Skills Matter: Further Results from the Survey of Adult Skills*, Figure 2.15; *OECD Survey of Adult Skills (PIAAC) database (2012 and 2015)*.

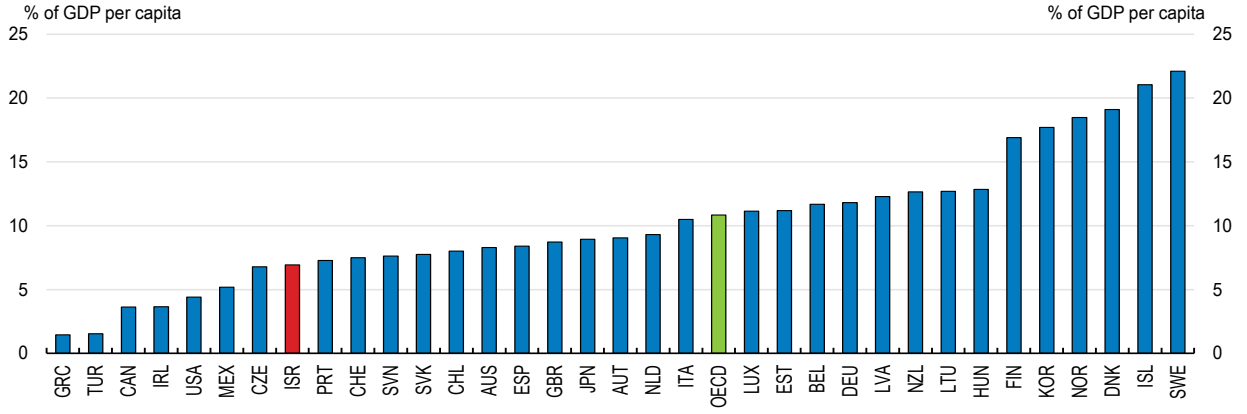
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Table 1.6. Past recommendations on education

Recommendations in previous *Survey*	Actions taken since March 2018
Increase funding for disadvantaged schools. Increase salaries of young teachers, those teaching subjects where there are labour market shortages and those who teach in disadvantaged schools.	Education funding has significantly increased. In March 2018 an agreement was signed with the teachers' unions, and wages for the starting teachers increased, narrowing the large gap between starting and senior teachers.
Further expand Hebrew courses in the Arab stream.	No action taken.
Expand childcare and education for children under 3, and put it under the responsibility of the Ministry of Education.	Spending on new daycare centres increased in recent years from NIS 200 million in 2015 to almost NIS 350 million
Make funding to the Haredi stream conditional on an increase in core subjects in the curriculum, and strengthened monitoring and testing.	No action taken.
Introduce graduate tracking, and publish high-quality data and analysis about their labour market outcomes.	Financial aid has increased for tech-related studies whose graduates are in short supply in the labour market. Tertiary institutions receive on average NIS 45 000 ($13 000) for each student enrolled in an engineering or computer science programme.

Figure 1.20. Public spending on early childhood education and care per child is low

Expenditure per child aged 0-5, 2015[1]



1. 2016 for Australia, Mexico, Turkey and the United States; 2017 for Chile, Israel and Korea; 2018 for New Zealand. The OECD average is based on 2015 data for all OECD countries included in this figure.
Source: *OECD Social Expenditure database*.

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The government should also reduce the differences between individual educational streams as much as possible so as to raise quality and enhance social cohesion. Primary and secondary schools are divided into four systems: secular Jewish, religious Jewish, Haredi and the Arabic-speaking stream. Secular and religious Hebrew-speaking schools offer a state-education curriculum in Hebrew, which is set by the Ministry of Education. Haredi schools offer state-religious education in Hebrew, but greater attention is devoted to religion studies. As a result, many Haredi men often lack basic skills, notably in mathematics and English. Lastly, Arab schools offer the state curriculum in Arabic. As argued in the 2018 *Survey* this streaming exacerbates differences in outcomes (OECD, 2018b).

One way forward is to promote pathways between the Arabic- and Hebrew-speaking streams. Offering additional Hebrew courses in the Arab stream is important, since poor command of Hebrew prevents the Arab population from fully integrating into the Israeli labour market (Marom, 2015). Empirical evidence suggests that pilot programmes, which encouraged Jewish teachers to teach Hebrew and other subjects in Arab schools and vice versa, proved to be effective (Schneider, 2016; Chapter 2). Most importantly, the government should promote teaching English, maths, sciences and other secular subjects in Haredi schools to allow their graduates to more easily integrate into the labour market. As was stressed in previous *Surveys* (OECD, 2018b; OECD, 2016), the teaching of core subjects in Haredi schools should be strengthened.

The government should also strengthen efforts to enhance skills of adults who have already left the education system without proper skills. Work-based vocational programmes targeted at Haredi adult men could help alleviate skills shortages among this group. International experience suggests that for adults, diverse work-based learning measures, including apprenticeships, may help to integrate disadvantaged social groups into the labour market (Kuczera et al., 2018).

Today, there are relatively few options in Israel for those who do not obtain proper formal education to acquire relevant skills for the labour market. The existing vocational counselling centres for Ultra-Orthodox men and women tend to focus merely on finding jobs for their clients. This is welcome, but there is a need to expand post-secondary vocational programme centres for adults that enhance skills relevant for the labour market. Their organisers should closely cooperate with local employers who should be involved in the governance structures and the development of programme design and student assessment. These programmes should include work-based learning (e.g. apprenticeships) in companies. Apprenticeships in Germany and Switzerland have traditionally focused on young people, but in recent years both countries have begun to encourage adult learners to pursue apprenticeships, with financial incentives and other support measures such as tutoring (Kuczera et al., 2018).

The government should ensure high-quality teaching in disadvantaged schools. To attract good teachers to such schools some OECD countries supplement generous financial incentives with other measures such as smaller classes or more teaching assistants (OECD, 2014; OECD, 2012). Wage rises should be accompanied by measures that promote better teaching methods. The government should strengthen professional development programmes, where teachers receive relevant training together with regular feedback under the mentorship of a lead teacher. Empirical research confirms that these programmes can significantly improve teaching quality (OECD, 2009; Fryer, 2016).

The government should also seek to ensure that the education system aligns student qualifications with labour market needs, particularly today when digitalisation is transforming the way many jobs are carried out. High-level ICT skills are becoming increasingly important as more and more occupations are linked to new technologies. The coronavirus crisis may further accelerate this process. The government is strengthening its programmes to boost the number of students in tech-related studies with extra financial aid for tertiary institutions and students. Over the past decade the number of computer science students has soared by 84%, while those studying the social sciences and law has fallen some 20%. In 2018 engineering became the most widely studied major in Israel. In addition, the Ministry of Education has succeeded in recent years in increasing the share of high school students studying math and English at the highest level (from 12% to 19%).

These are steps in the right direction, allowing Israel to make significant progress in improving digital skills. To strengthen these efforts, Israel should also improve teachers' digital skills and increase the use of ICT in schools (Figure 1.21). In addition, as was suggested in the 2018 *Survey*, the authorities should make available high-quality data and analysis about graduate labour market outcomes. Information on market returns from particular universities and colleges would help students to better respond to labour market signals. Collecting and publishing information about skills needs is considered good practice to align students' choices with labour market needs (OECD, 2018b; OECD, 2016).

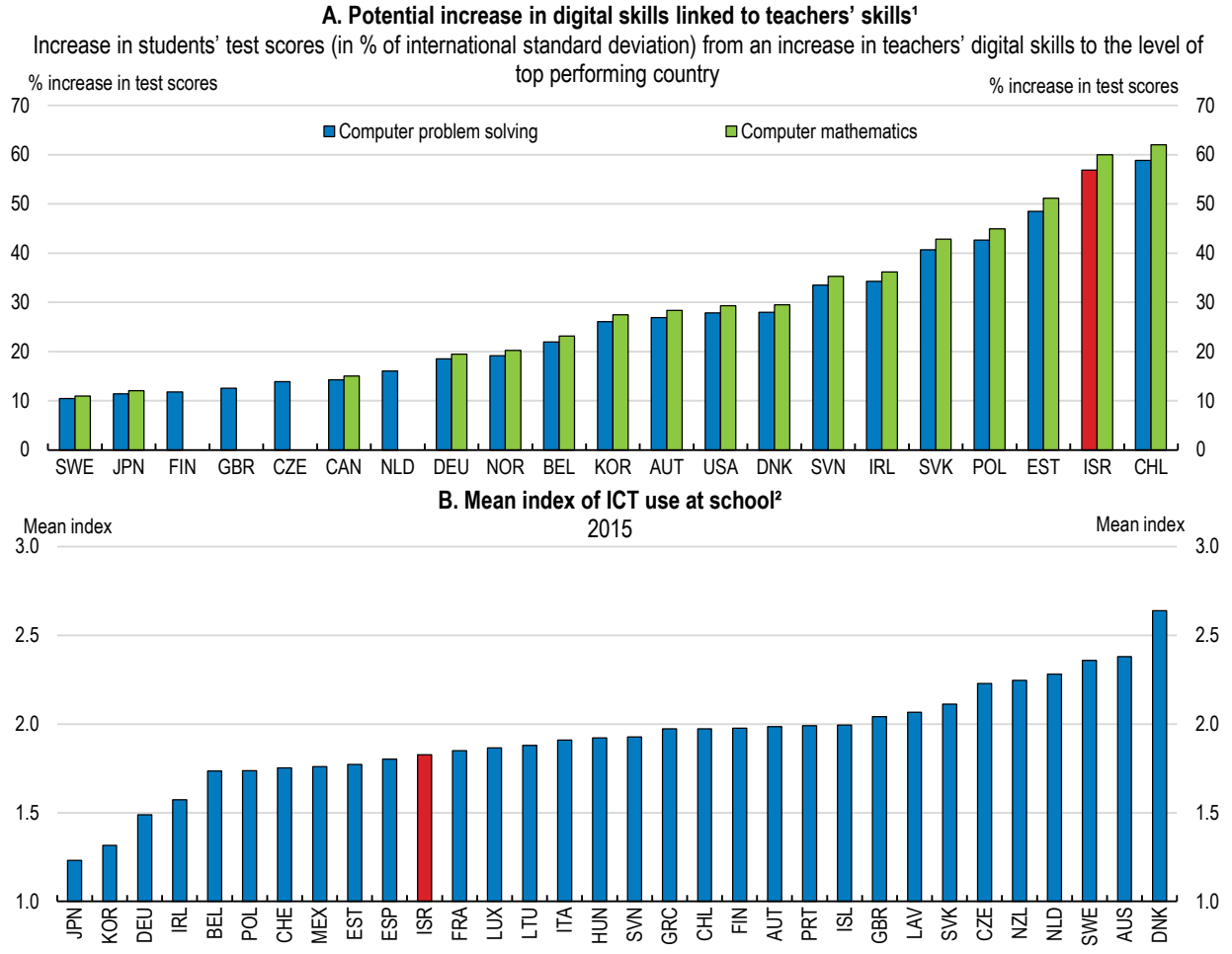
Fostering competition by improving business regulation

Lowering barriers that protect markets and promoting best-practice regulation are essential to foster investment and innovation, and spur the adoption of digital technologies (Sorbe et al., 2019; Andrews et al., 2018). In the wake of the coronavirus shock, fostering competition is likely to be important by supporting the entry of new firms and preventing the loss of existing viable firms, which may give rise to anti-competitive behaviour by the remaining incumbents. As highlighted in the 2016 *Survey* (OECD, 2016), low-productivity sectors in Israel are often sheltered from domestic and international competition (Brand,

2018a). Investment rates in these sectors lag behind those in the average OECD country (BoI, 2014; BoI, 2019d), hampering their ability to adopt new technologies.

Israel continues to make progress in improving the business environment, but regulations in a number of areas are more restrictive than in other OECD countries. An inter-ministerial committee was established to reduce the regulatory burden on businesses. For example, as part of these efforts, tax compliance costs for businesses were recently significantly reduced (Chapter 3). However, according to the latest OECD Product Market Regulation (PMR) indicators, Israel's involvement in business operations, mainly due to still widespread price regulations and deficiencies in public procurement (see above), and its barriers to trade and investment remain high (Figure 1.22). Barriers to competition also persist in key sectors such as electricity, transport (see below) and e-communications. There is also at least one major state-owned enterprise in broadcasting, courier services, rail freight transport and logistics. The recently approved electricity market reform will reduce barriers and foster competition in electricity generation in the short to medium term.

Figure 1.21. There is substantial room to improve digital skills

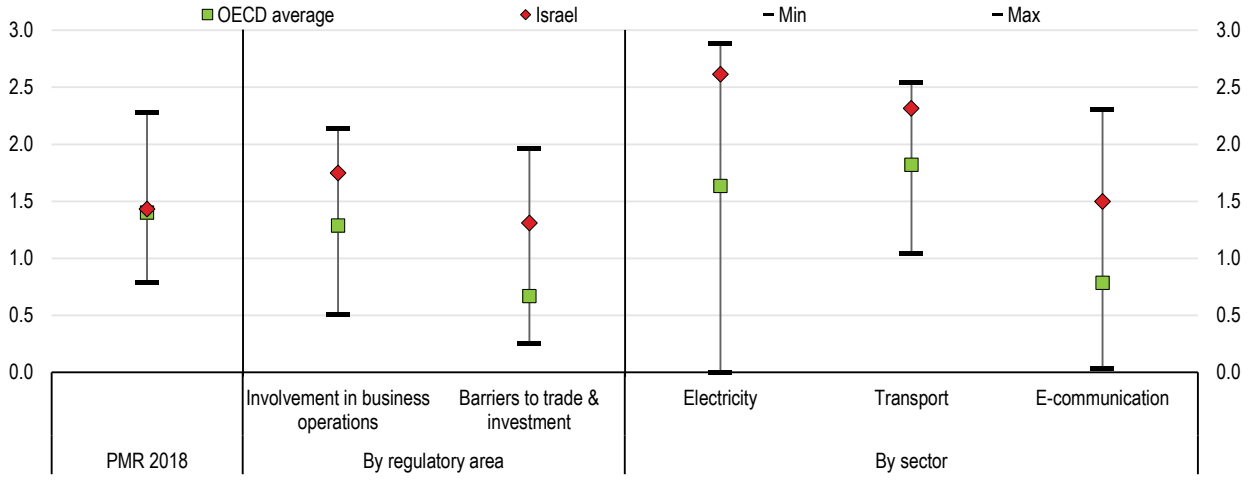


1. OECD calculations based on OECD (2012) and OECD (2015), *Survey of Adult Skills (PIAAC)* and OECD (2012), *PISA database 2012*.
2. The figure displays the mean index of ICT use at school by country. The index of ICT use at school measures how frequently students make a variety of digital device uses at school: playing simulations; posting one's work on the school website; practicing and drilling (such as for foreign languages or mathematics); downloading, uploading or browsing material from the school's website or intranet; chatting online at school; using email at school; doing homework on a school computer; using school computers for group work and communication with other students; browsing the Internet for schoolwork. The frequency of uses goes from never or hardly ever (value of 1) to every day (value of 5).
Source: OECD (2019), *OECD Skills Outlook 2019: Thriving in a Digital World*, OECD Publishing, Paris.

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There is room to reduce the regulatory burden and improve regulatory certainty for business. Two reforms in 2012 and 2018, which aimed at standardising regulatory requirements and simplifying procedures for licensing, have not been fully implemented. The bureaucratic costs of environmental licensing could also be cut if the currently fragmented approach were streamlined in an integrated procedure (OECD, 2016b; Eshet and Karni, 2016). More generally, Israel could introduce a "silence-is-consent" rule to business licensing when appropriate, as in Portugal. Since 2016, conducting Regulatory Impact Assessments is obligatory for all legislative proposals initiated by the executive, but not for the over 40% of laws initiated by members of the parliament (OECD, 2018d). Inter-ministerial coordination in the planning process of regulations should also be strengthened.

Figure 1.22. There is scope to improve product market regulations



Note: The Product Market Regulation (PMR) indicator is a composite index that encompasses a set of indicators that measure the degree to which policies promote or inhibit competition in areas of the product market where competition is viable. Scores range from 0 to 6 and increase with restrictiveness.
Source: *OECD Product Market Regulation database*.

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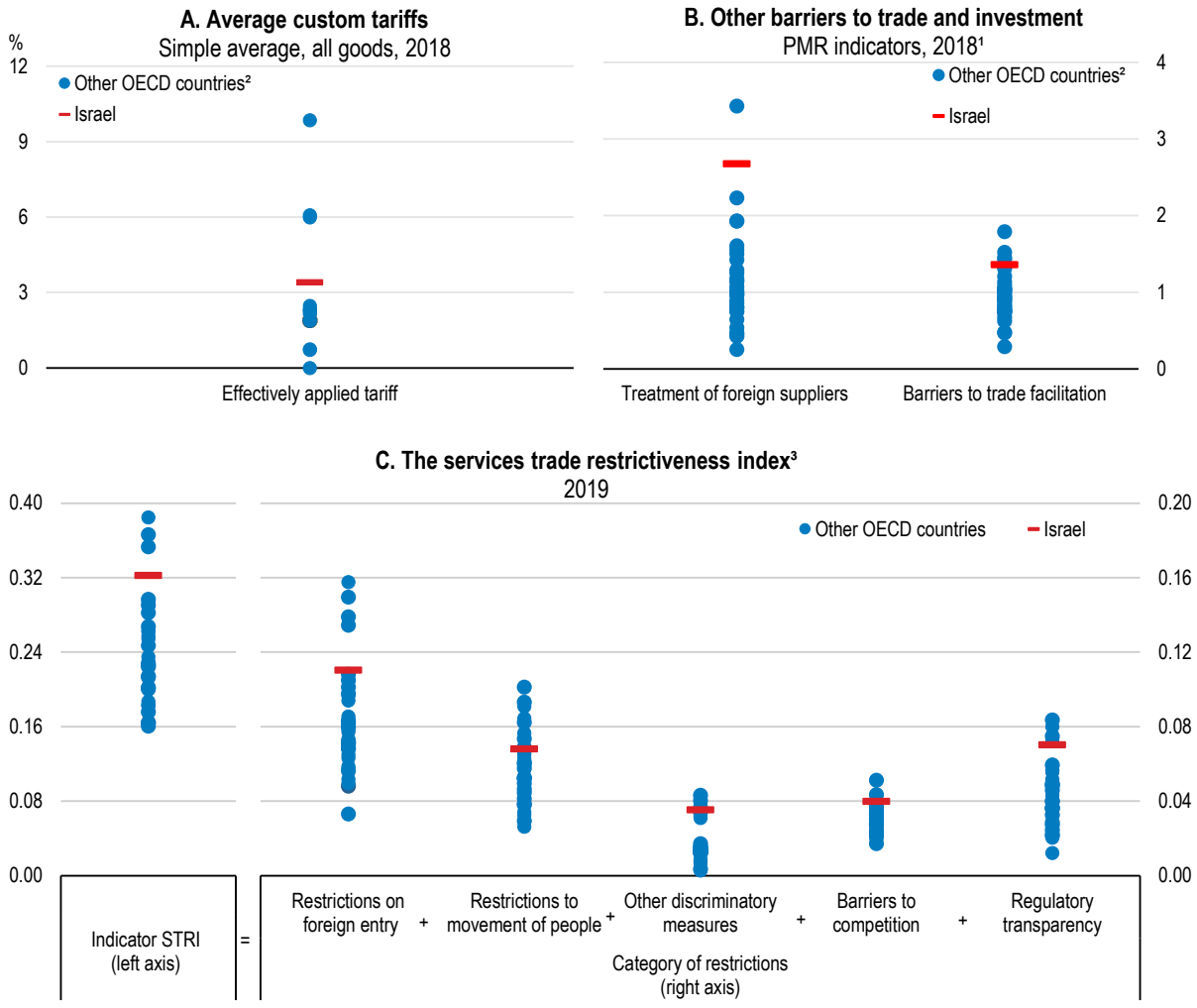
Israel has made significant progress in boosting foreign competition (Table 1.7). The government has continued to open the economy including by further cutting tariffs and by signing new (with Ukraine) or expanding existing free trade agreements (with Canada, EFTA countries). It has also continued to reduce non-tariff barriers such as by aligning import standards with international norms, removing special import licenses for certain products and easing barriers for personal imports of goods over the Internet. Still, the country's foreign trade exposure is relatively low compared to other small OECD economies, with the sum of exports and imports as a share of GDP at around 60%.

Table 1.7. Past recommendations on product market reform

Recommendations in previous *Survey*	Actions taken since March 2018
Use high-quality regulatory impact assessments based on a whole-of-government approach to cut the regulatory burden.	A government committee to address this issue was set up and is expected to release its recommendations in 2020.
Further cut customs tariffs and non tariff barriers.	Tariff cuts have continued, including on textiles and electronic/electrical equipment. A committee is reviewing all import standards and reducing differences from international standards. The operation of private laboratories that test compliance with standards has been eased, special import licences for certain products (e.g. wireless communication equipment, cosmetics) removed and regulatory barriers for personal imports of goods over the Internet lowered.
Replace agricultural quotas and tariffs with direct transfers to farmers.	In October 2018 the government and the dairy farmers signed an agreement that includes a gradual reduction of tariffs on dairy products and direct transfers to the farmers. Legislation of the reform is pending.
Adopt EU or similar standards for sensitive agricultural goods.	The number of goods classified as sensitive has been reduced.

More room exists to reduce Israel's restrictions on foreign suppliers of goods and services (Figure 1.23, Panels B and C). General and sector-specific restrictions act as a brake on the entry of foreign workers into Israel and discourage foreign services companies from opening operations there. Restrictions are particularly constraining in the construction, postal and courier, rail freight and telecoms sectors. Moreover, residence requirements still exist for the board of directors of Israeli corporations and for land acquisitions, and preferences are granted to local suppliers in procurement markets. Furthermore, Israel applies strict labour market tests for natural persons seeking to provide services in the country on a temporary basis (OECD, 2019c). The country has made some recent progress by easing foreign ownership of terrestrial broadcasting companies and by putting in place a temporary licensing procedure for foreign architects and engineers.

Figure 1.23. Barriers to foreign trade and investment are high



1. The Product Market Regulation (PMR) indicator is a composite index that encompasses a set of indicators (e.g. the one on Treatment of foreign suppliers and Barriers to trade facilitation, presented in Panel B) that measure the degree to which policies promote or inhibit competition in areas of the product market where competition is viable. Scores range from 0 to 6 and increase with restrictiveness.
2. With the exception of Estonia and the United States, which are not included in the PMR database.
3. Services trade restrictiveness index from 0 (open) to 1 (closed).
Source: *OECD Product Market Regulation database; OECD Services Trade Restrictiveness Index database*.

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There is also still much scope to facilitate trade procedures at the border. For example, according to World Bank (2019) data, it takes importers 64 hours to comply with border procedures, compared to an average of only 8.5 hours in high-income OECD countries. Particular areas for improvement include cross-border agency co-operation and providing traders greater certainty about customs requirements by updating advance ruling systems, for instance by increasing the length of time for which such rulings are valid. In addition, further progress is desirable to streamline formalities by promoting the use of electronic signatures and allowing goods, in particular perishable goods, to be released prior to the final determination and payment of customs duties (OECD, 2018b). These trade facilitation measures will especially benefit smaller firms, as costs related to border procedures are particularly onerous for them (López-González and Sorescu, 2019). Israel's new computerized customs system ("Global Gate System"), implemented in January 2018, should help improve efficiency of customs clearance.

Tariffs and regulations remain particularly distorting in the agricultural sector (OECD, 2019d). Despite reforms that began in 2014, Israel's tariff profile for agricultural products remains highly uneven, with very high – sometimes prohibitive – tariffs for goods such as dairy products, eggs and certain fruits and vegetables. Israel's average applied MFN tariff on agricultural goods (WTO definition) declined from 27.7% in 2012 to 19.1% in 2018 but remains much higher than the average for non-agricultural goods (WTO, 2018).

Onerous non-tariff barriers also persist for certain products, potentially limiting foreign supplies. Israel requires imports of beef, poultry and sheep meat to be certified as kosher, while other non-kosher agro-food products are rarely accepted by local marketing channels. The kosher certification system for businesses could be improved to reduce its restrictive impact on prices and competition. The system lacks transparency, the direct financial ties between supervisors and the firms they oversee generate conflicts of interest, and there is a need to better meet the various levels of certification required by consumers and businesses. The authorities have recognised a need to address these issues and to rationalise the government monopoly on kosher certification (Bennett, 2014). However, they could also consider reducing the role of the State in kosher certification and allow private systems organised by religious organisations, as is the case in the United States (Lytton and Talias, 2014), and regulating the system of supervisors (Philber, 2018).

The authorities signed a welcome agreement with farmers in October 2018 to undertake a comprehensive reform of the dairy sector. The outline of the reform includes a reduction of target prices, further cuts in customs tariffs, support for farmers leaving dairy production and subsidies for increasing production efficiency. The agricultural reform process should continue with the replacement of quotas, price guarantees and customs tariffs by direct payments to farmers to avoid distorting markets. The tariff system for agriculture should also be simplified by avoiding non-ad-valorem tariffs (OECD, 2019d). As recommended in the 2016 *Survey*, EU or similar health rules with *ex post verification* could be adopted for "sensitive" products, such as dairy, eggs and meat, which represent over half of all imported foodstuffs.

Improving infrastructure and its governance

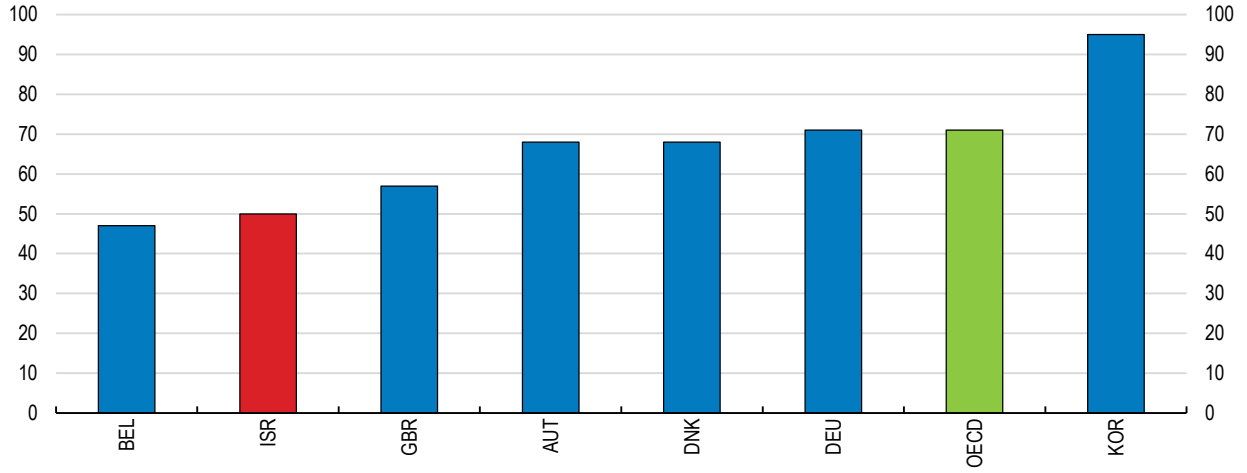
Well-functioning infrastructure is crucial to increase productivity growth and can help facilitate the recovery by speeding up the transition to new and more productive jobs. The benefits of efficient spending on infrastructure go well beyond their contribution to capital accumulation. Good infrastructure facilitates trade, bolsters market integration and competition and fosters the dissemination of ideas and innovations. For Israel, the potential benefits of improving infrastructure have been estimated at about 6% of GDP by 2065 (Argov and Tsur, 2019). Moreover, connecting disadvantaged groups to job opportunities and public services can reduce income inequalities and foster inclusive growth (Chapter 2).

Israel's transportation infrastructure lags significantly behind most other OECD countries', as discussed in detail in the previous *Survey* (OECD, 2018b). Its current level has not been able to meet the demand from the expanding economy. Population and employment have been growing at a robust pace with sharp

increases in the number of vehicles per population (by more than 50% since 1998). On the other hand, investment in roads and public transport as a share of GDP has remained relatively stable over the course of the past two decades, and the core infrastructure stock is well below the OECD average (Figure 1.24). As a result, road congestion is one of the worst in the OECD. Tel Aviv is now the fourth most congested city in the OECD (TomTom, 2019), with negative consequences for productivity and well-being. The commuting time required to travel to work outside one's residential locality has increased by one-third since 2005 (BoI, 2017).

Figure 1.24. Israel's current core infrastructure stock lags significantly behind other countries'

Total core infrastructure stock, 2015 (per cent of GDP)



Source: Office of the Accountant General, Ministry of Finance, ITF; GWI; IHS Global Insight; McKinsey Global Institute analysis; Israel Rail; Israel Airport Authority.

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The government therefore needs to increase its investment in infrastructure, especially in public transport. Investment in public transit has increased in recent years due to large-scale infrastructure projects, such as the Tel Aviv–Jerusalem rail line and the red light rail line in Tel Aviv (Table 1.8). Yet, the infrastructure gap remains substantial.

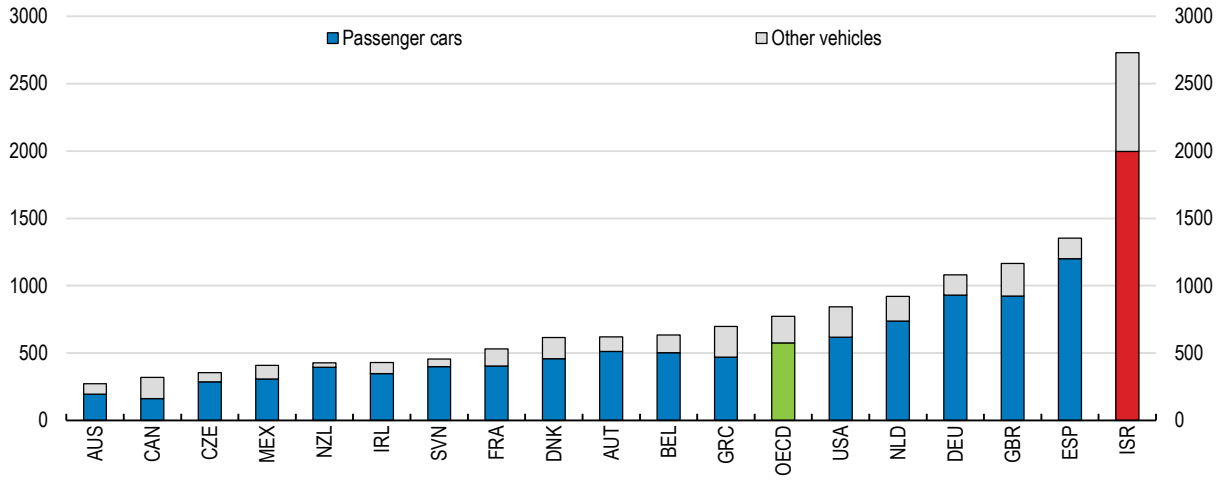
The government should introduce congestion charges, which can help finance public transport, reduce congestion and improve air quality and public health. Road traffic intensity, measured by vehicle-kilometres driven per kilometre of road network, is much higher than in other OECD countries (Figure 1.25). Several other OECD countries have introduced congestion charges, while improving public transport at the same time. For example, in Milan and London revenues from congestion charges fund public transport improvements including higher bus frequency, long-term measures, such as extensions of the subway network, and measures to promote sustainable mobility services (OECD, 2019e). Israel should introduce congestion charges in Tel Aviv, where around 60% of the countrywide congestion costs are estimated to occur and adopt GPS-based monitoring technologies, which are likely to substantially increase efficiency by adding a large degree of pricing flexibility (OECD, 2019e).

Table 1.8. Past recommendations on infrastructure

Recommendations in previous *Survey*	Actions taken since March 2018
Raise budgetary resources for infrastructure. Use public-private partnership agreements, especially in public transport, following a careful and clear allocation of their risks.	Investment in public transit has increased in recent years due to large-scale infrastructure projects, such as the Tel Aviv–Jerusalem rail line and the red line of the Tel Aviv light rail. As part of the Ministry of Transportation's "Hanetivim Hamehirim" project, private companies operate shuttles between central parking lots and central business districts, funded by toll roads and fees.
Promote road tolls and electricity smart meters to foster user funding of infrastructure	New major road and tunnel toll projects and 4 light rail train projects were launched in 2019.
Introduce systematic publication of cost-benefit analyses of projects with mandatory justification of policy-makers' choices.	The Ministry of Energy publishes cost-benefit analyses and plans to publish a methodological guide for cost-benefit analyses in the energy sector next year.
Promote a more efficient use of infrastructure by enhancing its regulation. Introduce, in particular, competition in airport management.	No action taken.

Figure 1.25. Traffic intensity is significant in Israel

Road traffic intensity per network length, 1000 vehicle-km driven/km, 2014 or latest year available



Source: OECD (2015), *Environment at a Glance 2015: OECD Indicators*, OECD Publishing, Paris.

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Some infrastructure projects can be financed through public-private partnerships (PPPs), as was suggested in the previous *Survey* (OECD, 2018b). However, PPPs can entail risks for public finances, as they lead to contingent public liabilities. To limit these risks the management procedures for PPPs should be closely aligned with best practices based on international and domestic experience, for example by entrusting the supervision and management of these contracts to a single public agency (OECD, 2018b). The United Kingdom has a well-established system of PPPs. In order to keep the process transparent, the private sector is required to provide information on actual and expected equity returns. An additional step would be to publish quantitative assessments comparing the value for money offered by PPPs relative to alternative procurement mechanisms, in line with the OECD Principles for Public Governance of PPPs (Pisu et al, 2015; OECD, 2014). In general, improving infrastructure governance and regulation to the level of the best OECD performers could bring sizeable productivity gains (Figure 1.26).

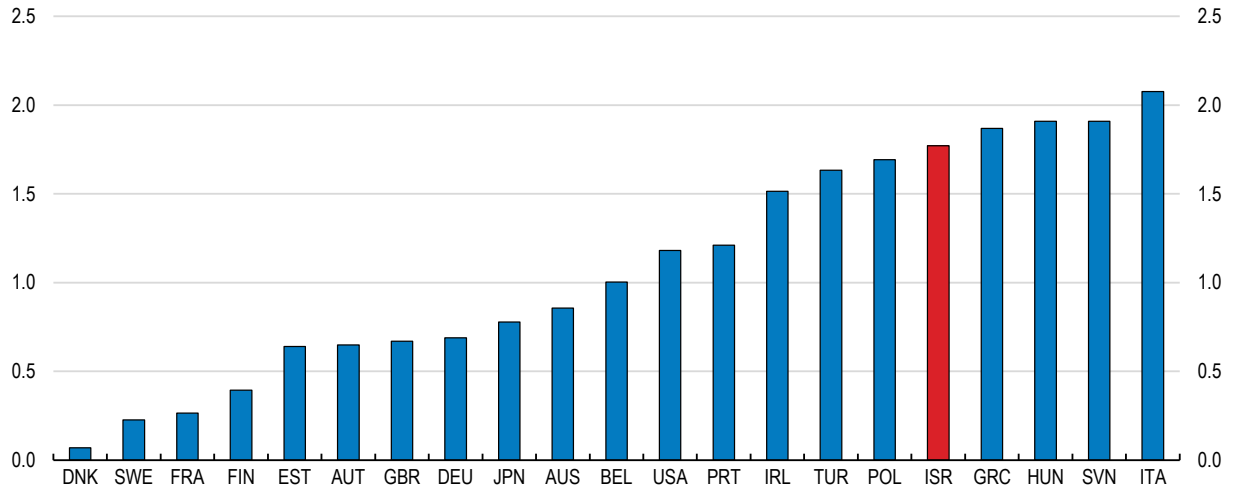
In addition, coordination between central government and local authorities should be improved (Figure 1.27). Large projects require the consent of local authorities in the jurisdiction where the project takes place. This often leads to lengthy negotiations that slow project advancement, especially since the

local authorities are focussed on their own needs. Empirical evidence suggests that a lack of coordination severely limits the gains from infrastructure investment (Demmou and Franco, 2020).

The government could establish metropolitan transit authorities, which can help promote transit solutions in line with national and local needs. Experience from other OECD countries shows that better coordination of transit management in metropolitan areas can contribute significantly to higher growth and well-being (OECD, 2015b). This would require transferring some of the responsibilities and funding assigned to lower levels of local government to the new metropolitan institutions, which have authority over strategic planning and responsibility for integrated land-use and transport planning (Chapter 2).

Figure 1.26. Israel can gain significantly from improvements in infrastructure governance

Productivity gains from raising infrastructure governance standards to those of the best performing country, in %

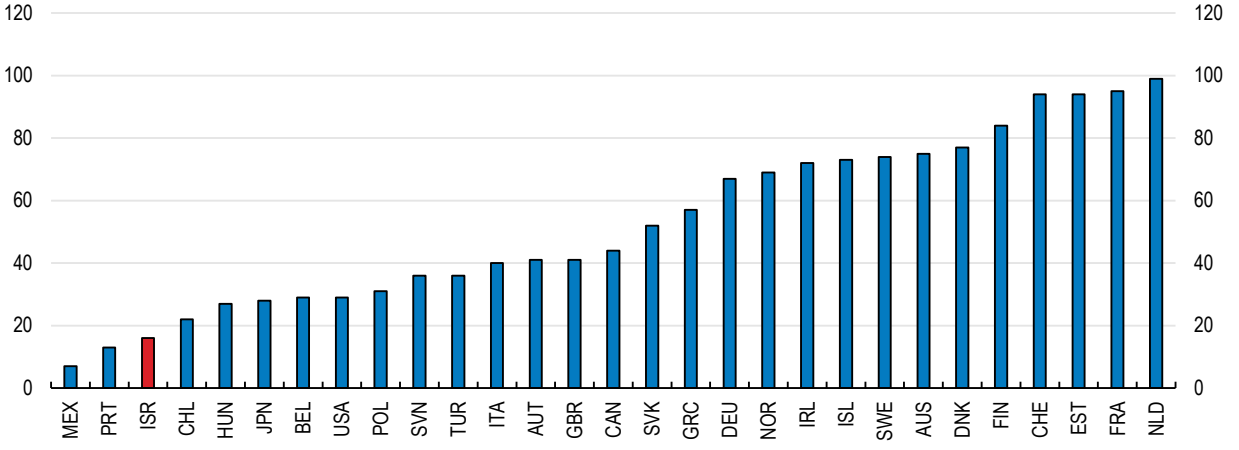


Source: L. Demmou and G. Franco (2020): "Do sound infrastructure and regulation affect productivity growth? New insights from firm level data", OECD

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Figure 1.27. Coordination in infrastructure governance across levels of governments is weak

Infrastructure governance, coordination index (lower index = weaker coordination)



Source: OECD calculations based on Hertie Business School data.

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Fostering competition in public transport would lead to efficiency gains. Israel's product market regulation in transport is stricter than other countries'. Regulations in the rail sector are among the most restrictive in the OECD. The statutory state-owned monopoly in rail freight together with no significant transit rights for foreign suppliers closes the market for international trade and investment. Bus services, which were previously controlled by two monopolies, were gradually opened to wider market competition from 2000 to 2014. Stronger market competition has led to price reductions, higher passenger numbers and better service quality (Ida and Talit, 2017a). However, access is open in only half of the total market.

Levelling the playing field across sectors

Reducing distortions between sectors is essential to allow factors of production to move to their most productive uses. As discussed in Chapter 3, the government provides substantial support to internationally competitive and high-tech firms. Eligible firms benefit from sharply reduced corporate income tax rates (effectively in the range of 5–16%, compared to a statutory rate of 23%). Additional investment grants are available in peripheral areas. As a small open economy with a substantial high-tech sector, Israel is particularly exposed to capital mobility and the scheme may have helped attract FDI. However, evidence is limited that the preferential treatment leads to higher productivity in benefitting firms and productivity spillovers to the wider economy. On the contrary, it may distort the optimal allocation of factors of production across sectors (Hercowitz and Lifschitz, 2016; Zimring and Moav, 2016; BoI, 2019d) and make it more difficult for domestic-oriented sectors to attract investment and skills. Furthermore, sector- and location-specific tax incentives can create tax-planning opportunities and potential for policy capture and may raise the costs of tax administration. The government should therefore thoroughly evaluate the system of tax breaks with a view to better targeting the scheme in order to ensure net benefits to society. This could create room to broaden the tax base and allow for further cuts in the statutory corporate income tax rate or a lighter business property tax, which would benefit the economy more broadly.

There is also room to rebalance support for innovation (Chapter 3). Public R&D funding can reduce the costs of adopting new technologies and ideas and hence speed up technology diffusion (Berlingieri et al., 2018). Direct Israeli government R&D support (grants and procurement) is substantial, but mainly benefits a few sectors, with manufacturing of computer, electronic and optical products, computer programming and consultancy, and scientific R&D accounting for 80% of total government-funded business R&D. The government should continue expanding targeted grant programmes that support firms in lagging sectors or technology adoption and consider replacing the current system of preferential tax rates for intellectual property (IP)-based income with a broader system of tax credits for R&D expenditure. The benefits of IP boxes and similar income-based provisions are likely to accrue mainly to large MNEs, as they hold most intellectual property (Appelt et al., 2016). Expenditure-based measures directly support the financing of R&D and thus help overcome difficulties in obtaining external funds, which is particularly important for small and young firms. To avoid overly favouring incumbents, tax benefits should include carry-forward provisions or cash refunds. Tax incentives could also go beyond R&D and target innovation activity more broadly, and include, for example, training, ICT investment or IP acquisitions as eligible expenditure.

Israel would benefit from stepped-up efforts to improve social cohesion

The COVID-19 crisis may reverse some of the recent labour market gains and aggravate inequality and poverty

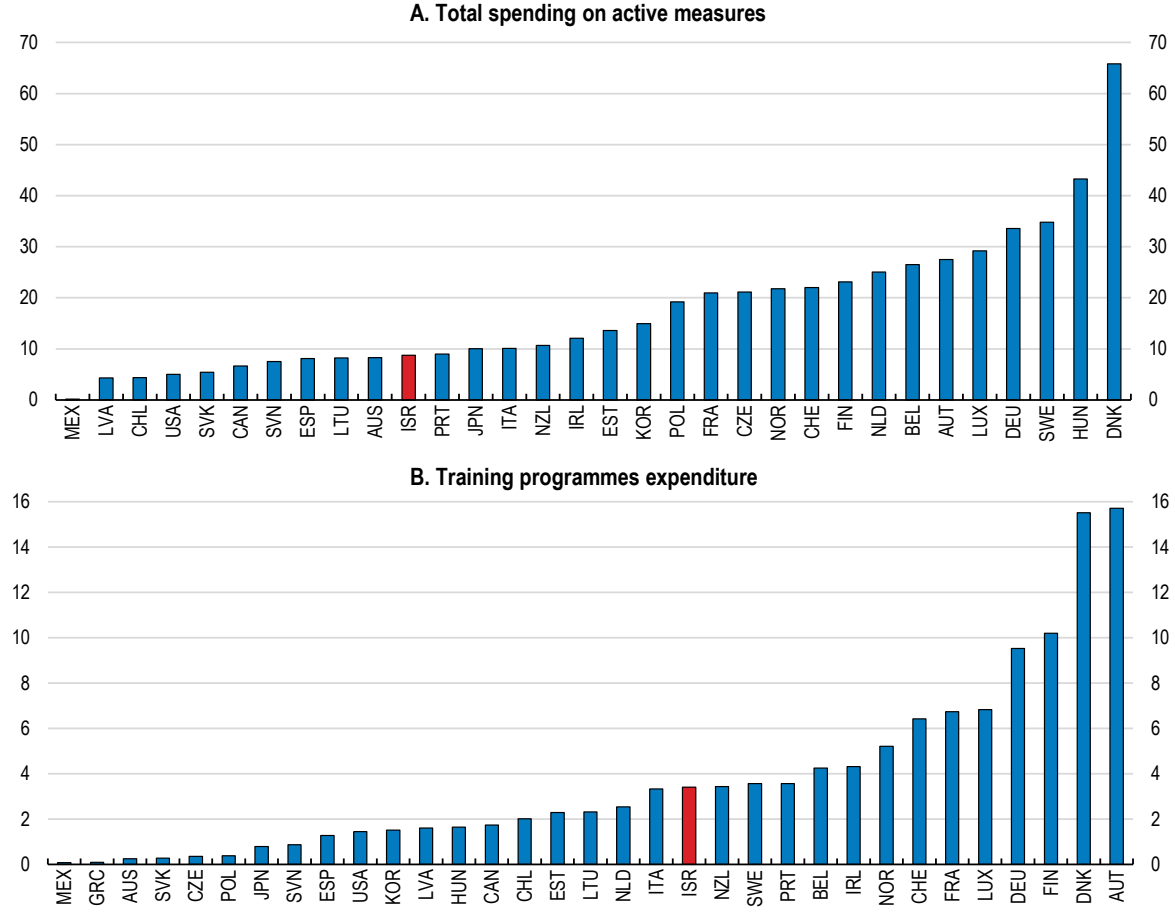
Since the onset of the COVID-19 crisis the labour market has weakened substantially. To cushion income losses, the government acted swiftly and broadened eligibility to unemployment benefits, notably to workers on unpaid leave. At the height of the lockdown in April, unemployment claims surged to more than one million people, around a quarter of the labour force. Many people have returned to work since the economy reopened. This process has also been helped by a new government subsidy to firms that rehire laid-off workers. However, the severity of the crisis has translated part of the temporary lay-offs into permanent ones and unemployment remains high. Analyses by the Ministry of Finance (MoF, 2020) show

that both low-skilled workers and workers with tertiary education have been affected by the current crisis. Youth, which represents one fifth of the new job seekers, is a particular concern because of scarring effects that may lead to persistent negative labour market outcomes (Bell and Blanchflower, 2011; Helbling and Sacchi, 2014).

The government should increase the role of active labour market policies to foster the efficient reallocation of labour from sectors facing extended weak demand and to reduce inequality and poverty. The crisis may accelerate a restructuring of the economy, forcing laid-off workers to find new jobs possibly in different sectors and requiring different skills. This calls for a strong focus on retraining efforts and job search assistance. Spending on active labour market policies remains low compared to other OECD countries (Figure 1.28). In most OECD countries, the public employment service (PES) has increased the possibility of online training as the provision of face-to-face training has been suspended shortly after the introduction of confinement measures. In Denmark, the law has been amended so that municipalities have the competence to offer new digital qualification courses. In France over 150 new training courses have become available online and Sweden has used part of the extra funding allocated to the PES to strengthen distance learning and internet-based education (OECD, 2020b).

Figure 1.28. Spending on active labour market policies is comparatively low

Per unemployed, as a % of GDP per capita, 2017



Note: 2015 for Italy and 2016 for New Zealand.
Source: *OECD Labour Market Programmes database; OECD National Accounts Statistics database*.

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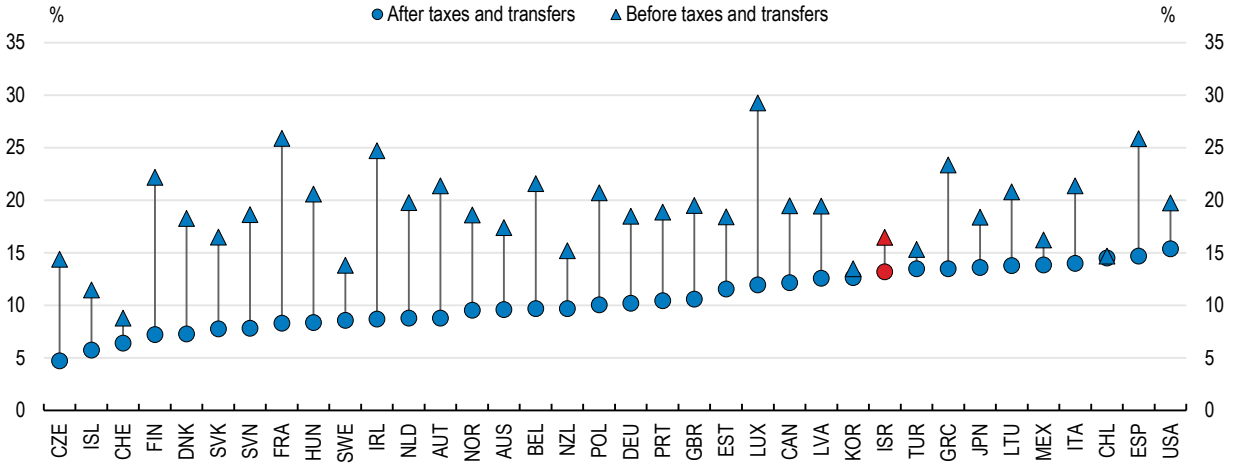
Israel has already implemented several pilot programmes to improve labour market options for the unemployed, focusing on enhancing the ability to find and keep a job, including job-search assistance and professional retraining. The evaluation of these pilots has shown an increase in employment and labour income and lower welfare payments (Larom and Lifshitz, 2018). These programmes should be scaled up at the national level. In addition, more focus should be placed on training programmes (Table 1.9). The focus of policy interventions has so far been on increasing employment and less on overall job quality and pay. Only a few public employment services (PES) in Israel offer the jobless basic skills and literacy training before seeking to place them in jobs (OECD, 2018b). Profiling of the unemployment can be used to determine needs and help provide training in high-demand fields. In Italy profiling is used to determine the amount of training vouchers. In Austria the PES covers course and related costs for job-seekers and low-income employees so that financial barriers do not deter them from taking up training.

In the longer-term, the evaluation of active labour market programmes should be strengthened. As was suggested in the previous *Survey* (OECD, 2018b), an agency should be set up to track and assess the net effect of programmes on the employment and income outcomes of participants, along the lines of the WhatWorks Centre for Local Economic Growth established by the UK government to promote evidence-based policy-making and evaluation (OECD, 2018b).

The government should also more vigorously address the needs of the most vulnerable groups and enhance its efforts to reduce poverty. In this regard government policy over the last decade has focused on promoting labour force participation to tackle poverty while cutting transfer payments that may harm work incentives, particularly among the Haredi, who value the time dedicated to religious studies, and the Arab-Israelis, who may face cultural barriers to female employment (OECD, 2018b; Yashiv and Kasir, 2013). However, even before the coronavirus pandemic, this policy has been partly reversed. Since 2015, the government stopped conditioning daycare discounts on both parents being in work, transfers were increased for families of religious students (*yeshivat* and *kollels*), and financial assistance was provided to needy yeshiva students (BoI, 2019a). Nevertheless, poverty remains among the highest in the OECD (Figure 1.29).

Figure 1.29. Poverty rates are high

Poverty rates with a poverty line of 50%, working-age population, 2017 or latest year available

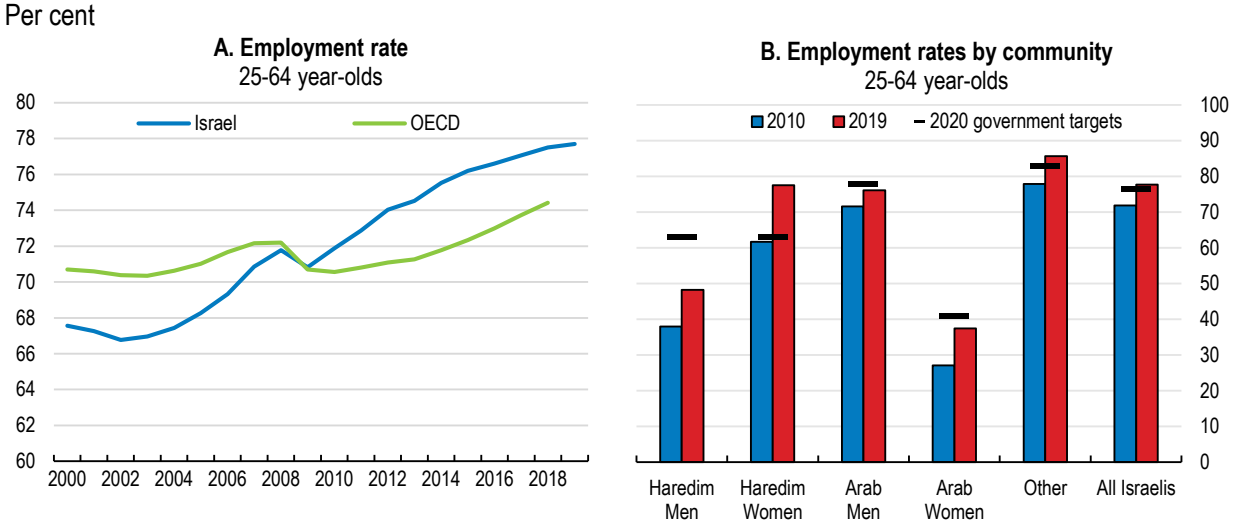


Note: Percentage of persons living with less than 50% of median equivalised disposable income. 2018 data for Australia and Israel.
Source: *OECD Income Distribution database*.

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Available evidence for Israel suggests that promoting employment while keeping transfers low has been successful, as employment among groups that have weak attachment to the labour market groups has expanded significantly (Figure 1.30; BoI, 2017). This, alongside minimum wage increases, has helped to reduce inequality. Inequality measured by the Gini coefficient has reached the lowest level since 1997. The employment rate for Arab-Israeli men and Haredi women has already reached the targets set for 2020, and the rate for Arab-Israeli women is very close. However, employment gains among Haredi men have stalled more recently, and rates remain considerably lower than those of the rest of the population.

Figure 1.30. Israel has made significant progress in increasing employment, but gaps remain for some groups



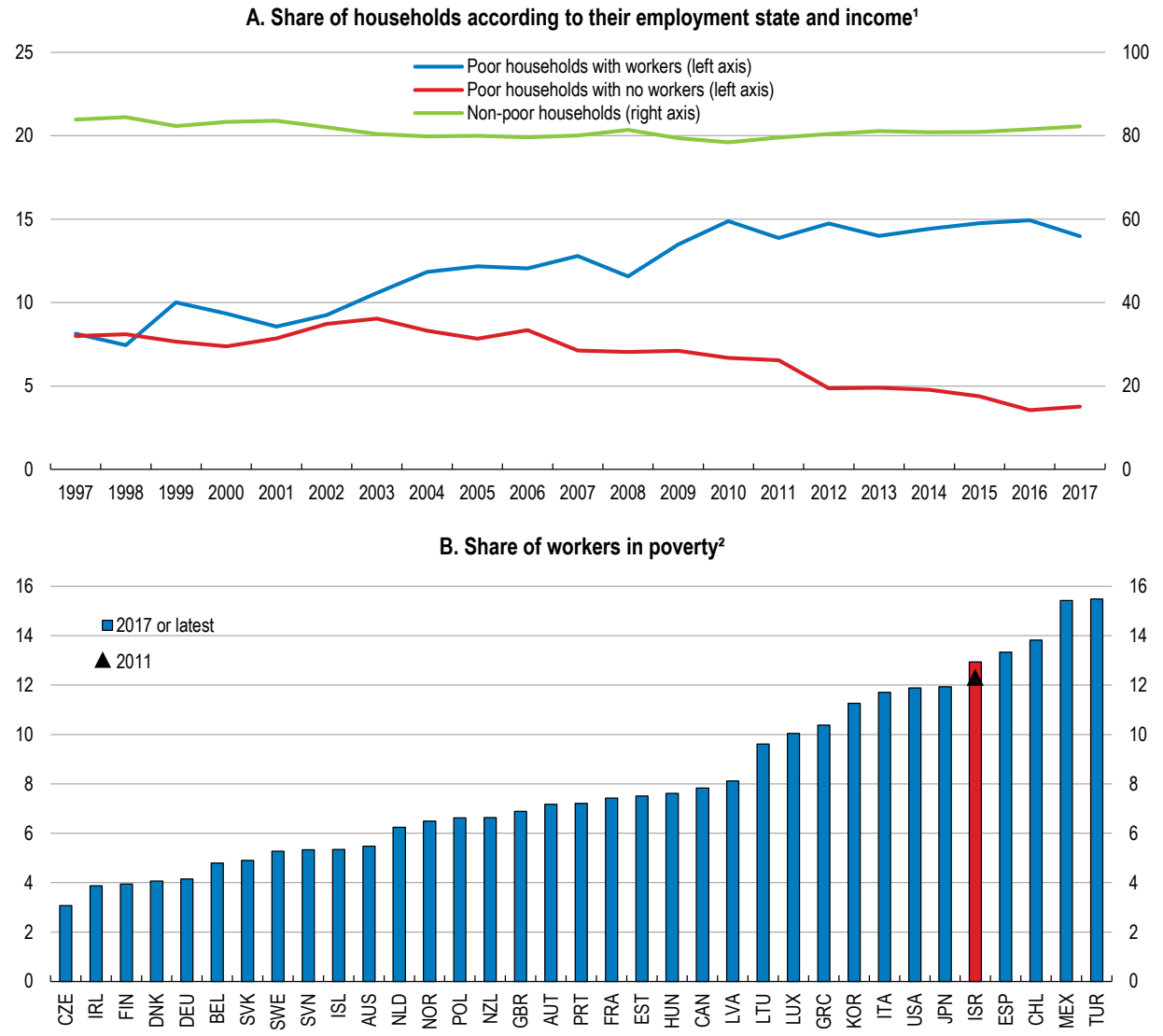
Source: OECD *Labour Force Statistics database*; Israel Central Bureau of Statistics. Israel Central Bureau of Statistics; and Bank of Israel Annual Report for 2019, Welfare and Social Policy Issues, Table 2.

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Although higher labour force participation among groups with traditionally low labour market attachment has significantly reduced household employment differences, the income received from work was not enough to make a substantial dent in poverty, which remains comparatively high. The poverty rate has declined only slightly, as the number of working poor has risen considerably (Figure 1.31). A large share of workers remains stuck in low-quality jobs with fewer working hours, low wages and limited income from other sources (OECD, 2018b). These workers also differ in their perceptions of job security, as they fear more than others that they may lose their job and fail to find another with a similar salary (BoI, 2017). More worryingly, the working poor and people outside the labour market are concentrated in certain communities, in particular among Arab-Israelis and Haredim, whose poverty rates remain almost 50%. These households face geographic, socio-cultural, training and health-related barriers that impede their integration (see Chapter 2).

Figure 1.31. The number of working poor has increased significantly over the past 20 years

Per cent



1. Households with a head of household aged 25–54. Changes were made to the survey in 2012, which created breaks in the series.
2. Those with income below the poverty line, living in households with a working-age head and at least one worker. 2018 data for Australia and Israel.
Source: Bank of Israel, *Annual Report 2018*; *OECD Income Distribution database*.

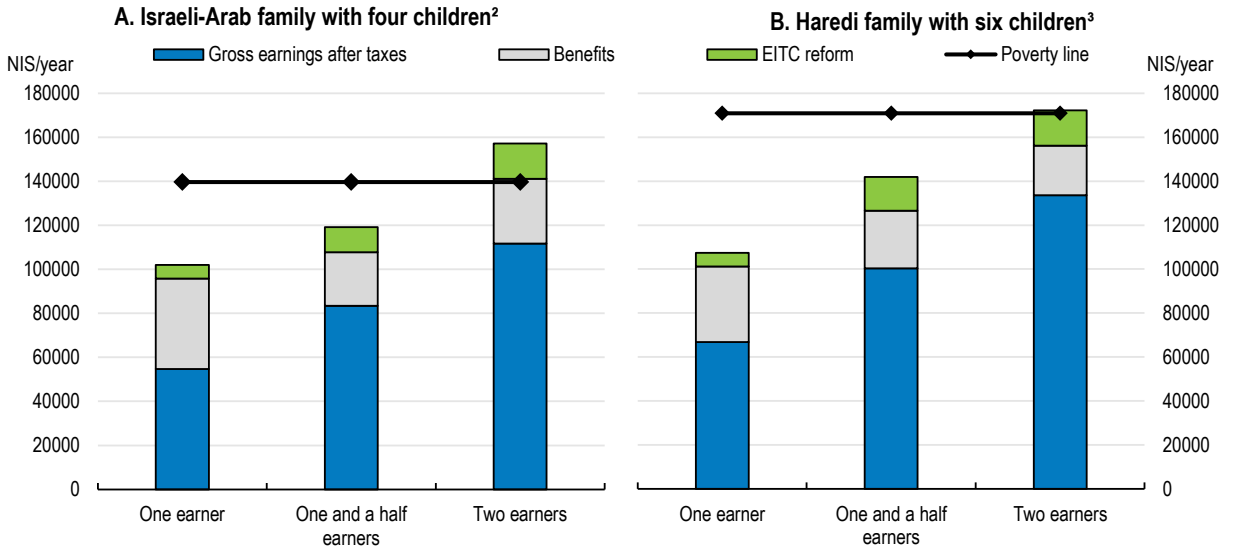
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As discussed in detail in Chapter 3, in order to tackle poverty while maintaining strong incentives to take up work, the government should further increase the negative income tax. Israel's Earned Income Tax Credit (EITC) is an effective redistribution measure with significantly positive employment effects for low-skilled workers (BoI, 2015b; MoF, 2017c; Brender and Strawczynski, 2019). The EITC has been progressively expanded since its inception in 2008, most recently in 2017 as part of the "Net Family" programme (Box 1.3). Further expanding the EITC would not be overly expensive, since its overall budgetary cost including the latest measures is only around 0.16% of GDP (IMF, 2018). Spending on similar programmes in the United States and the United Kingdom is markedly higher (0.4-0.5% of GDP).

New simulations conducted for this *Survey* using the OECD Tax Benefit Model suggest that expanding the EITC could help reduce poverty, including among Arab-Israelis and the Haredim (Figure 1.32). Arab-Israeli and Haredim earn on average only 75% and about 90% of the median hourly wage, respectively, and Haredi households typically have many children and only one breadwinner. Simulations in the previous *Survey* suggested that even if two spouses in these families were working full-time, total family income would not be enough to escape from poverty, given the current tax-transfer system and the size of their families. New simulations show that doubling the maximum payout amount under the EITC could lift the average Arab-Israeli and Haredi households with two earners above the poverty line.

Figure 1.32. An expansion of the earned-income tax credit could reduce poverty

Estimates of a family income according to the numbers of earners and its community group[1]



1. One earner corresponds to a family with one earner, one and a half earners corresponds to two-earner family where one works full-time and the second half-time, and two earners corresponds to two-earner family where both work full-time. The EITC reform scenario assumes a doubling of the maximum payouts, while maintaining the phase-out marginal rate, which causes the upper eligibility income threshold to move, and keeping the other income thresholds constant. The poverty line refers to the national poverty line as of 2017.
2. Workers are assumed to earn 75% of hourly median wage and work full-time.
3. Workers are assumed to earn 90% of the hourly median wage and work full-time.
Source: OECD simulations based on the OECD Tax Benefit Model.

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Table 1.9. Past recommendations on labour market

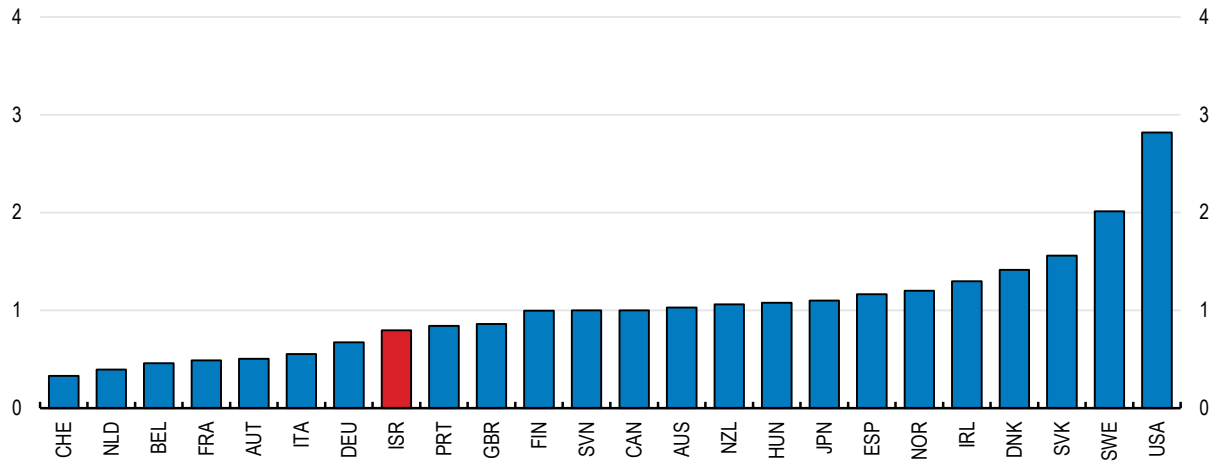
Recommendations in previous *Survey*	Actions taken since March 2018
Evaluate systematically the effectiveness of existing active labour market policies, raising funding for effective programmes, above all for training.	Pilot programmes for the unemployed have been introduced, focusing on enhancing the ability to find and keep a job, including job-search assistance and professional retraining.
Further expand the role of in-work benefits by providing higher transfers to large families where both parents are in low-paid work.	As part of the "Net Family" programme, the 2019 budget included several temporary measures to expand the earned-income tax credit: an increase of the tax credit for fathers by 50% to the level of mothers and the introduction of a 30% bonus for second-earners.

Improving access to affordable housing

Housing supply has been insufficient to meet increasing demand, causing shortages and high housing prices. Empirical research confirms that Israel's housing supply response to prices is weaker than in other OECD countries (Figure 1.33). A weak housing supply response affects social inclusion as high house prices undermine access to affordable housing, particularly for the poor, who are the first to be crowded out in rigid markets (Grossmann et al., 2019).

Figure 1.33. Housing supply response to prices is weak

Estimated supply elasticities of housing supply to change in prices



Note: Estimates of the long-run supply elasticity by country using the Common Correlated Effect Mean Group (CCE MG) approach in an unbalanced panel dataset of 25 countries from 1908Q1 to 2017Q4.
Source: OECD calculations.

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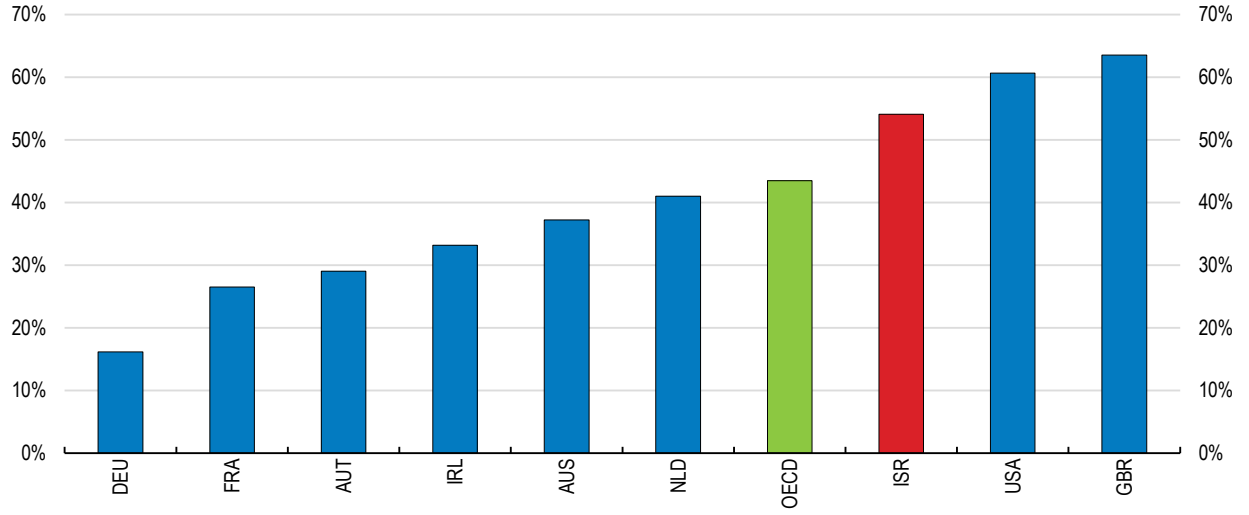
Indeed, housing affordability is lower than in other countries, particularly for low-income households (Figure 1.34). More than two thirds of those who rent belong to the two lowest deciles of the income distribution, and in the bottom decile outlays on rent averaged 61% of net monthly income in 2015 (Swirski and Hoffmann-Dishon, 2017).

One of the reasons why the supply response is weak is because Israeli municipalities do not prioritise residential development, despite the nation's pressing need for more housing. The current property tax system creates incentives for municipalities to make greater efforts to achieve business rather than residential development, as the property tax charged for commercial and industrial parks is up to 11 times higher than that on residential properties (Chapter 2). At the same time having more residents means that the municipalities need to provide public services for them, increasing their expenditures. This creates incentives for municipalities to develop industrial parks and commercial centres instead of residential areas. As a result the supply of land available for commercial-industrial parks exceeds the market demand, and in many cases this land remains largely empty (OECD, 2017b).

The difference between residential and non-residential tax rates should therefore be reduced. To shrink this gap non-residential property tax rates could be lowered and residential rates raised. This should, however, be accompanied by exemptions for disadvantaged groups. In addition, the government should strengthen equalisation efforts within municipalities to support those with socio-economically weaker populations by higher compensation from the wealthier ones (see Chapter 2). The government could also promote mergers of municipalities. Economically strong municipalities created through mergers will have the potential to improve public services and be more efficient.

Another way to improve affordability is through a well-functioning rental market, both public and private. In 2017 Israel introduced a “fair rental law” clarifying tenants’ and landlords’ responsibilities in several respects in order to support a deeper market. This was a step in the right direction, but rents have continued to increase.

Figure 1.34. Housing costs are high for poor households



Note: Share of population in the bottom quintile of the income distribution spending more than 40% of disposable income on rent, in per cent, 2015 or latest year available.
Source: OECD calculations based on European Survey on Income and Living Conditions (EU SILC) 2015 except: from the Household, Income and Labour Dynamics Survey (HILDA) for Australia (2014); the German Socioeconomic Panel (GSOEP) for Germany (2014); American Community Survey (ACS) for the United States (2015); Bank of Israel for Israel (2015); Adva Center (2017), "Public Housing Option: Adva Center's Response to the Housing Crisis in Israel".

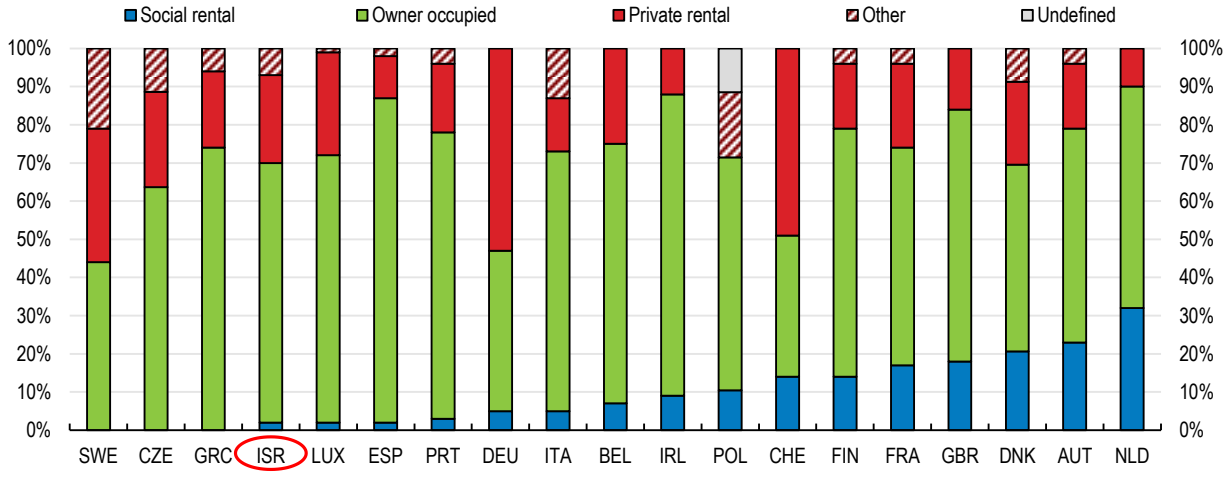
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Rent-setting regulations require a delicate balance between security for the tenant and flexibility and possibilities for satisfactory yields for the landlord. One way forward is to collect information on the local reference rent, similar to the German system. Collecting and publishing local rents and making the price developments on the rental market more transparent can help reduce information asymmetries and support rental market competition, which can curb excessive rents. Other countries are following Germany's example and setting up ways in which landlords and tenants can obtain comparable rental information (de Boer and Bitetti, 2014).

The government could also increase the effectiveness of housing-assistance policy to help reduce the segregation of poor population groups. Public housing in Israel is relatively scarce, although increasing (Figure 1.35). A large number of these housing units are being sold to the tenants at discounts in order to reduce poverty and support private home ownership. Public housing is often clustered in poor neighbourhoods, far from employment centres, with the risk of their developing into areas of distress (BoI, 2019a). At the same time living in public housing may impair geographical mobility, causing people to be locked into areas with limited employment opportunities. Evidence from other countries shows that these areas can result in significant disparities in employment outcomes and that children growing up in these poor-quality neighbourhoods perform less well in school and earn less as adults (Chetty et al., 2014; Galster, 2007; Gibbons, 2002; Andrews et al., 2011). Therefore, social housing needs to be located in areas close to employment opportunities and should be targeted at the most disadvantaged families, possible with additional social services to help their integration (Chapter 2). For example, some OECD countries are promoting mixed neighbourhoods by requiring new development projects to devote a small share of their flats to social housing to foster integration of disadvantaged groups. In England, at least 10% of the major residential development projects are required to take the form of social housing (HoC, 2019). The government should also consider abolishing its policy of selling public housing dwellings to tenants. Besides public housing, which should target the most disadvantaged families, housing assistance through rent subsidies should be strengthened.

Figure 1.35. The share of social housing is low in Israel

Per cent, 2015 or latest available year



Note: "Other" includes residential units such as sheltered housing, student dormitories and cooperatively owned apartments. Public housing in Sweden, estimated at 20%, is not defined as "social housing" since it is intended for the entire population and therefore included in "Other." In the Czech Republic, too, no homes are defined as "social housing," but 6–7% are public housing, i.e., apartments owned and leased by the local authorities.

Source: Adva Center (2017), "Public Housing Option: Adva Center's Response to the Housing Crisis in Israel".

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In view of the long-lived nature of new housing, energy efficiency standards of new homes should be zero-carbon consistent (IEA, 2018). While such standards raise upfront housing investment spending, they avoid higher costs of retrofitting later and limit the investment needs in the context of the progressive decarbonisation of the economy. Improving energy efficiency can deliver substantial economic, environmental and social benefits, such as reduced air pollution and less land-use for energy infrastructure deployment (OECD, 2019f). The government should therefore consider making energy efficiency standards mandatory for new housing.

Expanding renewables can boost environmental and economic outcomes

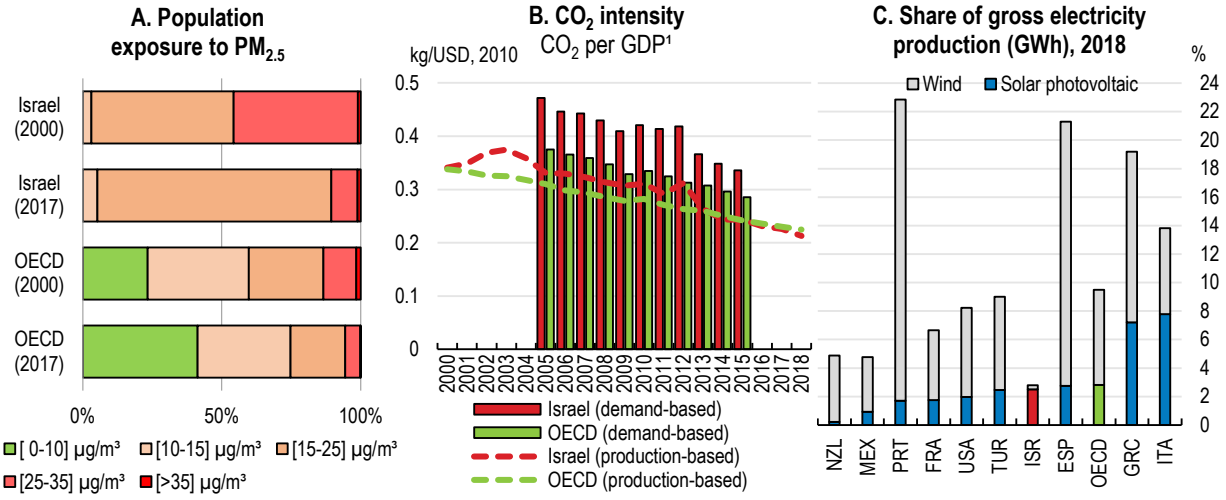
Policies to support the recovery should be designed with a view to continue progress on environmental performance and climate change mitigation. This is particularly important as plummeting fossil fuel energy prices at the onset of the COVID-19 crisis weaken incentives to invest in low carbon and energy efficiency technologies.

Most Israelis are still exposed to heavy small-particle pollution, well above the WHO-recommended limit of 10 micrograms per m^3 (Figure 1.36, Panel A), causing almost 2500 premature deaths per year. It affects children's health the most (WHO, 2018). Education outcomes for children exposed to higher air pollution are substantially and lastingly lower (Heissel et al., 2019); pollution also affects students' subsequent labour market performance in Israel (Lavy et al., 2014). Applying recent EU evidence (Dechezleprêtre et al., 2019) to Israel suggests worker productivity could be at least 5% higher if average exposure was below the WHO threshold. In Haifa the energy sector contributes the most to pollution, while transport dominates in Tel Aviv and Jerusalem (Ministry of Health, 2017).

Israel's CO_2 emissions have decoupled slowly from GDP, as is the case for the OECD at large (Figure 1.36, Panel B). In absolute terms CO_2 emissions have risen by 10% since 2000. In 2015 the Israeli government adopted a target of reducing per capita GHG emissions by 23% relative to 2015 by 2030. Since Israel's

population is projected to be 25% larger by then, overall emissions may rise further. The government also aims to reach a renewables electricity share of 30% in 2030, up from 5% at the end of 2019. Worldwide, strong emissions reductions are needed by 2030 to meet the objectives of the Paris agreement, which requires signatories to limit global warming to well below 2 Centigrade degrees and make efforts towards limiting global warming to 1.5 degrees. Limiting warming to 1.5 degrees would result in substantially lower climate-related risks to human well-being than 2 degrees (IPCC, 2018). Droughts, heat waves and wildfires are expected to increase particularly strongly in the Mediterranean region, with significant and increasing risks for ecosystems, food, health and security in the coming decades (Cramer et al., 2018). Fresh-water availability may decrease by up to 15%, among the largest falls in the world. Israel is already the OECD member with the highest level of water stress. Israel plans to double its desalination capacity by 2030. This will strengthen Israel's water stability but will add to energy consumption.

Figure 1.36. Green growth indicators



1. Included are CO_2 emissions from combustion of coal, oil, natural gas and other fuels. Gross Domestic Product (GDP) is expressed at constant 2010 USD using PPPs.
Source: *OECD Green Growth Indicators database; OECD Environment Statistics database; OECD National Accounts database; OECD Air quality and health database*; *OECD Electricity Information*.

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The Paris agreement invites signatories to present long-term emissions-reduction strategies by 2020. It is welcome that Israel plans to present its strategy in 2020. The strategy needs to cover a broad range of sectors, including electricity, buildings, transport, industry and agriculture (OECD, 2019f). If well designed, these policies can also reduce air pollution durably and generate well-being gains, which can materialise already in the near term. Taking early decisive action can harness these benefits and reduce costs, taking advantage of low-cost renewable energy and avoiding lock-in of investment inconsistent with decarbonisation (OECD, 2019f). Several high-income OECD countries have recently announced net zero GHG-emissions targets for 2050, including Switzerland, France and the United Kingdom.

In 2015 the energy sector contributed half of all GHG emissions in Israel, more than in the OECD area, where they account for about 30%. Transport accounts for about a further quarter. Many energy end uses need to be electrified to lower their emissions and pollution, including transport. It is therefore important to advance with the decarbonisation of electricity generation. This is discussed below. Improving energy efficiency is highly cost-effective in this context (IEA, 2018).

Israel has car purchase taxes that depend heavily on their environmental performance. It also plans to prohibit the sale of new petrol- and diesel-fired cars by 2030 and develop electric as well as natural-gas-

based mobility. Recent research for the United Kingdom suggests phasing out petrol- and diesel-fired cars by 2030 is less costly than doing so at a later date (UK Committee on Climate Change, 2019). There is much scope to improve local policies in Israel's cities to reduce transport-related pollution, CO_2 emissions and energy consumption, while reducing congestion and improving access to jobs and key facilities (OECD, 2019f). This requires metropolitan governance integrating urban planning, housing and transport policies, including better pricing of transport. Such policies can also boost productivity (OECD, 2015c).

Decarbonising transport can provide opportunities to develop innovative mobility and connectivity, implementing new technologies and pilots for transport solutions, such as digital-based ride sharing. This can include better batteries, grid technologies for cost-effective charging and technologies to decarbonise road freight, including alternative fuels such as hydrogen. Israel could benefit from further R&D investment in these areas as well as in areas discussed below, notably solar technologies, large-scale energy storage, dual use of land and smart grids.

Natural gas helps reduce emissions and pollution in the near term

In 2018 30% of total power generated in Israel was from coal, down from 59% in 2010. Use of natural gas has expanded on the back of the discovery of large gas fields off Israel's coast. Natural gas accounted for 66% of total power generated, up from 39% in 2010. Recently, the Minister of Energy has announced plans to eliminate coal in electricity generation by 2026. Replacing coal with gas is reducing SO_2, small-particle pollution and GHG emissions, although gas combustion still produces NO_x emissions. At 3% at end-2018, the share of renewables was one of the smallest in the OECD (Figure 1.36, Panel C), but capacity is expanding quickly.

Relying predominantly on natural gas for electricity generation carries risks in the longer term. Electricity from ground-mounted solar panels is already cheaper to produce than from coal or gas, even without appropriate pricing of GHG emissions. The cost of solar is set to fall below that of gas in many regions across the world by 2023 (IEA, 2018). When accounting for emissions comprehensively, including fugitive emissions in extraction and transportation, gas-fired electricity emits about half of coal across the world (IPCC, 2014). The Israeli authorities are committed to minimising fugitive emissions, which is welcome. Equipping gas-fired electricity with carbon capture, use and storage (CCUS) may reduce emissions to a fifth of coal (IPCC, 2014) but would also raise costs. Relying predominantly on gas would therefore make the deeper emissions reductions that are needed in the longer term more difficult to achieve.

Gas-fired power plants would have value as a backup to produce dispatchable electricity to offset the intermittency of renewables and could eventually be used to fire zero-carbon hydrogen, provided they are equipped accordingly. Israel could export its natural gas to countries in the region where it could help reduce coal use. Gas exports to Jordan and Egypt have commenced at the beginning of 2020.

Gas production is supported by a purchase agreement at guaranteed prices between the state-owned electricity company and the operators of the gas fields. To provide incentives to phase out coal and reduce emissions cost-effectively it would be preferable to rely on carbon taxation instead, as argued in Chapter 3.

More can be done to boost renewables cost-effectively

These arguments suggest that Israel should expand renewable electricity substantially. The IEA has pointed to excellent potential and increasing economic attractiveness of solar electricity in Israel. Gas-fired power can ease this transition, in particular in view of Israel's limited scope for international network connections in the current geopolitical context. Israel is giving solar energy policy support (IEA, 2018), including auctions for commercial rooftop projects and improved permitting and tax treatment for residential systems. It has required new buildings to be equipped with solar panels for heating for many years. Owners of new buildings now choose whether to install solar panels for heating or photovoltaic panels for electricity.

However, restricted land availability, transmission grid constraints and permit procedures are holding back large-scale projects. These offer the lowest generation costs.

Israel deregulated solar installations and introduced an auctions system for solar investments. Well-designed and transparent auction schemes can attract investment in large-scale renewables (IRENA and CEM, 2015) and lower costs. In Israel, investors need to settle private land-development rights separately from the tender. Tendering pre-approved sites with secured land rights has reduced uncertainty, attracting investors and lowering costs, for example in the Netherlands (OECD, 2017), Jordan and India (Agora Energiewende, 2018). More public land should also be made available for tenders. One-stop shops (as in Denmark), standardisation of contracts and a legal time limit for permit procedures also help (OECD, 2017). Israel's weather and limited land availability make it an ideal location for solutions based on dual use of land. For example, solar photovoltaic installations that float on water reservoirs can reduce demand on land, prevent up to 80% of evaporating water (Taboada et al., 2017), improve efficiency and maintenance.

The potential to develop large-scale renewables generation is greatest in areas that are far from the centres of electricity consumption. However, infrastructure development has not taken into account renewables production (Gallo and Porath, 2017). In 2018 the Minister of Energy approved a five-year development plan to increase investment. The authorities have also become pro-active in identifying sites suitable for development. The economic benefits of doing such investments may include the development of regions heretofore poorly served with infrastructure, including job opportunities for the local population, although this may require upskilling (Agora Energiewende, 2018). Pre-approved sites for renewables generation can be combined with land rights for the needed transmission lines. Tenders also lower the cost of executing transmission network projects (IEA, 2016).

Israel’s solar tenders are based on a uniform price system, which guarantees a feed-in- tariff to all successful bidders. Remuneration of solar electricity should combine auction-determined minimum fixed prices with some market responsiveness. Minimum fixed prices reduce uncertainty to investors, while market signals provide incentives to choose installations that maximise market value, for example by supplying more at peak demand. For such incentives to materialise a well-developed wholesale electricity market is necessary. Israel has established the rules for a competitive wholesale market. However, the bids of most of the power plants are regulated. With the development of competition in the natural gas sector, regulated prices are expected to decline. Nevertheless wholesale competition should be further developed. Integration of increasing renewables generation can be achieved through high-resolution prices (including prices closer to real-time and locational prices that reflect grid constraints) and appropriate allocation of transmission and distribution network costs, as well as the use of smart grids and storage (IEA, 2016).

The government-owned Israel Electric Corporation (IEC) owned 80% of generation capacity in 2017. Privatisation is expected to bring that share down to 40% by 2025. According to approved legislation, all new power generation will be privately owned. The IEC also owns the transmission infrastructure. While state-owned enterprises can support policies to encourage investment in renewables, market concentration tends to discourage it (Prag et al., 2018). The major electricity market reform of 2018 aimed to facilitate entry, which is welcome. It foresees a transfer of transmission system operations management to a separate but also government-owned company. According to the government’s assessment, implementing this transfer as planned will ensure that the system operator will be fully independent of the incumbent. This is important to prevent discrimination against market entrants (Fuentes, 2009). The electricity market regulator will also need to have appropriate tools and resources, including effective *ex ante* regulation.

Rooftop solar electricity generation provides an additional option for expanding solar energy use when land is scarce. However, producing electricity with rooftop panels costs more than twice as much as with ground-mounted ones. Owners of residential rooftop photovoltaic systems benefit from a net metering scheme. It credits households for surplus electricity they feed into the grid. These households also

contribute to grid costs. Overall the value of surplus electricity to households slightly exceeds the energy bill they save from consuming their own production (PUA, 2014). As solar energy has become cheaper to produce, Israel has replaced net metering with a lower feed-in price for surplus electricity in new installations. This creates incentives for households to shift demand in real time cost-effectively, taking advantage of periods when cheap solar energy is abundant, for example through the installation of heat pumps, plug-in electric vehicles or battery-based storage. Grid costs can then be lowered and recovered more easily without putting a charge on self-consumption (IEA-PVPS, 2016), thereby also preserving incentives to invest in rooftop solar. However, the new feed-in tariffs are only slightly lower than the retail price. Moreover, setting feed-in prices administratively is inherently difficult. Basing rooftop feed-in tariffs on wholesale prices would be an attractive alternative (IEA-PVPS, 2016).

Israel may also consider a large expansion of capacity when upgrading low-voltage distribution networks, as the cost of upgrading is relatively insensitive to the size of the capacity increase (Imperial College London & Vivid Economics, 2019). Time-varying pricing would reinforce incentives to consume electricity at times when variable renewable energy is abundant, while maintaining incentives for energy efficiency (IRENA, IEA, REN, 2018). In this way renewable energy generation as well as energy end-use costs can be minimised. Developing smart technologies to manage flexible demand response can also strengthen Israel's technological leadership.

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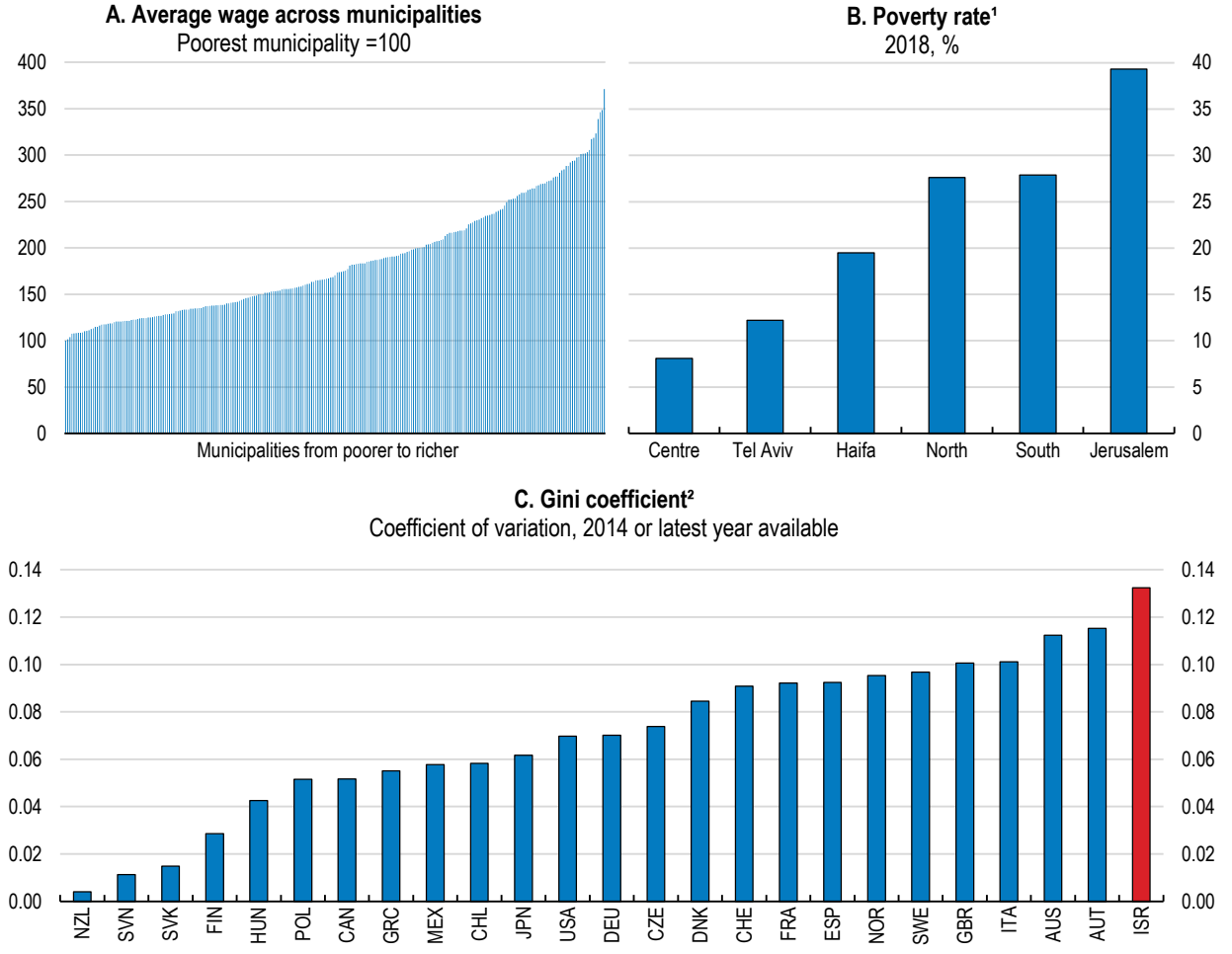
2 Reducing socio-economic differences between municipalities

Despite being one of the smallest countries in the OECD, Israel is marked by significant socio-economic disparities, which have a clear spatial dimension. Ethnic and religious groups with weak socio-economic outcomes are not benefitting from the thriving high-tech sector in the centre of the country. As a result, there is a persistent lack of employment opportunities in the peripheral areas alongside skills shortages in the dynamic centre. Inequalities between municipalities are the highest in the OECD. Moreover, the current pandemic has hit poorer Haredi neighbourhoods particularly hard. The government should reduce barriers that prevent segments of the population from fully participating in the economic process and give everyone a similar chance to succeed, regardless of where he or she was born. This will require equal access to high-quality education, affordable housing, reasonable public transportation and improved urban planning in every municipality to reduce spatial divides and segregation of disadvantaged households. Local authorities can play a significant role, since good municipal government and effective policies to achieve national priorities are the best means to improve the outcomes of residents of poor areas.

Differences between municipalities and localities are pronounced

Israel is one of the smallest countries in the OECD in terms of surface area but suffers from large economic disparities. Income inequality and poverty rates are higher than the OECD average and have clear spatial dimensions, as poor households are regionally concentrated. Israel has a single sub-national level of government, composed of 257 local authorities. The average monthly wage in the richest locality is almost four times higher than in the poorest one (Figure 2.1, Panel A). The difference in disposable income between the poorest locality and the richest one is one of the largest in the OECD (OECD, 2018a). Only a tenth of Tel Aviv's residents lives below the poverty line, while in Jerusalem almost half of residents do so (Panel B). Regional disposable income differences are the largest among OECD countries, even after controlling for the average level of the Gini coefficient (Panel C).

Figure 2.1. Income disparities among localities are high



1. At-risk-of-poverty rate is defined as the share of people with an equivalised disposable income below the risk-of-poverty threshold, which is set at 50 % of the national median equivalised disposable income.
2. The Gini coefficient is calculated for household disposable income after taxes and transfers, adjusted for differences in household size. The coefficient of variation is defined as the ratio of the standard deviation to the mean.
Source: National Insurance Institute (2019), Poverty and social gaps Report 2018, Table 12; Eurostat; OECD Regional Well-being database.

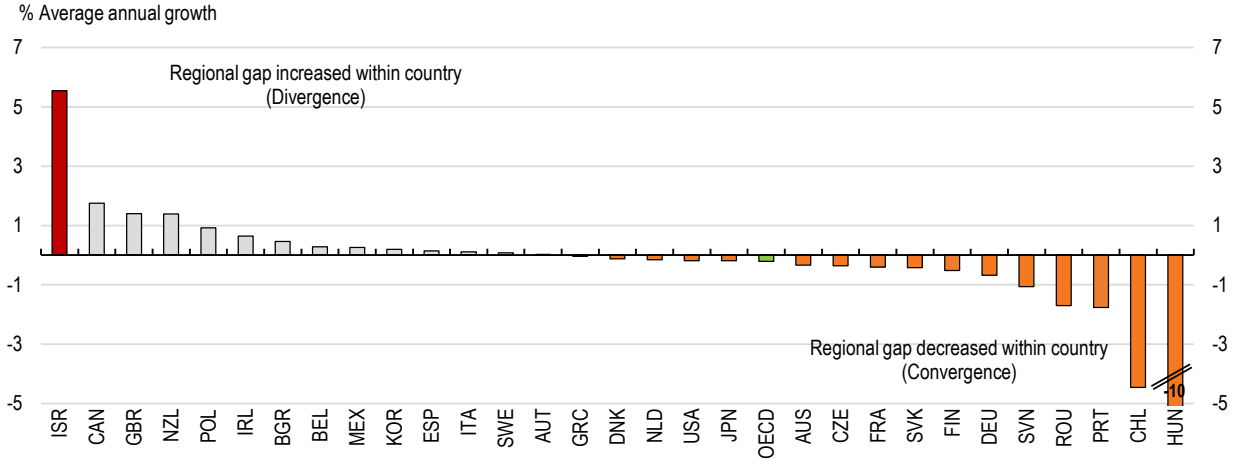
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Income disparities between the richest and poorest areas continue to widen. The growth in disposable income has been largely confined to wealthier localities. Over the last decade the income disparity between the top 10% and the bottom 10% of regions grew by an annual average of more than 5% - the fastest pace among the OECD countries (Figure 2.2). This suggests that not every area has been benefitting from the country's robust economic performance before the crisis.

The current economic impact of the crisis will differ across regions. In the short run, the most touristic destinations and metropolitan regions will be at higher risk of employment losses than other regions. At the same time, the first phase of the outbreak disproportionally affected poorer Haredi neighbourhoods (Box 2.1). However, in the medium- to long-term the economic effect is likely to become more uniform across regions (OECD, 2020a) and disparities between municipalities are expected to remain large.

Figure 2.2. Disparities in disposable income have been widening

Difference in per capita disposable income growth rate between the top and bottom 10% of large regions (2006-16)



Note: The figure shows the change between 2006 and 2016 in the ratio of average disposable income per capita of the richest 10% and poorest 10% TL2 regions. Richest and poorest regions are the aggregation of regions with the highest and lowest income per capita and representing 10% of national population.
Last available year: 2016; Canada, Finland, France, France, France, Germany, Hungary, Ireland, Japan, Mexico, New Zealand, Norway, Poland, Portugal, Slovenia, Spain and Turkey, 2016; Belgium and Switzerland, 2014; Italy and Sweden, 2013; Chile 2012.
First available year: Chile, Ireland, Israel, and Slovak Republic 1996; United Kingdom 1997; New Zealand 1998; Slovenia 1999; Austria, Denmark, Finland, Hungary, Portugal, and Sweden 2000; Japan 2001; Estonia and Mexico 2008; Korea and Poland 2010; Norway 2011.
Source: OECD (2018), *OECD Regional Statistics database,* http://dx.doi.org/10.1787/region-data-en

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The differences between municipalities and localities are due to significant divisions that exist in the Israeli economy and society. To begin with, the labour market is marked by severe duality, with a significant, highly productive high-tech sector mainly consisting of telecommunications and software companies in the centre and mostly low-productivity, often non-tradable sectors, with low-quality and low-wage jobs in the periphery. More importantly, significant socio-economic differences exist between the majority of the population and Ultra-Orthodox and Arab-Israelis who often live in separate towns, villages or neighbourhoods.

The benefits of the dynamic high-tech sector are concentrated in the centre of the country. More than 60% of all high-tech jobs are located in Tel Aviv and the central district, and approximately 80% of high-tech companies operate in this area. This trend has intensified in recent years, with the growth in high-tech employment in Tel Aviv constituting approximately 70% of the total national increase in this sector (Innovation Authority, 2018). As in other countries, the high-tech sector is concentrated, but its future

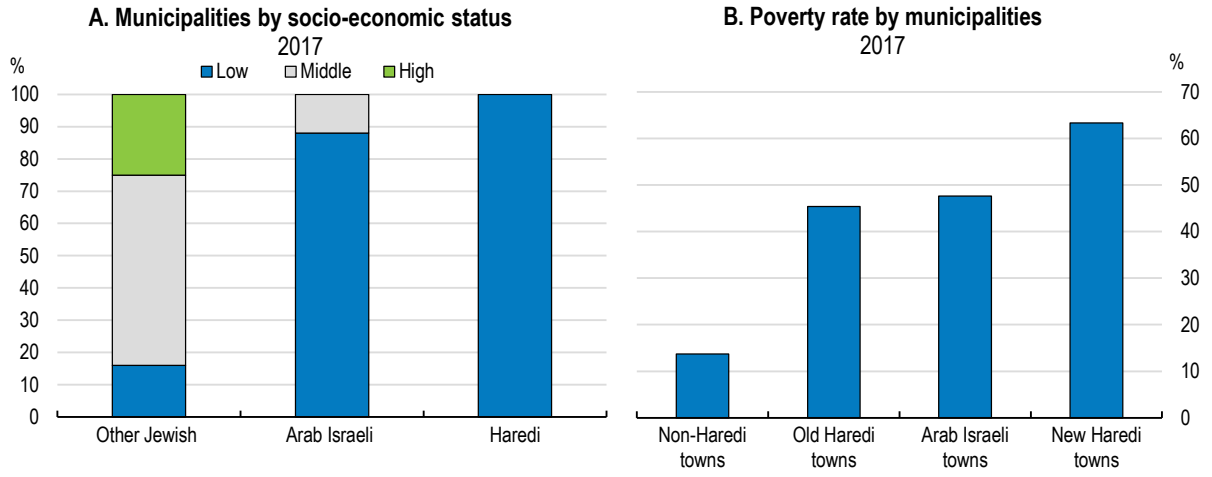
growth will be constrained if it fails to fully utilise the periphery's human capital potential. The shortage of skilled high-tech workers is increasing, with an estimated 15 000 unfilled jobs in the high-tech industry (Innovation Authority, 2018). This suggests that skills, transport or housing barriers exist that prevent people in peripheral locations from accessing the economically dynamic centre of the country. As Israel's territory is small, it needs to make the best use of all available resources and skills in order to remain globally competitive.

Moreover, ethnic and religious groups with weak socio-economic status are concentrated in separate cities or neighbourhoods, which hampers their integration and mobility. Municipalities are usually divided along community, ethnic and religious lines. Spatial concentration of different communities is also common in other OECD countries but typically has less economic significance than in Israel. Segregation can represent a problem if it implies that disadvantages are spatially concentrated in cities and neighbourhoods with low job accessibility or a poor social environment. Highly segregated cities can lead to worse outcomes for individuals who start from a more disadvantaged situation (Sharkey, 2008; Sampson and Sharkey, 2008). Particularly, Arab-Israelis are primarily located in poorer areas, while Jewish residents are concentrated in wealthier municipalities (Figure 2.3). Arab-Israelis and Haredi living in mixed cities or in more diverse localities have better labour market outcomes than those living in segregated areas (BoI, 2016).

Arab citizens represent around 20% of Israel's population and live largely separated from the majority. Only one-tenth of the Arab population lives in mixed Jewish-Arab cities and the rest in separated cities, mostly in the north of the country and in the Negev district in the south (15%). In these towns economic activity is generally weak and inward migration limited (Khamaisi, 2013). The Arabs living in Jewish localities and in mixed cities have much stronger socio-economic outcomes (BoI, 2016).

The Haredim represent one-tenth of the population, and the vast majority live in the centre of the country — the area bounded by greater Jerusalem, Bnei Brak (near Tel Aviv) and Ashdod. A large part of the Haredi population lives in predominantly Haredi neighbourhoods with their own schools and little day-to-day contact with other parts of the Israeli population (Machlica, 2020). Moreover, their share of the population is expected to increase to almost one-third by 2065 because of their high birth rates. The segregation of the Ultra-Orthodox has increased in recent decades due to rapid expansion of new Ultra-Orthodox cities fuelled by the significant increase in their population. The socio-economic outcomes for residents of Ultra-Orthodox cities, including labour market participation and household income, are much weaker than those of other Israelis. In contrast, Haredi residents of more diverse localities in the centre of the country have high employment rates and incomes compared to the average Haredim in Israel, and a tendency to work outside the Ultra-Orthodox community (BoI, 2016).

Figure 2.3. Arab-Israeli and Haredi cities are much poorer



Source: J. Gal, S.Madhala and H. Bleich (2017):, "Social service budgeting in local authorities", Taub Center, A chapter from The State of the Nation Report 2017.

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Significant differences between areas in Israel also suggest that individuals' future socio-economic outcomes can be to some extent predicted by place of birth. Being born in a disadvantaged area can hamper social mobility across generations, especially for poorer households. Empirical research confirms that those born in poorer families in the periphery have fewer chances to improve their income relative to their parents' than poor children in the centre, and children from poorer households born in Arab-Israeli or Haredi municipalities also have fewer chances to improve their income compared to poor children in other municipalities (Krill and Bats, 2019). Lack of upward mobility at the bottom of the income distribution means that many potential talents are overlooked or under-developed (OECD, 2018b).

Therefore, Israel badly needs more inclusive growth to facilitate regional convergence so that everybody has an equal chance to succeed regardless of birthplace. The multi-dimensional nature of inequalities calls for a policy response that cuts across policy lines and levels of government and builds upon the strength and assets in peripheral areas. The government should put policies in place that give everyone the chance to succeed and reduce the barriers that prevent segments of the population from fully participating in the economy and in material progress. This will require: (i) access to public transportation; (ii) affordable housing and improved urban planning; and (iii) high-quality education in every municipality, which will help reduce spatial divides and segregation of disadvantaged households.

In particular, measurers to contain the COVID-19 should continue to be adapted to the needs of different cities. Experience from other countries and from Israel show that cultural minority groups can be particularly exposed to COVID-19 infection due to the interaction of various socio-economic vulnerabilities (Box 2.1). This requires measures first to respond to their needs and then also to mitigate the spread of the virus.

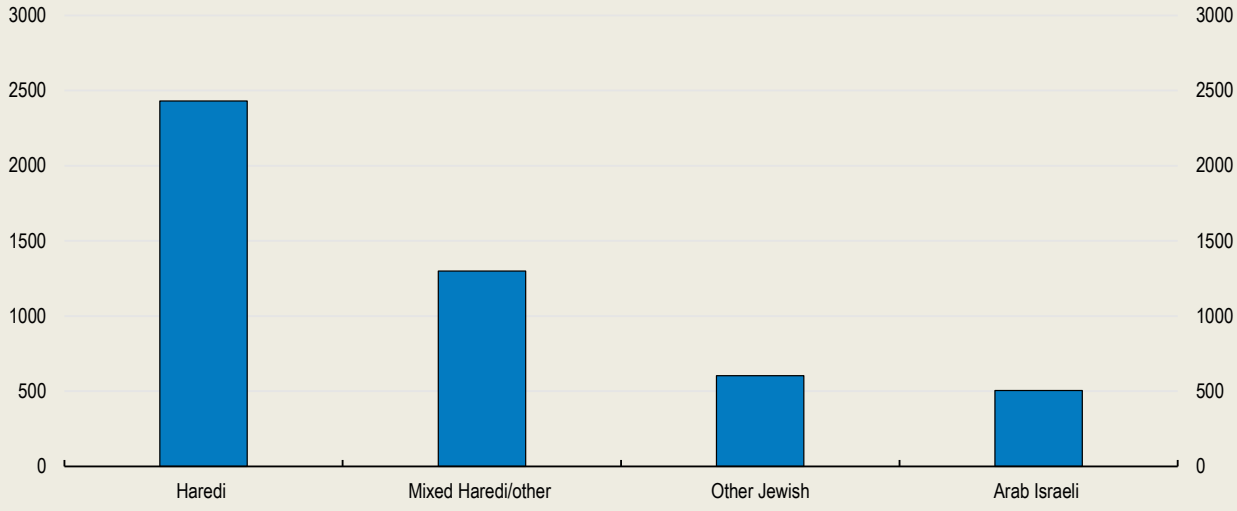
Box 2.1. Coronavirus infection rates across Israeli municipalities

In OECD countries, the regional and local impact of the coronavirus outbreak has been highly asymmetric in the first phase of the outbreak. In China, 83% of confirmed cases were concentrated in Hubei province, in Italy, the country's north was hardest hit, in France, the regions of Île-de-France and Grand Est were the most affected as of 1 April (OECD, 2020a). Evidence from other countries also suggest that the outbreak disproportionally affected neighbourhoods with lower average incomes and larger families (Borjas, 2020).

The impact of the first phase of the outbreak has also varied substantially across Israeli municipalities. The infection rate has been particularly high in Haredi towns and neighbourhoods, while the infection rate in other Jewish neighbourhoods and Arab municipalities has been smaller (Figure 2.4). High infection rates can be related to large family size, crowded living conditions, intense social and community life, higher dependency on public transportation and higher share of low-skilled occupations with limited possibilities of teleworking. Empirical research suggest that the fraction of the population living in religious yeshivas or boarding schools and population density are the main explanations for the differences in infection rates between municipalities (Shores, 2020).

Figure 2.4. Haredi towns have been particularly hit by the pandemic

Confirmed infection rate per 100 000 (6th of August)



Source: Alex Weinreb, Taub Center for Social Policy.

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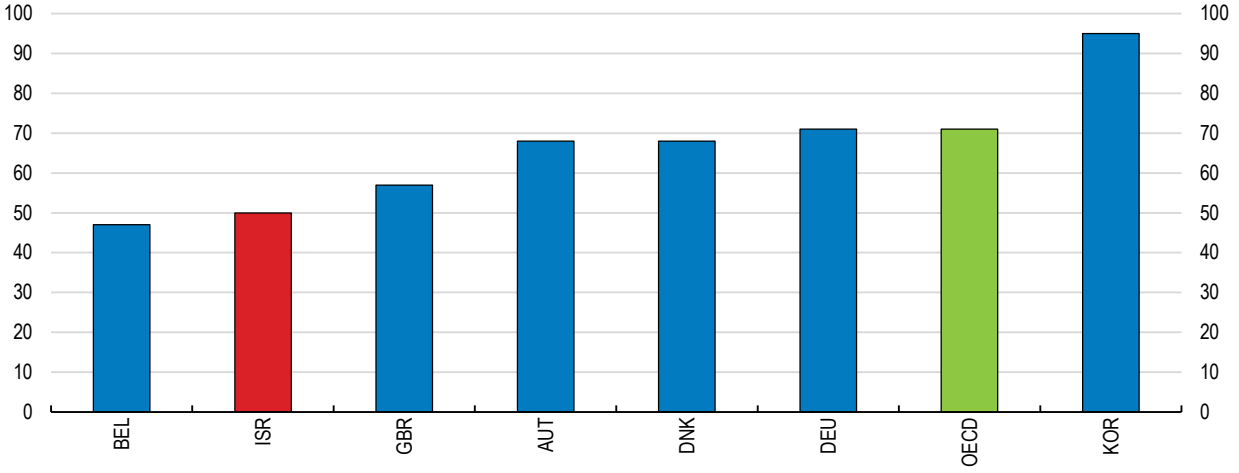
Improving transport infrastructure to spur growth in lagging municipalities

Connecting disadvantaged groups to job opportunities and public services through effective transportation networks can reduce socio-economic differences and foster inclusive growth. Moreover, if Israel wants to remain a key player in high tech, it needs to compete with other larger metropolitan areas, which can use their agglomeration advantage. Given that Israel's area is small, it is important to set up a highly interlinked network of cities. For example, in the Netherlands there has been a great deal of focus on networking among cities trying to compensate for their small size with good connections to make more use of agglomeration benefits and of the periphery's human capital potential (Burger et al., 2013; Meijers et al., 2017).

Israel's transportation infrastructure is under-developed. The core infrastructure stock is smaller by almost one third than those of other OECD countries (Figure 2.5). Investment activity in recent years has not been sufficient to meet the growing demand for transportation infrastructure. Over the past two decades the economy has been growing at a robust pace, with strong employment growth. As a result, the motorisation rate in Israel has increased by more than 50%, from approximately 210 vehicles per 1000 inhabitants in 1998 to 320 in 2017 (BoI, 2019). The number of people working outside their residential locality has doubled in this period (BoI, 2017). In contrast, investment in road infrastructure and public transport as a share of GDP has remained relatively stable over this period, although it has increased most recently (Figure 2.6, Panel A). Commuting times have been steadily increasing. The average time required to travel to work outside the residential locality has risen significantly since 2005 (Panel B).

Figure 2.5. Israel's current core infrastructure stock lags significantly behind other countries'

Total core infrastructure stock, 2015 (percent of GDP).

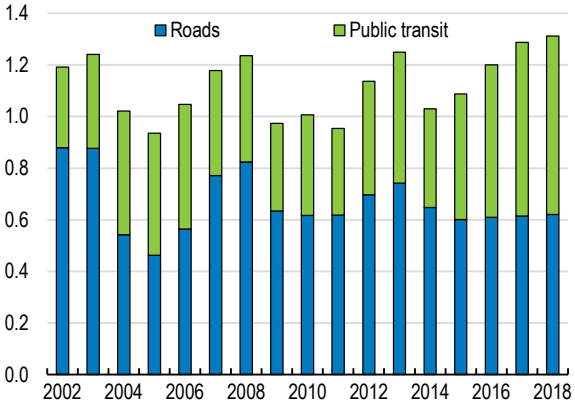


Source: Office of the Accountant General, Ministry of Finance; ITF; GWI; IHS Global Insight; McKinsey Global Institute analysis; Israel Rail; Israel Airport Authority.

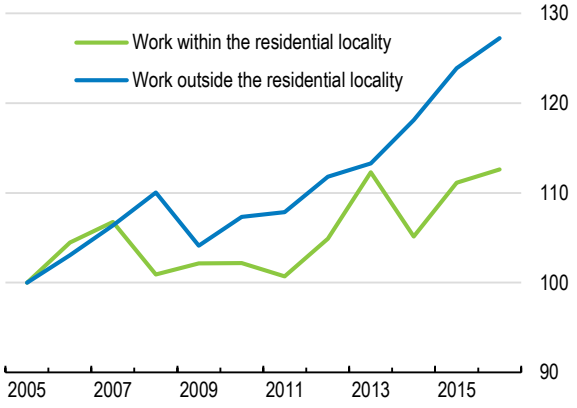
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Figure 2.6. The supply of transport infrastructure has not been sufficient to meet rising demand

A. Investment in land transport infrastructure
4-year moving average, % of GDP



B. Duration of travel to work in Israel
2005=100



Source: Israel Central Bureau of Statistics.

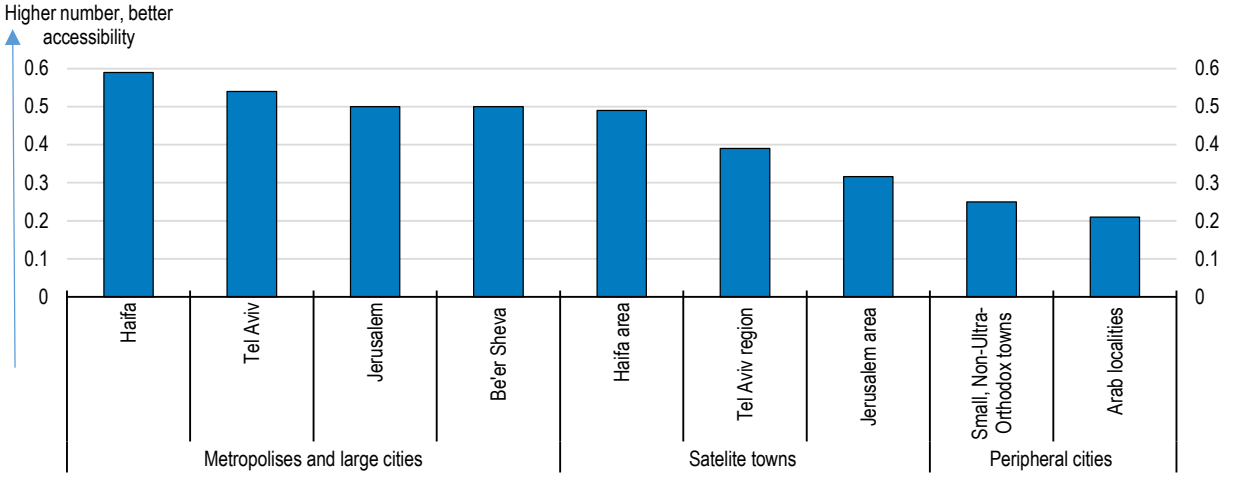
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Public transportation is crucial to connect disadvantaged groups to economic centres, but in Israel it is not only inadequate but also inefficient. The majority of public transport is provided through bus service, which needs much less investment than subway or light-rail infrastructure, but given insufficient investment in road infrastructure bus transport adds to congestion. The total distance travelled by an average Israeli in public transportation in metropolitan areas is about half of that in other developed countries (TSC, 2019).

Furthermore, limited availability and the low quality of public transit hinder accessibility to better paying jobs for poor households with low levels of motorisation. Many Israelis use public transit as a last resort when they do not have a private vehicle available (BoI, 2017). Less than 10% consider public transport efficient, and satisfaction with public transit in the three largest cities in Israel is much lower than in the major cities of Europe (Suhoy and Sofer, 2019; BoI, 2017). The main complaints are that buses are not sufficiently frequent and are too slow (TSC, 2019). The average speed of public transportation in Israeli cities is only 16 km/h, compared to 25 km/h in the average OECD country (TSC, 2019). Moreover, there are large differences in terms of access to public transit services between municipalities that are mainly inhabited by non-Haredi Jews and others (TSC, 2019). Access to public transit is lowest in small and peripheral urban centres and majority-Arab towns (Figure 2.7).

Figure 2.7. The accessibility to public transit is weak, particularly in peripheral areas

Towns and localities according to accessibility to public transport



Source: T. Suhoy and Y.Sofer (2019) "Getting to Work in Israel: Locality and Individual Effects", *Bank of Israel, Research Department,* https://www.boi.org.il/he/Research/DocLib/dp201902h.pdf

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The transport infrastructure and public transport network need to expand

The government is aware of the unsatisfactory situation and has outlined several strategic plans to close the large infrastructure gaps over the coming decades. Investment in public transit has increased in recent years due to large-scale infrastructure projects, such as the Tel Aviv–Jerusalem rail line and the red line of the Tel Aviv light rail; but it remains low (BoI, 2017). These investments to finance transport infrastructure and public transport are necessary, but the expenditures should not be allowed to erode public finances, and, as was suggested in the previous *Economic Survey* (OECD, 2018c), some infrastructure projects can be financed through public-private partnerships (PPPs). PPPs have helped reduce the costs of new electricity production facilities based on renewable resources and assisted with the construction of very energy-efficient desalination capacity in the water sector (OECD, 2018c). However, they still entail risks for public finances in the form of contingent public liabilities. Therefore, it is important that the management procedures for PPPs be aligned closely with best practices based on international and domestic experience. Quantitative assessments comparing the value for money offered by PPPs relative to

alternative procurement routes should be made public, in line with the OECD Principles for Public Governance of PPPs (Pisu et al, 2015; OECD, 2014a). Also, entrusting supervision and management of these contracts to a single public agency would be advisable (OECD, 2018c). The Ministry of Finance should closely monitor contingent liabilities.

Introduction of congestion charges can represent an additional source of public transport funding. This would not only help provide resources for the underlying capital investment but would also help reduce congestion and improve air quality and public health. In Israel, most levies and taxes related to road transit have no direct link with the use of infrastructure, which leads to over-utilisation of existing capacity. Road traffic intensity, in terms of vehicle-kilometres driven per kilometre of road network, is much higher than in other OECD countries (Figure 2.8). Congestion causes real damage to the economy and quality of the life of residents, due to the loss of both work and leisure hours and the increase in air pollution and in road accidents.

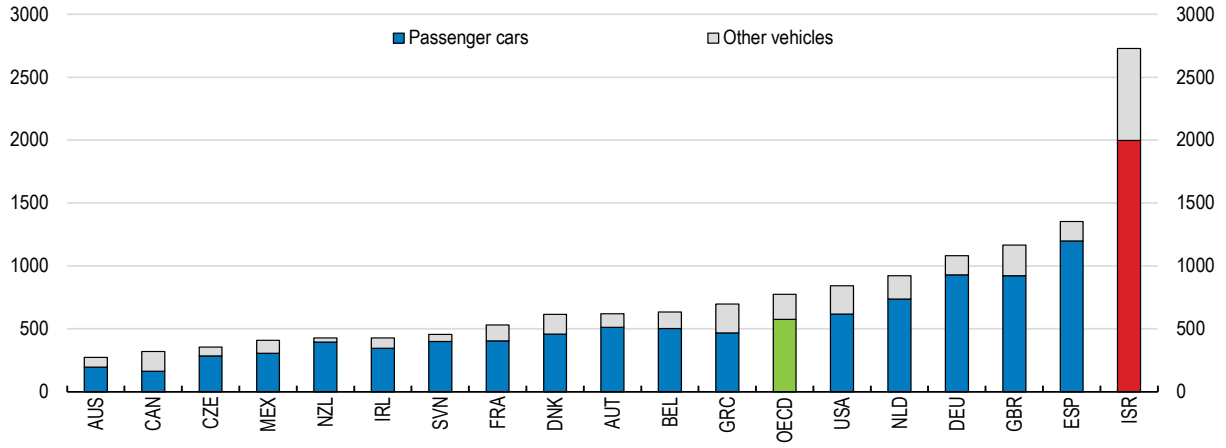
Congestion charges are generally considered to be an effective traffic regulation system. Several other OECD countries have introduced such charges. For example, London introduced its congestion charges, while improving public transport at the same time. Transport quality has improved, and 300 new buses were put into service in order to increase frequency (OECD, 2019a). In Milan revenues from congestion charges fund public transport improvements including higher bus frequency, long-term measures such as extensions of the subway network and other changes to promote sustainable mobility services (OECD, 2019a).

Israeli congestion is worst in the metropolitan area around Tel Aviv, where around 60% of the countrywide congestion costs are estimated to occur. Indeed, Tel Aviv is the fourth most congested city in the OECD (TomTom, 2019). This calls for focusing congestion charging on Tel Aviv and, possibly, Jerusalem. Nation-wide congestion charges are less common across OECD countries. Israel should consider the adoption of GPS-based monitoring technologies, which are likely to substantially increase efficiency by adding a large degree of pricing flexibility (OECD, 2019a).

A complementary approach to congestion charges is to improve the efficiency of parking policies. Parking fees in Israel in cities are very low or zero for many car users. However, experience from other countries shows that free or under-priced parking increases the costs of parking supply and land use, implying that funds that could possibly be directed to improve the public transport system are used for parking (Russo et al., 2019). Therefore, congestion charges need to be combined with increased parking charges in central areas. For example, Singapore constantly improves and expands its current public transport network, complementing it with electronic road pricing and parking policies, resulting in a shift from private to public transport in recent years (Aguilar Jaber and Glocker, 2015).

Figure 2.8. Traffic intensity is significant in Israel

Road traffic intensity per network length, 1000 vehicle-km driven/km, 2014 or latest year available



Source: OECD (2015), *Environment at a Glance 2015*: *OECD Indicators*, OECD Publishing, Paris.

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Enhance the effectiveness of infrastructure governance

Israel's infrastructure project management capacity is weak compared to other countries (Hertie School of Governance, 2016). Improving governance and regulation to the level of the best OECD performers could bring sizable productivity gains (Demmou and Franco, 2020). As the previous *Economic Survey* suggested, transparency and long-term strategic planning should be enhanced by introducing systematic cost-benefit analyses entrusted to an independent agency that would also publish its results (OECD, 2018c). It is of the utmost importance that regional perspectives are taken into account, giving priority to projects that improve connectivity among regions.

Another problem is that the existing division of responsibilities between the central government and local authorities hinders infrastructure project development. The coordination in infrastructure governance across levels of governments is one of the weakest in the OECD (Hertie School of Governance, 2016). Large projects require the consent of local authorities in the jurisdictions where the project takes place. This often leads to lengthy negotiations that hinder the advancement of projects, especially since the local authorities are focussed on their own local needs. For example, the planning of a fourth railway track along the Ayalon Highway took nearly 10 years to finish (Globes, 2019). The currently planned building of a Tel Aviv metro, a mass transit subway system connecting many cities in central Israel, has faced many disputes from local authorities at the planning stage, which risk delaying the start of construction for many years. Therefore, co-ordination is necessary to identify investment opportunities and bottlenecks and to ensure adequate resources and capacity to undertake investment (OECD, 2014a).

One way forward is the establishment of metropolitan transit authorities (MTAs). Several attempts to establish metropolitan authorities in Israel have failed (TSC, 2019). However, their establishment could help to promote transit solutions in line with national and local needs. MTAs would have the capacity to better understand commuting patterns and transit needs across the wider economic area and help to better prioritise investment, facilitate decision-making regarding regional linkages and promote coordination and common pricing systems that make public transport more attractive. Experience from other OECD countries shows that better integration of transit management in metropolitan areas can contribute significantly to higher growth and well-being (OECD, 2015). Rotterdam, Barcelona, London and Paris have established some of the world's most effective metropolitan transit authorities (OECD, 2016a; ITF, 2018; Box 2.2).

Box 2.2. Metropolitan transport authorities in selected countries

London, Paris and Barcelona have introduced MTAs as they faced common challenges, including the lack of an integrated transport network, overlapping responsibilities regarding the various transport modes and inefficient mechanisms to ensure stable financial support for public transport.

MTAs' responsibilities related to transport governance in these cities are:

(i) operational responsibilities, including the setting and collection of fares; and

(ii) strategic and planning responsibilities, including strategy, policy and infrastructure planning and funding of major infrastructure projects.

A common feature among these cities' MTAs is that all of them carry out strategic planning and have a high level of control over planning of public transport infrastructure and services (Table 2.1).

Table 2.1. Responsibilities of MTAs (high, partial, no responsibility)

City	MTA	Strategic planning	Public transport			Traffic management and parking policies	Road safety
			Planning infrastructure and services	Fare setting	Investment		
London	TfL	high	high	high	high	high	high
Paris	ÎFM	high	high	high	high	no	partial
Barcelona	ATM	high	high	high	no	no	no
	AMD	high	high	no	high	high	no

Financing of the MTAs in Paris, London and Barcelona

Île-de-France Mobilités in Paris is 50% financed by the transport tax, which is paid by companies with more than nine employees that are located in proximity to the transport network; the tax is paid as a percentage of the employer's total payroll cost. Additional income comes from fares, including driving and parking fines (30%). The rest of the MTA's budget (20%) is from regional, department and municipal authorities.

Transport for London (TfL) is financed through fares (47% of the budget), grants and funding for Crossrail (23%) borrowing (17%), and other sources (13%) including revenue from congestion charges and commercial development of the MTA estate.

Barcelona has two-level arrangement: ATM (Autoritat del Transport Metropolità) is established for the wider commuting zone and AMB (Área Metropolitana de Barcelona) serving the urban core. ATM's budget comes from two main sources: government grants (53%) and fare revenue (47%). AMB's budget has four main sources. Municipalities across AMB pay a "metropolitan tax", a specific tax charged to all municipalities within the AMB (15% of the budget), surcharges such as waste management municipal taxes from municipalities (25%) and regular fares (52%); 5% is from charges for concessions on private operators, including Aerobus and tourist buses

The text in this box is based on information from: F. Lloveras Minguell (2018), "Public Transport Governance in Greater Barcelona", *Discussion Paper*, International Transport Forum, Paris; and ITF (2018), " Policy Directions for Establishing a Metropolitan Transport Authority for Korea's Capital Region", *International Transport Forum Policy Papers*, No. 61, OECD Publishing, Paris.

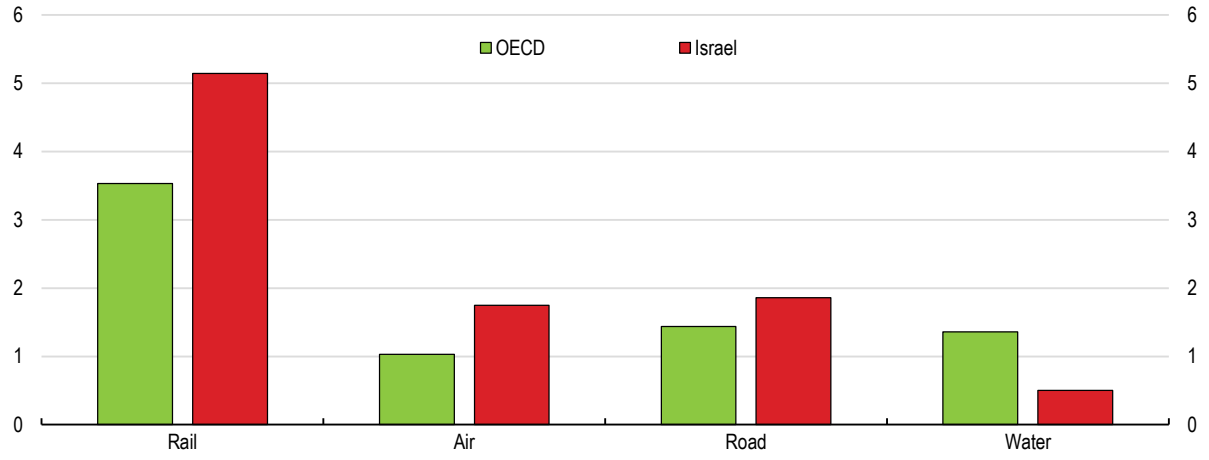
Establishing a metropolitan transport authority entails transferring some of the responsibilities and funding assigned to lower levels of local government to the new metropolitan institution. An appropriate budget is crucial to delivering benefits and to ensuring that the MTA is a durable institution. In Israel, congestion charges and fares should be the main sources of financing; other possibilities include surcharges such as municipal waste management taxes.

There is also room for more competition to improve the quality of public transit. Israel's product market regulation in infrastructure is currently stricter than other countries' (Figure 2.9). Bus service regulations were reformed in 2000 and 2014. These included opening the market to competing bus lines, which were

previously controlled by two monopolies. After the reforms, 11 new operators started competing to provide regular bus service. Market competition has led to price reductions, higher passenger numbers and better quality (Ida and Talit, 2017a). However, there are still several barriers to competition in this area: access is open in only half of the total market for bus services, with the remaining half still controlled by the two monopolies. Comparing the competitive and monopoly-run bus services reveals significant differences, highlighting the advantages of the competition-based approach, including higher numbers of passengers and cheaper fares (Ida and Talit, 2017b).

Figure 2.9. Transport regulation is heavy in Israel

Product market regulation indicator from 1 (least restrictive) to 6 (most restrictive), 2018



Source: OECD Product Market Regulation Indicators.

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While improving public transport and related infrastructure can be a powerful tool to boost accessibility to employment opportunities for disadvantaged groups, it should be accompanied by other measures. Empirical research has shown that high-quality public transport can help to overcome the effects of distance from suitable employment opportunities, particularly for low-skilled workers who are not able to afford cars (Tyndall, 2017). However, the effect on disadvantaged groups can be limited (Barak, 2019) if is it not accompanied by a more holistic policy approach, including education or housing policies. Therefore, in order to significantly increase employment rates among the Arab or Haredi population, other barriers such as skills gaps and the lack of housing must be addressed simultaneously.

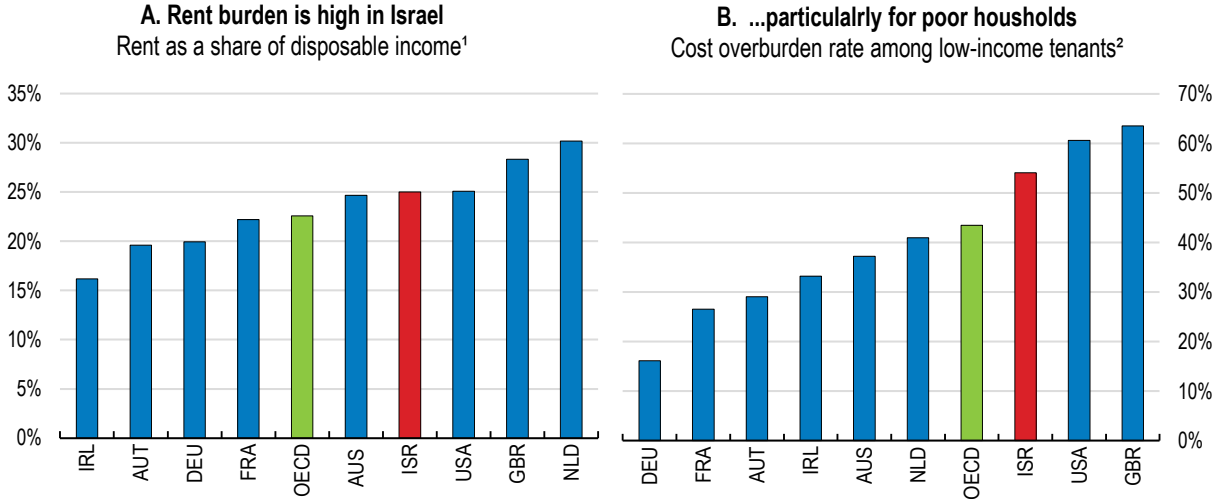
Improving the economic policy framework for the housing market

Another way to connect disadvantaged groups to job opportunities is to promote affordable housing near Israel's economic centres. Access to good-quality, affordable housing is essential to enhance equality of opportunity, social inclusion and mobility. This is particularly important for Israel, which faces a housing deficit fuelled by rapid population growth (OECD, 2017a). The undersupply of available housing led to significant price increases, over 70% in real terms between 2007 and 2016. Prices have stabilised recently but remain high in international comparison (OECD, 2018c).

Rapid increases in housing prices have exacerbated inequalities and widened regional differences. Poorer families cannot afford to own an apartment, and the rent burden is high in international comparison, particularly for low-income tenants (Figure 2.10). Limited housing and increasing prices have forced lower-income households to relocate to more affordable areas with fewer economic opportunities. Indeed, house prices are strongly affected by their proximity to metropolitan centres: the price of housing in Israel declines

with the distance from Tel Aviv to the same extent in all directions (Eckstein et al., 2012). This can represent a barrier to better employment opportunities and income. Evidence from other OECD countries suggests that higher housing prices, which force workers to stay in less productive regions, can have a substantial negative impact on the economy (Hsieh and Moretti, 2015).

Figure 2.10. Housing costs are high for poor households



1. Median of the mortgage burden (principal repayment and interest payments) or rent burden (private market and subsidised rent) as a share of disposable income, in per cent, 2015 or latest year available.
2. Share of population in the bottom quintile of the income distribution spending more than 40% of disposable income on rent, in per cent, 2015 or latest year available.
Source: OECD calculations based on European Survey on Income and Living Conditions (EU SILC) 2015 except: from the Household, Income and Labour Dynamics Survey (HILDA) for Australia (2014); the German Socioeconomic Panel (GSOEP) for Germany (2014); American Community Survey (ACS) for the United States (2015) and Bank of Israel for Israel (2015).

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It is thus important to provide effective land-use and housing policies, which can have significant implications for wealth distribution and can improve local economic development (OECD, 2017b).

Municipalities favour business development over residential growth

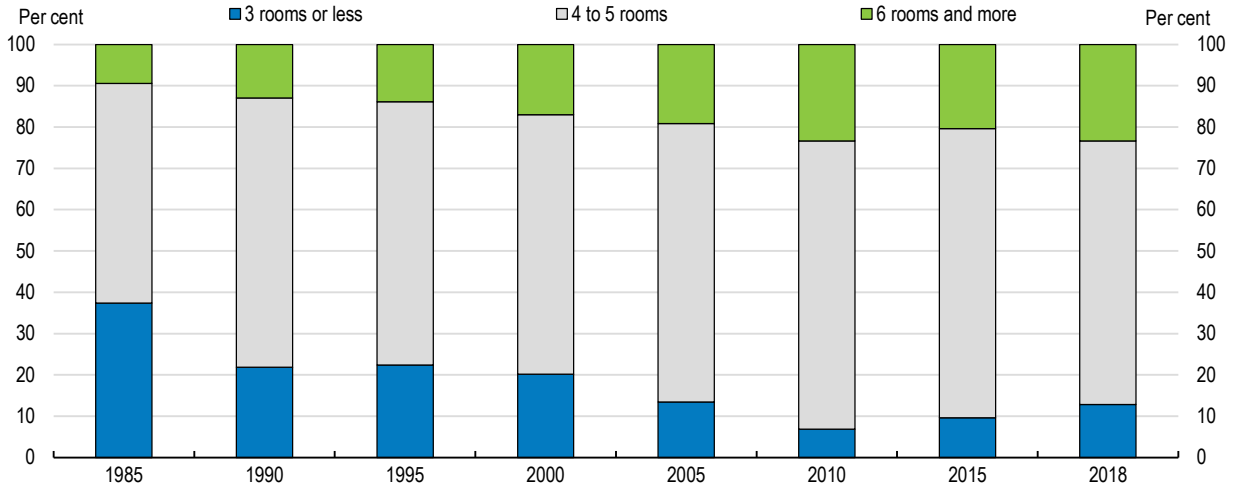
Local authorities play a role in housing and land planning, as they influence the zoning of land use through their individual urban plans. However, Israeli municipalities do not prioritise residential development, despite the pressing need for more housing in the country.

The current property tax system creates incentives for them to favour business over residential development. Local property tax (Arnona) is the main source of municipal revenue, and business properties have much higher tax rates than residential properties. The property tax charged for commercial and industrial parks can be 11 times higher than that on residential properties (OECD, 2017a). The Israeli property tax is area-based and depends on the square metres of a given property. It reflects the property's size, location, age and use (commercial, residential, industrial, etc.). This is in contrast to many other OECD countries where the tax is based on the assessed value of the property (OECD, 2020b).

At the same time, municipalities with more residents have higher expenditures, as they need to provide more municipal services for these residents. Moreover, large-scale residential projects require major infrastructure components (OECD, 2017a). Therefore, having more residents represents a net loss for local authorities. They are thus incentivised to develop industrial parks and commercial centres at the expense of residential areas. As a result, the supply of land available for commercial-industrial parks exceeds the market demand, and in many cases this land remains largely empty (OECD, 2017a).

Moreover, municipalities tend to prioritise attracting high-income earners in residential projects instead of poor young families or the elderly who are both intensive consumers of municipal services. These groups not only require higher spending but can receive tax breaks resulting in loss of revenues. Low-income families, the elderly and students are granted exemptions and discounts by the central government. Therefore, local governments tend to direct housing supply to more expensive and upscale housing and reduce the share of small apartments (OECD, 2017a). Indeed, the construction of larger apartments dominates the market. While in the 1980s the share of three-room apartments represented over one-third of all new dwellings, today they represent only around 10% (Figure 2.11).

Figure 2.11. Newly built houses are increasingly tilted towards large-size and luxury housing



Source: Israel Central Bureau of Statistics.

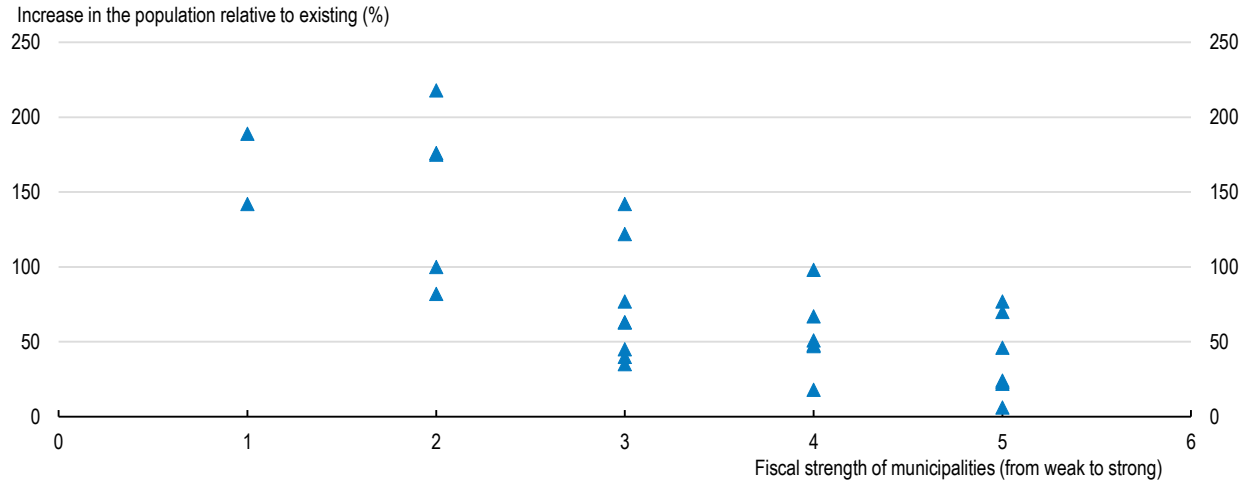
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The government has taken several steps aimed at weakening the negative incentives facing local authorities regarding residential development. “Umbrella agreements”, introduced in 2014, provide them with additional financing. According to these agreements the government finances the infrastructure and the public buildings required for new neighbourhoods, while the local authorities issue building permits and approvals for the building plans. The Umbrella agreements also allow local authorities to use the funds for the renewal of infrastructure in old neighbourhoods.

However, the Umbrella agreements provide funding only at the initial construction stage, but the new residents also require additional expenditures on education and social and other public services. Poorer municipalities will be put under fiscal pressure to provide additional services for new residents. The approved construction projects within the Umbrella agreements assume a significant population boost will take place in a number of municipalities. In a third of them, the population is expected to almost double (Figure 2.12). This will create heavy fiscal pressure on these municipalities, who will be challenged to absorb such a significant addition to their population without additional government support. Moreover, the Umbrella agreements have been signed primarily with financially weaker local authorities that already have trouble providing adequate services to their population (BoI, 2017). This represents a particular challenge for the municipalities with high population growth. Addressing this challenge will require changes to the municipal property tax system (see below) or changes to the planning process to take into account the financial strength of municipalities.

Figure 2.12. Umbrella agreements assume significant population increase in poorer municipalities

Municipalities under umbrella agreements according to expected population increase and fiscal strength



Source: Bank of Israel (2017), *National Report*.

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More incentives for residential development should be provided

The government needs to reduce the current differences between residential and non-residential tax rates. The current large differences in rates not only encourage municipalities to provide land for commercial use at the expense of residential housing but also contribute to sizeable differences in revenues between municipalities. To reduce this gap the non-residential property tax rates could be lowered and the residential rates raised. To offset possible regressive effects of higher residential property tax rates, the central government should standardise most residential Arnona discounts and exemptions for low-income households.

In this regard the government should establish a value-based system of property taxation for non-residential and residential property (see Chapter 3). Value-based property tax systems perform better in terms of equity compared to the current area-based property tax (OECD, 2019a). This will require municipalities to have the capacity to estimate market values of properties on a systematic basis. Comparing selling prices is the most common method in OECD countries to assess property values: under this a property's value is determined by comparing the sales prices of other properties with similar characteristics (Blöchliger, 2015). In Israel, the market values of non-residential properties already exist in the form of the information that businesses must provide (OECD, 2020b).

The current property tax system is not the only reason for insufficient housing supply (Chapter 1). In the medium to long term, land-use planning could be further decentralised and made more flexible. In recent years many OECD countries have shifted towards more flexibility within their planning systems in order to reduce the amount of time and effort needed to receive planning and building permissions (OECD, 2017b).However, more flexible land-use planning requires fulfilling a number of conditions. First, municipalities need stronger incentives to develop residential areas (see above). Second, they need to improve their capacity in terms of human resources, technical skills and use of modern IT systems. Capacity limitations limit the possibility for more flexible and decentralised land-use planning, which can help to improve efficiency of residential construction.

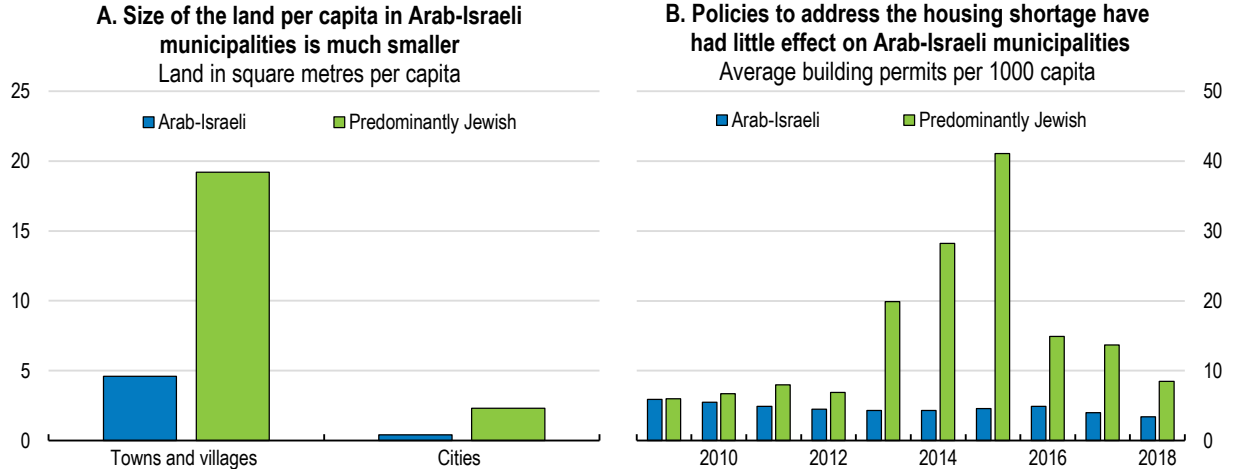
Before the 2014 reform the residential construction process took on average 13 years, with the actual construction accounting for two of those years, while the remaining 11 years were devoted to bureaucratic proceedings (Gruber, 2014). One of the reasons for this was that the six district-level planning committees were overburdened issuing building permits for many small-scale housing construction projects. The 2014

reform devolved these approvals from the district level to 127 local planning committees, which helped speed up the process. In the future the government could consider allowing even more flexibility and further decentralisation, together with increasing the number of planning committees, which could improve efficiency, although this step should be conditional on available capacities within the planning committees. The local planning committees can more efficiently approve small-scale development projects and can help free up resources for the district-level committees to focus on large-scale housing projects (OECD, 2017a).

More support should be provided to Arab-Israeli municipalities

Assistance and support should be provided to local authorities facing significant housing challenges, particularly the Arab municipalities. The municipal jurisdictions in Arab cities are four times smaller than those in the rest of the country (Figure 2.13, Panel A), with only a small portion of public land. At the same time, Arab municipalities have less outward migration: only 2% of their residents move out annually. Residential building construction is slow (Panel B), as most Arab localities do not have their own planning and building committees and are therefore regulated by district planning committees. This is partly due to their lack of resources and local planning capabilities (OECD, 2017a).

Figure 2.13. There is much less land per capita in Arab-Israeli municipalities



Note: A municipality is classified as Arab if over 50% of its population is Arab. Cities refers to municipalities that have at least 20 000 residents, while towns and villages refer to all other municipalities.
Source: OECD calculation using Israel Central Bureau of Statistics data.

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A major challenge is the lack of land registration. In many Arab municipalities landowners do not register their land due to a lack of trust in the government, a complicated registration process and tax avoidance, as land transactions involve various taxes such as land excise tax, capital gains tax and taxes on real estate transfers (OECD, 2017a). In some cases, the registration process can be costly due to legal work and land readjustment requirements if several landowners are involved. Moreover, many houses have been built without a permit.

Unregistered housing results in a delayed planning and construction process and can represent huge tax losses for the municipalities. These housing units lack basic infrastructure, do not adhere to safety regulations and face the risk of fines and even eviction. This problem is widespread across Arab municipalities (OECD, 2017a). Households living in homes built without a permit also lack access to loans, since the property cannot be used as collateral.

Legalisation and formalisation of property rights will be crucial in Arab municipalities. The government has already taken steps in this direction and most of Arab municipalities have their valid building outline plans in the process of approval. The government should also step up efforts to reduce unregistered housing and ensure retroactive approval of housing units or grandfathering recognition of buildings that were built as a result of the lack of regulatory procedures in the past (OECD, 2017a). More highly trained municipal staff and closer interaction with central government are essential for improving the management of Arab municipalities, including by increasing their relatively low tax-collection rates and updating their plans for buildings on their territory (Belikoff and Agbaria, 2014).

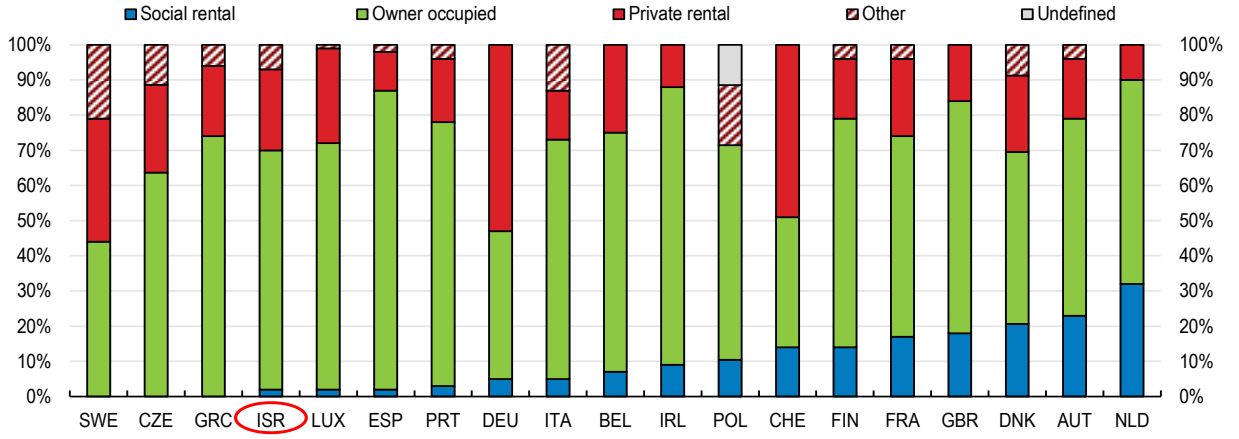
Expanding social housing in economic centres

Another measure that can promote affordable housing is housing assistance. Israel furnishes housing assistance to poor households by either subsidising market rent or providing social housing. Rent subsidies partly cover rents in the private market. About 6% of households received such subsidies. While rent subsidies are prevalent in Israel, they are still low in international comparison (BoI, 2015).

The share of social housing is also relatively low (Figure 2.14), and the number of poor families in Israel exceeds the supply of public housing. The waiting list for public housing has increased by 50% since 2017, reaching almost 4000 families. The supply of available public housing has decreased over the last decade as large numbers of these housing units have been sold to the tenants at discounts in order to reduce poverty and support private home ownership. In 2018 alone almost 1500 dwellings were sold at an average discount of 60 percent from the market price (BoI, 2018).

Figure 2.14. Social rental housing is relatively small in Israel

Per cent, 2015 or latest available year



Note: "Other" includes residential units such as sheltered housing, student dormitories and cooperatively owned apartments. Public housing in Sweden, estimated at 20%, is not defined as "social housing" since it is intended for the entire population and therefore included in "Other." In the Czech Republic, too, no homes are defined as "social housing," but 6–7% are public housing, i.e., apartments owned and leased by the local authorities.

Source: Adva Center (2017), "Public Housing Option: Adva Center's Response to the Housing Crisis in Israel".

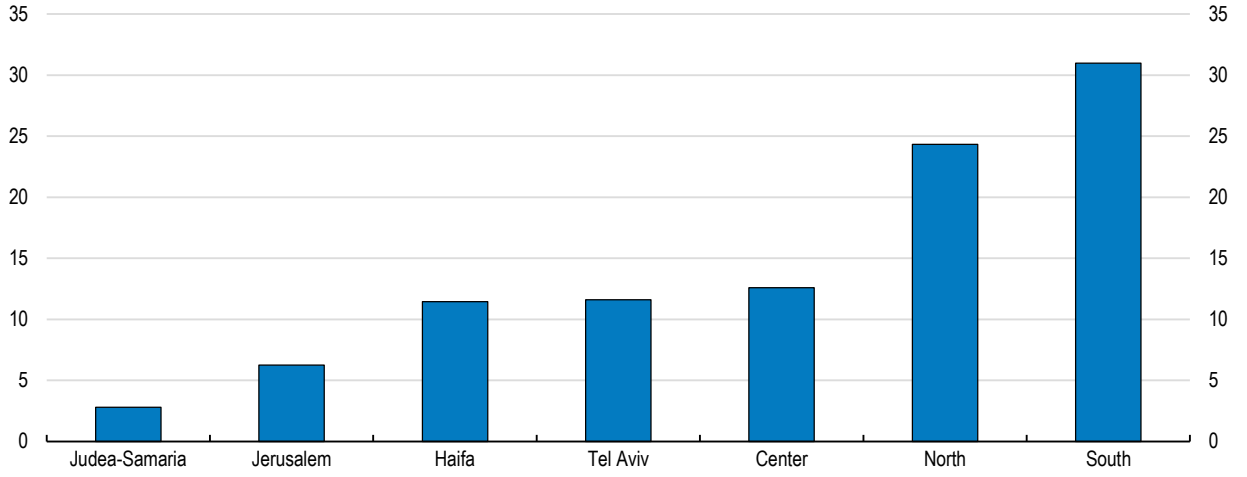
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Moreover, public housing is mainly located in peripheral areas and in neighbourhoods with low socio-economic status far from employment centres, which are usually clustered together and have developed into areas of distress (BoI, 2019; Figure 2.15). International evidence shows that this can result in significant disparities in the quality of and access to education and in employment outcomes as well as in access to transit networks and public services (e.g. Galster, 2007; Gibbons, 2002; Andrews et al., 2011). American children growing up in poor-quality neighbourhoods perform less well in school and earn less as adults (Chetty et al., 2015).

One way forward to increase the supply of public housing for needier households is by frequent reassessment of eligibility, with appropriate actions if the household's situation has changed. Today, yearly rental contracts for social housing units in Israel are renewed automatically, although the subsidised rent may change according to changes in the financial state of the tenants. In New Zealand, for example, in a pilot fixed-term tenancy programme in public housing, tenants who are found to be no longer eligible for social rental housing and able to move are helped to find an alternative solution. In France tenants have to leave when their income is for two years in a row 150% above the eligible revenue ceiling for housing financed through a social housing loan (OECD, 2017c). At the same time, the government should consider abolishing its policy of selling public housing dwellings to tenants to keep its stock of public housing.

Figure 2.15. Social housing is located mostly in areas with weak economic activity

Public housing units by district, % of total



Source: Ministry of Construction and Housing.

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A more effective housing-assistance policy would focus on helping households maximise their socio-economic potential and reduce the segregation of poor population groups. Living in public housing may impair geographical mobility and work incentives because the dwellings are generally far from employment areas. Therefore, public housing should be targeted at the most disadvantaged families and should be built in areas close to employment centres. This method of housing support can be coupled with support services to help families adapt to the new community and reinforce employment incentives. Successful projects in Spain and the Czech Republic have helped families to resettle, providing subsidised rental housing and packages of social support to adjust to the new environment and livelihoods (Gatti et al., 2016; Housing First, 2018). Besides public housing, which should target the most disadvantaged families, housing assistance through rent subsidies should be strengthened instead, as it can have fewer distortive effects on residential mobility than social housing and improve affordability in the private rental sector.

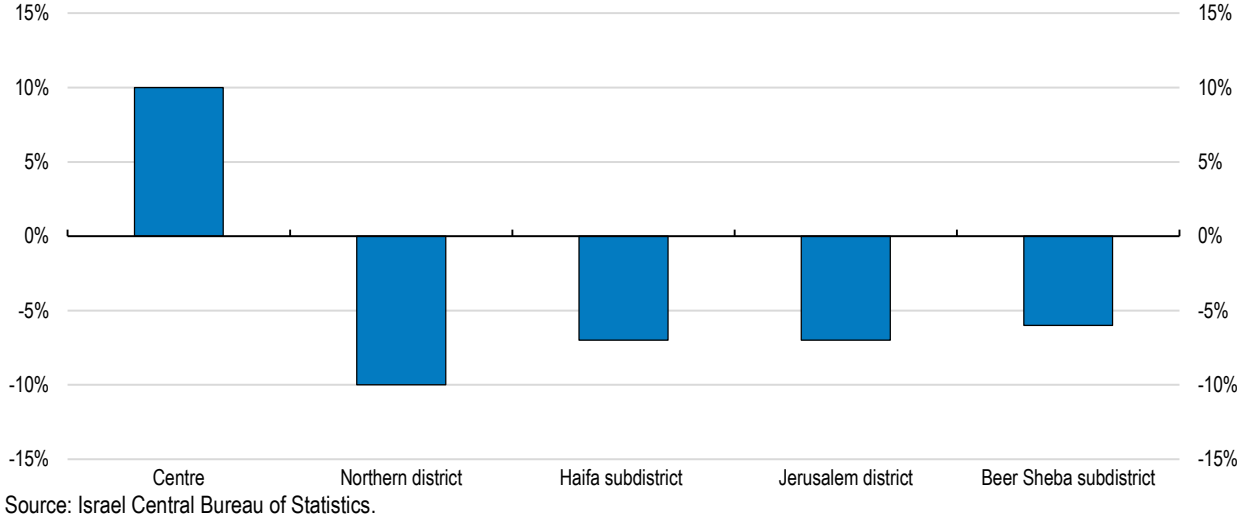
Regional development policy should continue to free up public land in the centre

Similar to other countries, Israel is experiencing internal migration from peripheral regions to the centre, particularly among youth and the well educated (Figure 2.16). This weakens the periphery and creates pressure on infrastructure and housing in the centre.

Therefore, principles that have guided regional development policies in Israel in the last decade have included dispersion of the population from the country's centre to its northern and southern regions. For example, the Law for the Encouragement of Capital Investment provides grants to exporting firms in the

periphery to promote productivity, process innovation and employment in the periphery. The government also provides income tax benefits to residents of around 400 outlying and near-border areas to increase the attractiveness of poorer regions and encourage migration from richer regions. There are also grants for high-tech companies that move to Beer Sheva, a city in the south.

Figure 2.16. Extent of change in population aged 15-29 during the decade 2005-15



Source: Israel Central Bureau of Statistics.

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However, research by the Bank of Israel finds little evidence that the tax credits encourage migration to poorer regions (BoI, 2015). In addition, they are prone to abuse. The same research shows that the number of residents who are registered in a region but do not actually live there is higher in areas that benefit from the credits than in other regions. Furthermore, the income of these "fictitious" residents of areas that benefit from the credit is substantially higher than actual residents' income, suggesting that tax incentives play a role in wrongfully registering in these regions.

The demand for housing remains high in the central region, with a shortage of land available for construction. Almost 60 percent of households reside in the areas in high demand—the Centre, Tel Aviv and Jerusalem—but these areas account for only 14% of the country's area, which means that they have little available land. Therefore, the government is rightly trying to find available land in the centre. The relocation of military bases from the Tel Aviv district will free up land for constructing about 60 000 housing units—with a total fiscal cost of NIS 5.3 billion for 2015–27. The government should continue with its effort to free up public land in high-demand areas occupied by various public entities, including the Israeli Defence Force, local authorities, and agricultural and industrial bodies.

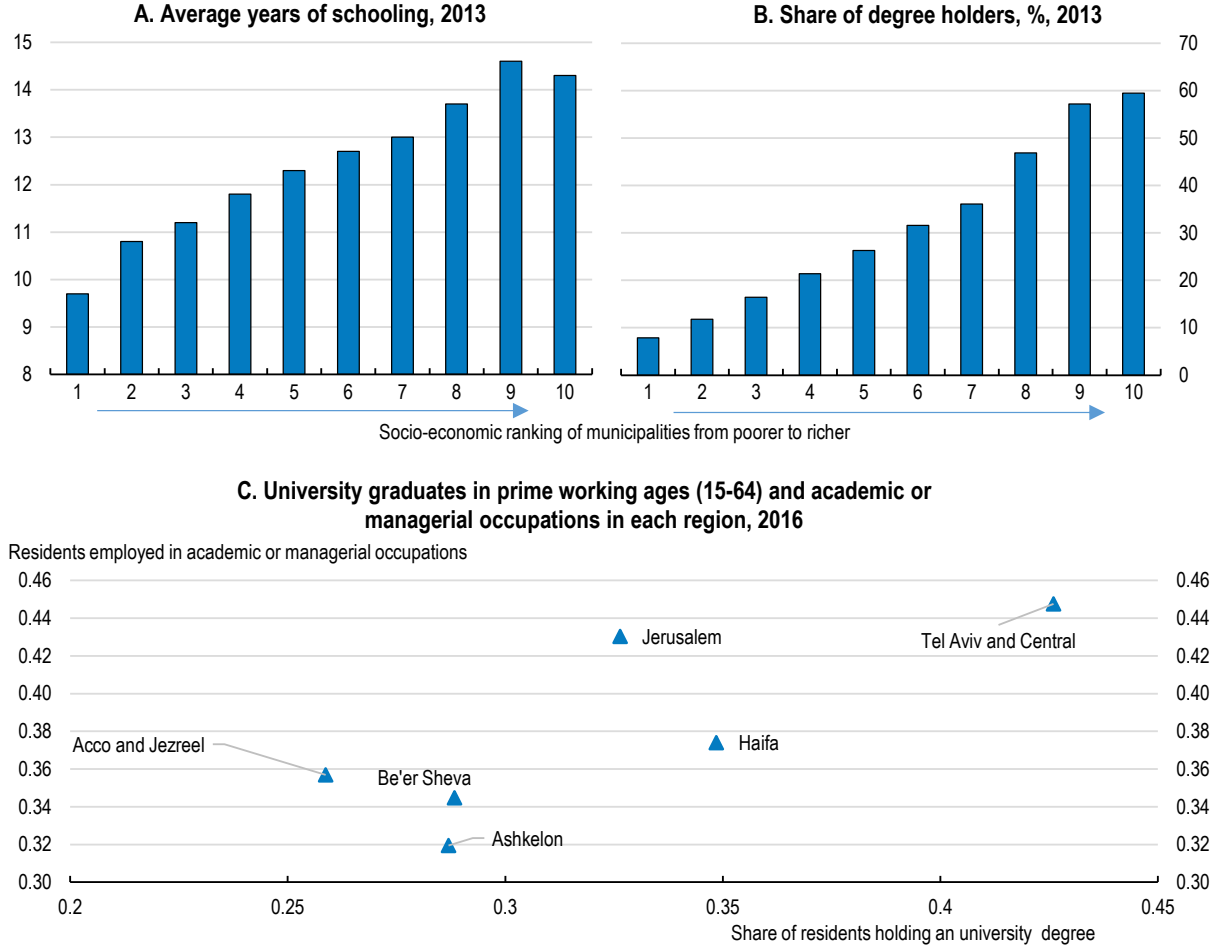
Low skills can be another barrier to growth in lagging localities

Human capital has a strong impact on regional growth and income (OECD, 2009a). Increasing the quality of education would improve the employability of the labour force in economically lagging municipalities, and a higher skilled workforce would also make lagging municipalities more attractive to firms.

However, localities in Israel differ considerably in the quality of their schools and the attractiveness of their local labour markets, and many risk becoming low-skill traps. Low-skilled workers become concentrated in some areas because housing is less expensive. Employers who require highly developed skills are less willing to invest there and offer high-skilled jobs. Therefore, local workers have no incentive to acquire additional training or higher education and those who do will tend to leave these regions. Indeed, poorer localities in Israel have a less educated population (Figure 2.17, Panels A and B). Analysis by the Bank of

Israel confirms that both supply and demand for highly skilled people is concentrated in the Tel Aviv and central regions. In contrast, in the southern and northern regions, the proportion of educated individuals is small, as is the demand for highly skilled workers (Panel C).

Figure 2.17. Poorer socio-economic areas have less skilled labour



Source: D. Chernichovsky, B. Bisharat, L. Bowers, A. Brill and C. Sharony (2017), "The Health of the Arab Israeli Population", Taub Center, Jerusalem, http://taubcenter.org.il/wp-content/files_mf/healthofthearabisraelipopulation.pdf.

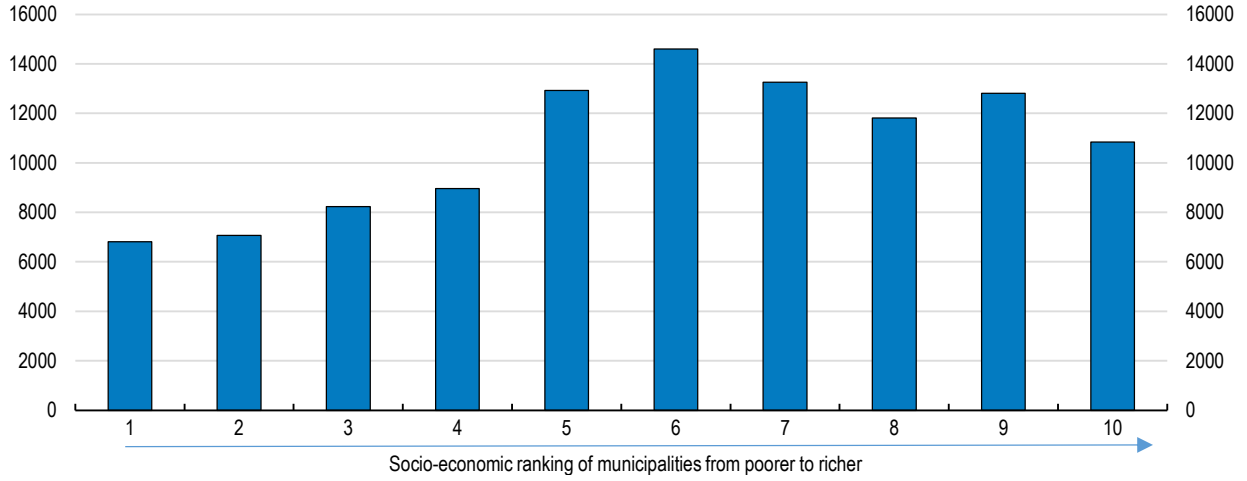
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Moreover, the existence of multiple school streams in Israel reinforces geographic segregation along religious/community lines and hinders mobility between regions. There are four different school streams: (i) for Arabic speakers, (ii) for the Haredi community, (iii) religious and (iv) secular. In schools in the Arab cities the instructional language is Arabic, and almost all teachers are Arabs. In the Haredi stream boys study mainly religion and have only basic instruction in subjects like English or math. This fragmented education system weakens skills formation and contributes to Israel having the largest dispersion in educational outcomes in the OECD (OECD, 2018c). Moreover, the new 2018 PISA results suggest that the variation between schools is the highest in the OECD and the differences between Arab-Israeli and Hebrew streams have increased (OECD, 2019b). This is in contrast with the best performing education systems across OECD countries, which successfully combine high quality with little dispersion (OECD, 2012).

Overall spending per student, including municipal and central government spending, is much lower for schools in poorer and disadvantaged areas (Figure 2.18). Central government funding does not target schools in poorer areas sufficiently. Additional financing for socio-economically weak schools is low. Per student spending has been 12% above average in the (predominantly) Jewish local authorities, while predominantly Arabs local authorities have spent 36% less than average (OECD, 2020b).

Figure 2.18. Education spending is much lower in the poorer localities

Spending per student in kindergarten, primary school, and secondary schools[1], 2016



1. Based on municipal reporting.
Source: OECD (2020), "A review of local government finance in Israel: Reforming the Arnona system" (forthcoming); Israel Central Bureau of Statistics.

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In many other OECD countries the financing of schools with weaker socio-economic profiles is much more generous. In Denmark, for example, municipalities with a relatively disadvantaged population receive more resources for education than others: the top-up funding for schools with disadvantaged groups represent one quarter of the overall budget for primary and lower secondary schools (Houlberg et al., 2016). In Chile a weighted voucher system provides 50% more resources for students from poor socio-economic backgrounds (Elacqua, 2012). Funding should be boosted for schools with a high percentage of disadvantaged students and should be subject to regular monitoring and evaluation. Schools' physical structures and the quality of the teaching staff should provide favourable conditions for students from different backgrounds to succeed.

In order to reduce the differences in skills between localities and overcome skills barriers, the government should focus on: (i) improving pre-school education, (ii) recruiting higher-quality teachers and (iii) reducing the gaps between the different streams (see below).

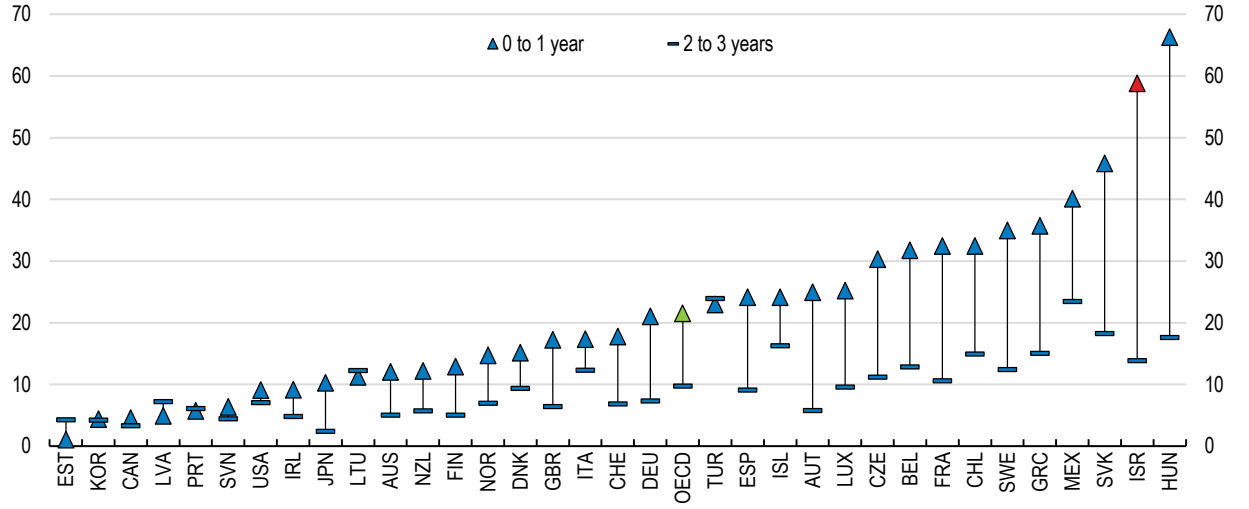
Reducing the skills gap between regions should start early on

Improving educational outcomes in poor localities should focus on pre-school education. Results from the OECD's PISA tests for 15 year-olds suggest that gaps in educational outcomes between Arab-Israeli students and the rest of the population are significant, amounting to 4 years of schooling. This suggests that the gap is already relatively high at the age of 15, so to close the gap interventions should start much earlier.

Participation in high-quality early childhood education and care can significantly improve children's development, benefiting their health and well-being (OECD, 2018d). Indeed, children who attend pre-school education are less likely to become low-performing students in most OECD member countries, with the impact in Israel being one of the largest (Figure 2.19). Therefore, allocating funding to high-quality pre-school facilities is likely to help prevent the need for more costly interventions at later stages of the schooling process. Targeting higher participation of disadvantaged children is crucial for attaining both efficiency and equity in education.

Figure 2.19. Students who attended pre-school education are less likely to become low-performers

Proportion of low-performers among 15 year-old students according to the number of years spent in early childhood education, 2015, %



Source: *OECD PISA online education database*.

StatLink https://doi.org/10.1787/888934153217

Israel has made significant progress in increasing participation in pre-school education. In 2012-13 Israel introduced compulsory education from the age of 3-4. Since then the number of children enrolled in public pre-schools and afternoon programmes has increased, along with an overall decline in parental payments for pre-school education (Shraberman and Blass, 2017). The responsibility for implementation and financing is divided between the Ministry of Education and local authorities. But weaker localities do not always have the necessary resources to build new buildings and ensure places for all 3-4 year-olds. In particular, one-fifth of Arab children aged 3-4 do not participate in pre-school education (double the rate among the rest of the population). The implementation of compulsory pre-school education for 3-4 year-olds led to over-crowded pre-school classrooms. Funding per child is half the level in OECD countries (Chapter 1). Avoiding a low-quality pre-school experience is important, because of the risk of detrimental effects on development and learning (OECD, 2018e).

Moreover, despite positive efforts to improve access to day-care centres and family-based frameworks for children aged 0-3, access is still limited (Shavit et al., 2018). Only a fifth of children aged 0-3 attend daycare centres or family daycare, and only half as many do so among the Arab population. Israel has no specific authority that coordinates services and supervises the quality of care provided to young children; in other OECD countries child development and outcomes are monitored alongside staff quality (OECD, 2017d). Only those local authorities who have the available budgets operate daycare centres, because there is no obligation for the local authorities to establish such centres.

Additional educational funding could help increase the supply of high-quality pre-school programmes and allow easier access to daycare centres for children whose parents do not regularly and continuously

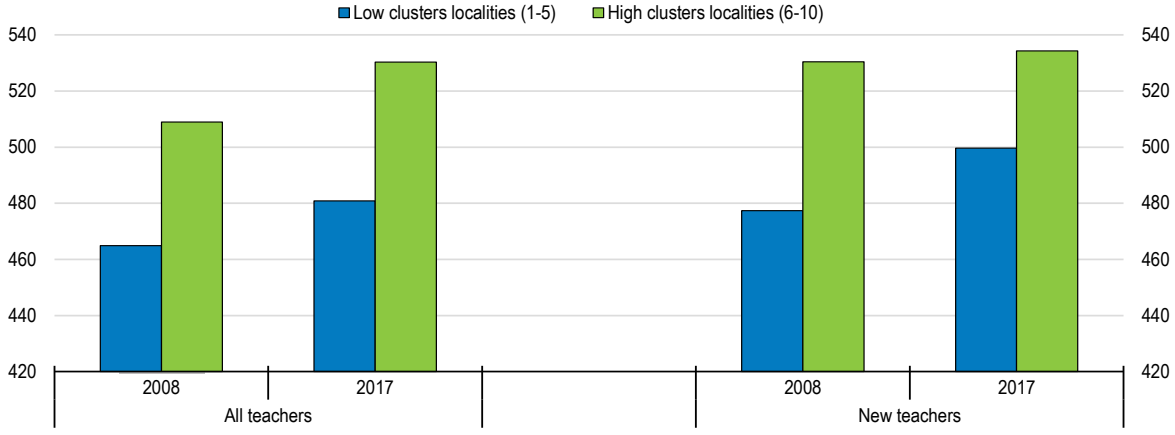
participate in the labour market. Improving staff quality should be at the centre of these efforts by raising minimum requirements and providing adequate training and working conditions. Special emphasis is called for to develop a system of daycare centres to serve the Arab-Israeli population.

Improving teacher quality in poorer regions

Empirical research suggests that teacher quality is the single most important driver of student performance, strong enough to close the achievement gap between advantaged and disadvantaged students (Chetty et al., 2014). However, as the previous *Economic Survey* argued, the quality of Israeli teachers is poor. There are a large number of uncertified teachers, and teacher skills are among the weakest in the OECD (OECD, 2018c). Moreover, teacher quality varies significantly across regions. Teacher quality in areas where many people have a relatively low socio-economic background is significantly lower than in economically stronger localities, though the gap has narrowed over the past decade (Figure 2.20). Arab teachers' scores in psychometric tests are much worse, which also reflects the overall weak performance of Arab-Israelis in these tests. Poorly qualified teachers in US schools serving disadvantaged students tend to have a negative impact on student performance (Darling-Hammond, 2010), further diminishing their students' chances of success.

Figure 2.20. Schools in poorer localities have weaker teachers

Average score achieved by teachers on psychometric tests by socio-economic cluster of the school's locality



Source: Bank of Israel (2017), *Annual Report – 2017*, March.

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In order to reduce regional disparities the focus should be on attracting the best teachers to disadvantaged schools and poorer regions. This is challenging, as experience from other countries shows that teachers' least-preferred options are schools in rural and remote settings, together with schools with higher proportions of disadvantaged children and children who speak minority languages (OECD, 2005). Today there is almost no incentive for Israeli teachers to teach in disadvantaged schools. Their wages are almost identical across regions and across sectors (Blass and Bleikh, 2018). Several other OECD countries provide financial incentives to compensate teachers for working in poorer areas (OECD, 2014b). In the United States these wage bonuses have helped reduce turnover rates of teachers in disadvantaged schools (Clotfelter et al., 2008). Empirical research has shown that a 30-50% salary premium is required to convince teachers to stay in disadvantaged schools (Hanushek et al., 2004).

Financial incentives should be accompanied by better working conditions, which are key for better outcomes, such as smaller class sizes or more teaching assistants (OECD, 2012). For example, in addition to a salary premium Korea offers multiple incentives to candidates working in high-needs schools, such as

smaller class sizes and additional credits towards future promotion. Faster promotion to leadership positions can be achieved for those with a proven track record of helping disadvantaged students progress. In addition, a teacher-evaluation system should be promoted to help schools with many students from weak backgrounds to retain their existing high-quality teachers. Israel has no comprehensive teacher-evaluation system (BoI, 2017). Such a system could improve teaching quality significantly and also make the teaching profession more attractive (OECD, 2009a; Fryer, 2016). French empirical research has confirmed that students of teachers who are assessed positively in such a review experience faster learning progress than others, with a particularly strong effect for disadvantaged students (Benhenda, 2014). An evaluation system could also be used to identify good teachers, who could then qualify for promotion and higher salaries, particularly when they teach many poor children.

Building bridges between different educational streams

Student streaming and segregation can have a significant impact on equity; there is therefore a need to reduce the differences between individual streams as much as possible (OECD, 2018a). While merging all streams into one might be challenging, efforts should focus on building bridges between the streams.

Additional financing should concentrate on promoting pathways between the Arabic- and Hebrew-speaking streams. Promotion of additional Hebrew courses in the Arab stream is important, since poor command of the Hebrew language prevents the Arab population from job mobility and from fully integrating into the Israeli labour market (OECD, 2018c). Surveys confirm that the vast majority of Arab students believe that better knowledge of Hebrew will help their careers (Marom, 2015).

It is also important to encourage Jewish teachers to teach Hebrew and other subjects in Arab schools and vice versa. The number of Arab teachers in Hebrew-speaking streams has almost doubled since 2012, but they still represent only around 5% of all the teachers in Israel. Pilot programmes placing Jewish teachers in Arab schools and Arab teachers in Jewish schools to teach their native languages have proved to be effective (Schneider, 2016). Another way to build bridges between the streams is to promote bilingual schools (Box 2.3). These schools should be monitored in terms of equity and outcomes; if they prove effective, the government should increase funding for them.

Box 2.3. Bilingual schools in Israel

In recent years parent groups and non-governmental organisations have created bilingual schools, which aim to create an egalitarian, bilingual educational environment of mutual respect and equality for both groups. In bilingual educational institutions, Hebrew and Arabic are used equally as languages of instruction, and two teachers are in the classroom simultaneously, each teaching in a different language.

Since bilingual schools staff each class with a pair of teachers, their operating costs are higher than those in mainstream schools. The difference between the Ministry of Education's allocation and actual expenditures is made up by donations and tuition fees (Shwed et al., 2014).

Currently, eight schools (seven elementary schools and one high school) and at least 15 kindergartens in Israel have defined themselves as bilingual. The number of students increased from 1000 in 2013 to around 1700 in 2018 but remains marginal, given that there are around 1.2 million students in Israel (KRIC, 2019).

Another way to reduce the skills gaps between different cities and towns is to promote the teaching of English, maths, sciences and other secular subjects in Haredi schools. The Haredi education stream emphasises studying religious subjects, and at the age of 13 boys enter yeshivas, which focus on the study of traditional religious texts, and reject formal education in secular subjects. As a result, many Haredi men

often lack basic skills, notably in mathematics and English. As was recommended in previous *Surveys*, teaching of core subjects in Haredi schools should be strengthened (OECD, 2018c). Many previous attempts failed for political reasons, but the authorities should redouble their efforts to introduce core subjects in the Haredi curriculum in order to improve integration of the Haredi community into the wider Israeli society.

The local authority funding system exacerbates regional differences

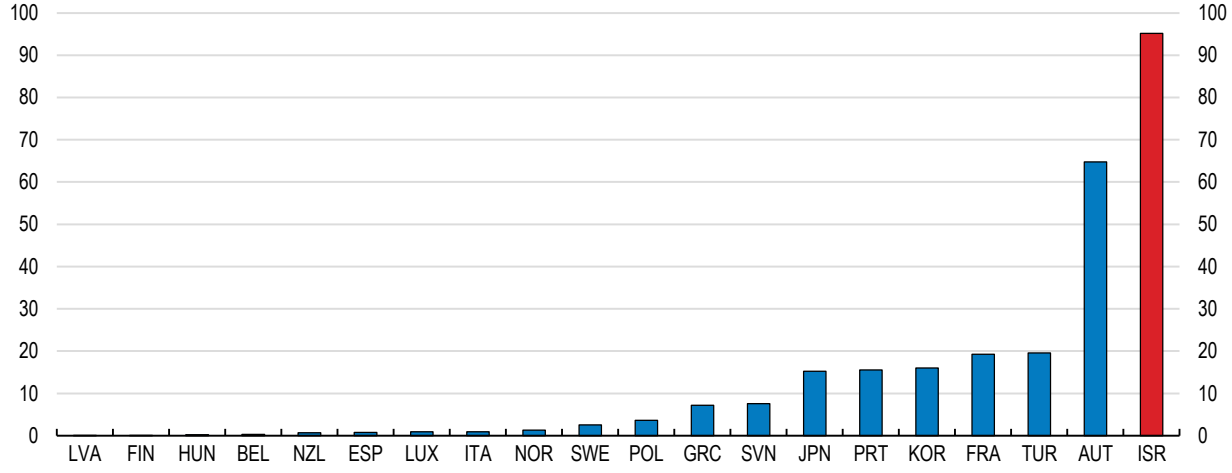
The success of education, transport and housing policies will depend heavily on their funding and implementation on the local level. Empirical research confirms that better schools, good local government and effective policies to realise national priorities are the right means to improve the outcomes of residents living in poor municipalities (Justman and Spivak, 2004). However, the ability of municipalities to implement policies effectively depends crucially on their fiscal position.

Economically strong municipalities benefit from high local revenues

Local government revenue consists of government transfers and municipal income. The composition of these two revenue sources varies from authority to authority and depends on municipalities' tax-raising capacity. The largest source of municipal income is the local property tax, which accounts for 80% of the total tax revenue raised by local authorities. Israel's local authorities have only limited ability to adjust tax rates, and their tax autonomy is the weakest in the OECD (Blöchliger, 2015; Figure 2.21). The local property tax rates must remain within a certain range supervised by the central government. Moreover, a local authority that would like to modify its property tax rate must receive the approval of both the Ministry of the Interior and the Ministry of Finance. In 2018 all the approved requests involved only marginal adjustments (OECD, 2019a).

Figure 2.21. Local tax autonomy in Israel is weak

Percentage of local tax revenue decided by central government, 2014



Source: *OECD Fiscal Decentralisation database*.

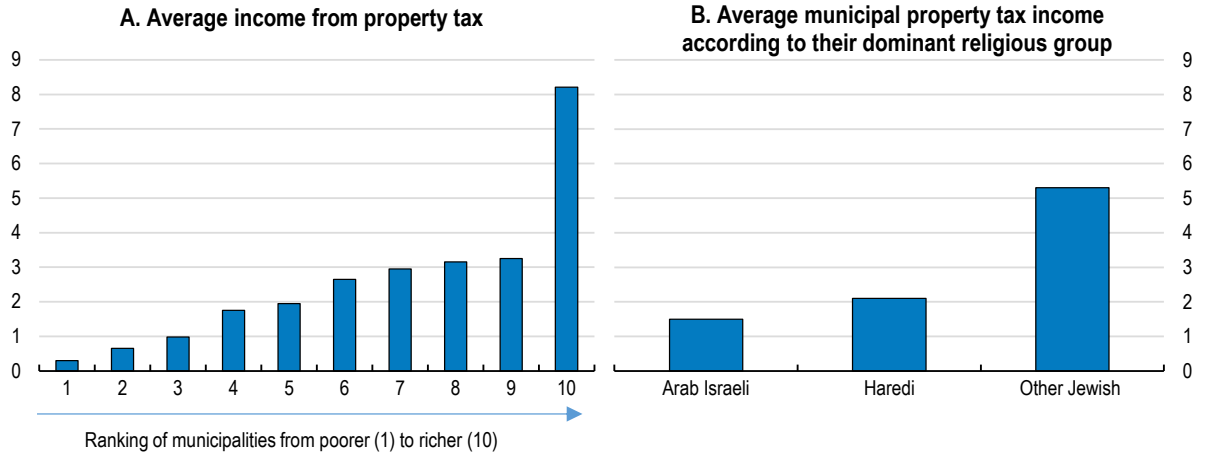
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Economically strong municipalities have higher revenue from property taxes than others (Figure 2.22). First, they have many more commercial and industrial parks, as economic activity is concentrated in metropolitan areas and economic centres. The property tax charged for non-residential land is much higher than that on residential properties (see above). Second, residential property tax collection as a proportion of what is owed is much lower in poorer municipalities, less than 50%, while it is around 90% in the

wealthiest municipalities (Figure 2.23). These differences are mainly due to tax breaks, exemptions and discounts for low-income earners, but tax avoidance in poorer municipalities also plays a role (Brender, 2007). Not only have poor municipalities less in the way of commercial property and receive less from non-residential tax revenues, but they also receive less from residential taxes due to tax breaks and discounts, which are set by the central government.

Figure 2.22. Local authority revenues are much smaller in poorer municipalities

Thousand NIS per resident, 2017

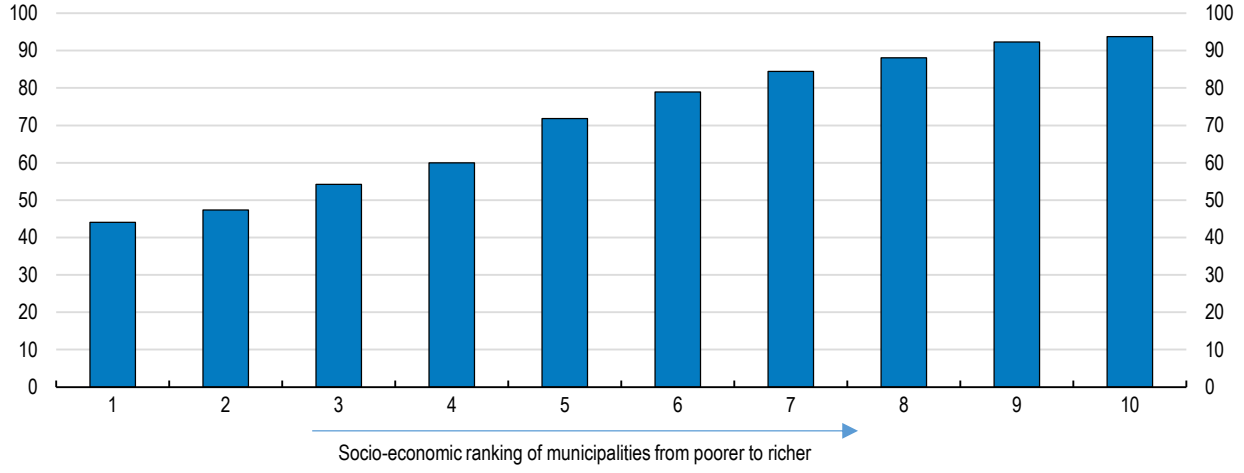


Source: OECD (2020), "A review of local government finance in Israel: Reforming the Arnona system" (forthcoming); Israel Central Bureau of Statistics.

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Figure 2.23. Poorer municipalities have weaker tax collection

Residential property tax collection rate (% of what is owed)



Source: OECD (2020), "A review of local government finance in Israel: Reforming the Arnona system", (forthcoming).

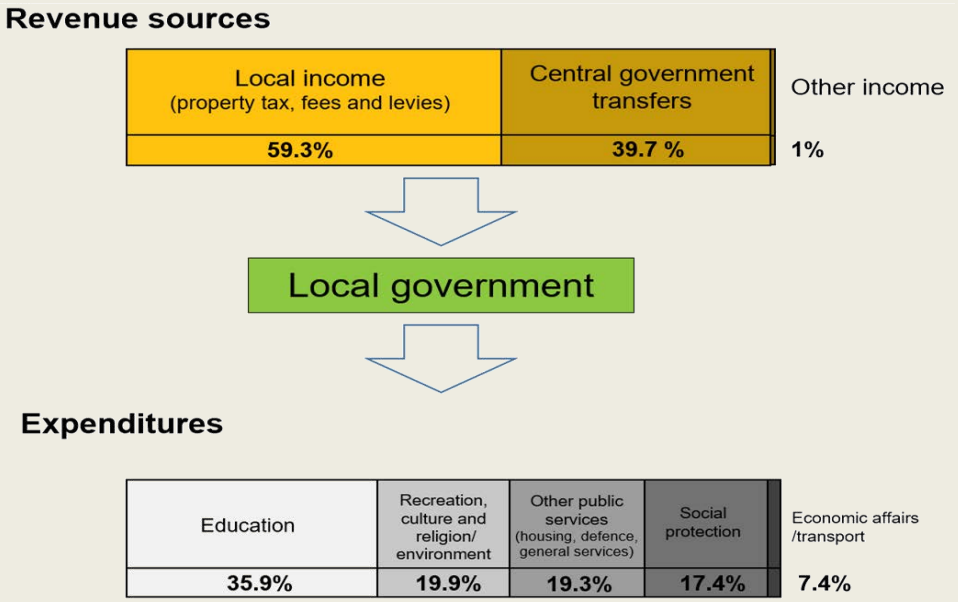
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Box 2.4. Local authorities in Israel

Israel has one sub-national level of government, composed of 257 local authorities - 76 municipalities (cities with at least 20 000 inhabitants), 125 local councils (towns with fewer than 20 000 inhabitants) and 56 regional councils. Local authorities are elected through direct elections and have administrative and governmental power in their jurisdiction. The average municipality has around 35 000 inhabitants, 3.5 times the average in OECD countries (OECD, 2020b).

In terms of spending responsibilities Israel is a centralised country with a relatively small amount of local government expenditures. In 2016 local government expenditures stood at 5.5% of GDP, below the OECD average for unitary countries (13.4% of GDP). Local authorities have been delegated responsibilities by the central government for education, social services and infrastructure. More than half of their expenditure goes to education and social protection. Local government revenues are comprised mainly of government transfers and own income, mainly from property tax (see below).

Structure of local revenues and expenditures in Israel



Source: OECD (2020), "A review of local government finance in Israel: Reforming the Arnona system" (forthcoming).

Central government transfers are too small to close local revenue gaps

In order to narrow the income gap between local governments, the government provides transfers, which consist of:

- Service grants for education and welfare, which are used for delegated responsibilities in education and social welfare; yet local governments have some discretion as to how they spend these funds. These Service grants also include a matching component, whereby local governments are required to match the additional grant with their own resources.
- The Balancing grant is an equalisation fund, which provides more funding to poorer municipalities. The grant is calculated as the difference between normative expenses set by the central government and potential revenues.
- The Equalisation Fund is levied on government-owned property and distributed to municipalities according to: (i) the municipality's socio-economic index, (ii) its lack of non-residential property, (iii) its peripherality and (iv) the quality of its financial management (OECD, 2019a).

A corrigendum has been issued for this page. See:
https://www.oecd.org/about/publishing/Corrigendum_ISR_survey_2020.pdf

While the transfers help to reduce the differences in resources among local governments, the differences remain significant (Moughkedi and Shalem, 2018). The wealthiest municipality still has 12 times higher overall revenue per capita than the poorest (Table 2.2). The effect of equalisation funds in other countries is much more substantial: pre-equalisation disparities are reduced by roughly two-thirds on average across countries (OECD, 2013), but in Israel by only one-third. The differences in overall revenues in Israel even after the impact of the grants remain the highest in the OECD (Figure 2.24).

Differences in resources mean that poorer municipalities can find it difficult to provide adequate service levels for their residents. Expenditure per capita on education and welfare is lower in poorer regions, and residents of Haredi and Arab municipalities receive much lower overall expenditure per capita (Figure 2.25). The differences in public-service provision is striking, given that poorer and rural areas have greater needs and would require higher spending to enhance convergence and as a means to escape poverty. Poor municipalities can find themselves in a vicious circle in which weak economic activity leads to less tax revenue and lower-quality services, which hampers local development and results in further weakness in economic activity.

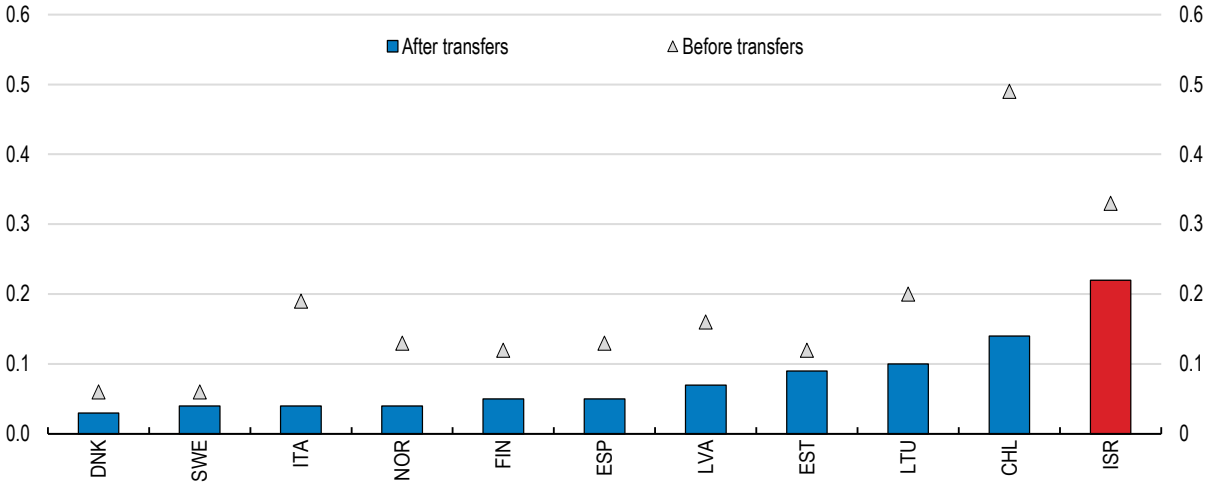
Table 2.2. The impact of grants on fiscal disparities among Israeli local governments, 2016

	Total property tax	Total property tax & all grants
Average	3,294	7,134
Standard Deviation	2,807	3,953
Coefficient of Variation	0.85	0.55
Minimum	73	2,977
Maximum	29,824	37,272
Gini Coefficient	0.333	0.221

Source: OECD (2020), "A review of local government finance in Israel: Reforming the Arnona system", forthcoming.

Figure 2.24. The differences between municipalities remain large even after transfers

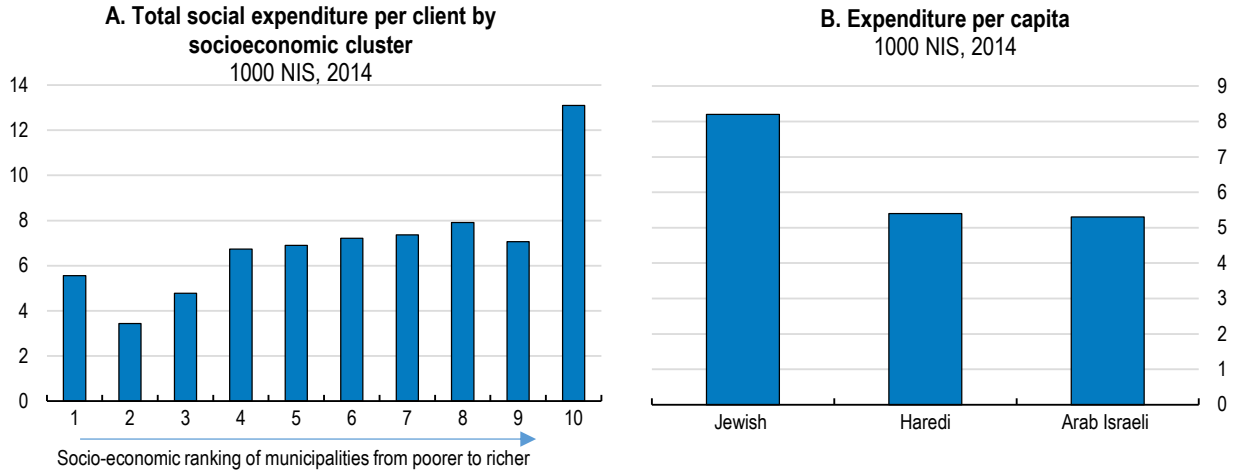
Gini coefficient before and after transfers



Note: Data for Estonia, Israel, Latvia, Lithuania and Sweden refer to 2017; data for Chile, Denmark, Finland, Italy, Norway and Spain to 2012.
Source: H. Blöchliger (2014), "Fiscal equalisation - a cross country perspective", Paper prepared for the conference on "Fiscal Equalisation", Berlin, 26-27 June, OECD (2020), "A review of local government finance in Israel: Reforming the Arnona system", forthcoming; OECD (2020), "Fiscal equalisation - a cross country perspective" (forthcoming).

StatLink https://doi.org/10.1787/888934153312

Figure 2.25. Poorer municipalities have less public-service provision

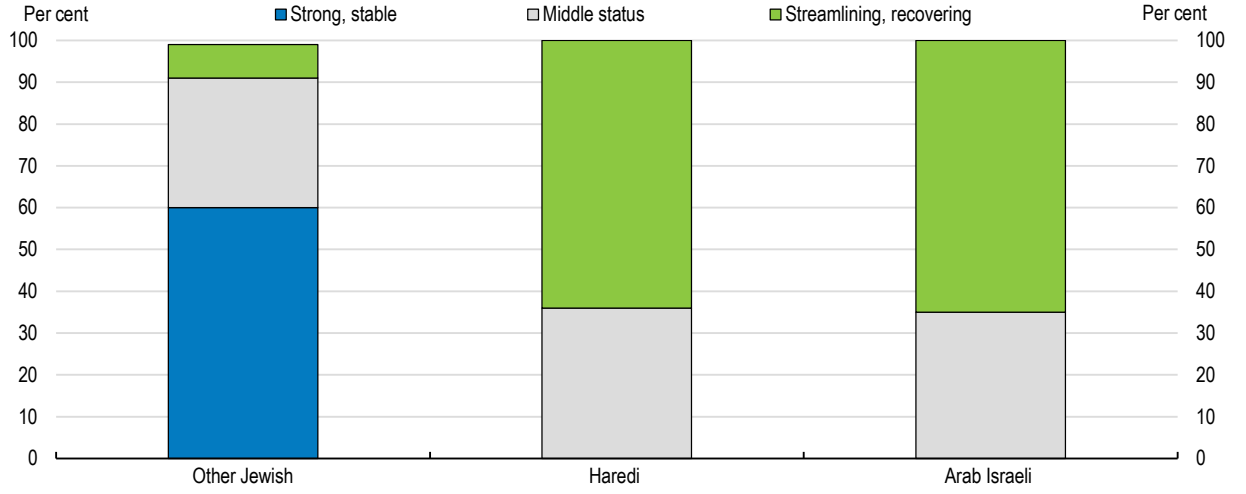


Source: Israel Central Bureau of Statistics; OECD (2017), *Spatial Planning and Policy in Israel: The Cases of Netanya and Umm al-Fahm*, OECD Publishing, Paris.; J. Gal, S. Madhala and H. Bleich (2017):, "Social service budgeting in local authorities", Taub Center, A chapter from *The State of the Nation Report 2017*.

StatLink https://doi.org/10.1787/888934153331

At the same time poorer municipalities often run into fiscal difficulties. These municipalities have less revenue, but at the same time higher expenditure needs. Local municipalities are not allowed to run deficits, and the Ministry of the Interior provides special fiscal recovery grants to local authorities that have an accumulated deficit and are engaged in a fiscal recovery programme. The government categorises local municipalities in groups according to their fiscal stance and the quality of the services provided to their citizens. More than 60% of the municipalities with Jewish residents have fiscally strong and stable local authorities, while Arab-Israelis and Haredim overwhelmingly live in municipalities in recovery programmes due to accumulated deficits (Figure 2.26).

Figure 2.26. Municipalities with disadvantaged groups have much worse fiscal outcomes[1]



1. Strong or stable stands for balanced budget or fiscal deficit less or equal than 1% of income, Middle status, municipalities receiving loans but are run accordance to efficiency plans, Streamlining and Recovery means deficit over 17.5% and debt higher than 50% of the municipal income.
Source: J. Gal, S. Madhala and H. Bleich (2017),: "Social service budgeting in local authorities", Taub Center, A chapter from *The State of the Nation Report 2017*.

StatLink https://doi.org/10.1787/888934153350

The government is aware of the problem, and reducing the differences between municipalities has been an important objective of the Ministry of Interior. In the recent years additional measures have been implemented to deal with it (Box 2.4). In response to the COVID-19 crises, the Ministry of Interior and Ministry of Finance provided a 25% discount in local property taxes for firms that were shut down during the lockdown (NIS 2.7 billion) and compensated local governments for the revenue shortfall differentiated according to the fiscal strength of the municipalities. Businesses experiencing a substantial decrease in their sales turnover will receive a refund for property tax expenses until the end of June 2021. In addition, the government allocated a regional grant for the city of Eilat and the municipality of Tiberias, whose income is reliant on tourism.

Box 2.5. Additional actions to reduce economic discrepancies between local authorities

- The balancing grant increased from 2013 through 2017 by half a billion shekels, resulting in a fairer distribution between local authorities.
- Seven permanent geographical committees have been established since 2017. They deal with municipal boundary changes and with the subsequent distribution of revenues from non-residential areas such as joint industrial zones or military bases. The local authorities have exchanged lands with a total area of 48.5 sq.km and a total of 160 million ILS in revenue were redistributed in order to reduce differences in resources between municipalities.
- The government has been assisting disadvantaged local authorities, those containing minorities and those in the periphery with a budget of NIS 7.2 billion. This assistance include Plan for the Development of Druze and Circassia Municipalities for 2016-2020, Government Activity Plan for the Financial Development of Minorities for 2016-2020.
- Several development instruments for local authorities have been set up. For example, “Youth for Local Government” is integrating high-quality human capital into disadvantaged local authorities. As of now, 210 graduates have been absorbed into 90 municipalities and regional clusters.

The local fiscal framework needs to promote high-quality services in poorer municipalities

The government should continue with its efforts to shrink these differences in resources as the gaps remain substantial. It should ensure that everybody has the same basic public-sector provision regardless where they are born. This will require higher funding for disadvantaged poorer areas. To finance these costs and to reduce significant differences in resources between municipalities, the government will have to strengthen its fiscal equalisation efforts.

One way forward could be a higher “compensation rate” from wealthier municipalities. In some OECD countries wealthier jurisdictions transfer part of their revenues to central government for redistribution (Box 2.6). Evidence from OECD countries shows that this type of equalisation is more effective than vertical equalisation as it has a higher equalisation effect per monetary unit (Blöchliger, 2015). For example, in the United Kingdom local government retains part of the revenues from the non-residential property tax, and the rest is transferred to the central government and redistributed as grants (Kim and Dougherty, 2018). Swedish municipalities and county councils whose income exceeds 110-115% of average tax capacity per capita have to pay an income equalisation charge to central government. In Norway municipalities with above 90% of average fiscal capacity do so. In Germany those localities with above-average fiscal capacities reallocate a portion of their revenue to localities with below-average fiscal capacity. The rate of equalisation declines as fiscal capacity rises, but the equalisation is held intentionally below 100% to stimulate the development of own-source revenues (OECD, 2020b).

The matching component used in grants for social services should also be reconsidered. This requirement obliges local authorities to co-fund part of the total cost of these services along with the central government. Currently the matching component is the same for every municipality; for example, in social services central government covers 75% of the costs and municipalities cover the other 25%. With these central government grants and their much higher tax revenues the wealthier municipalities can afford to expand their services. Therefore, the matching component should be reconsidered to better reflect differences in tax capacity between municipalities.

Box 2.6. Equalisation systems in OECD countries

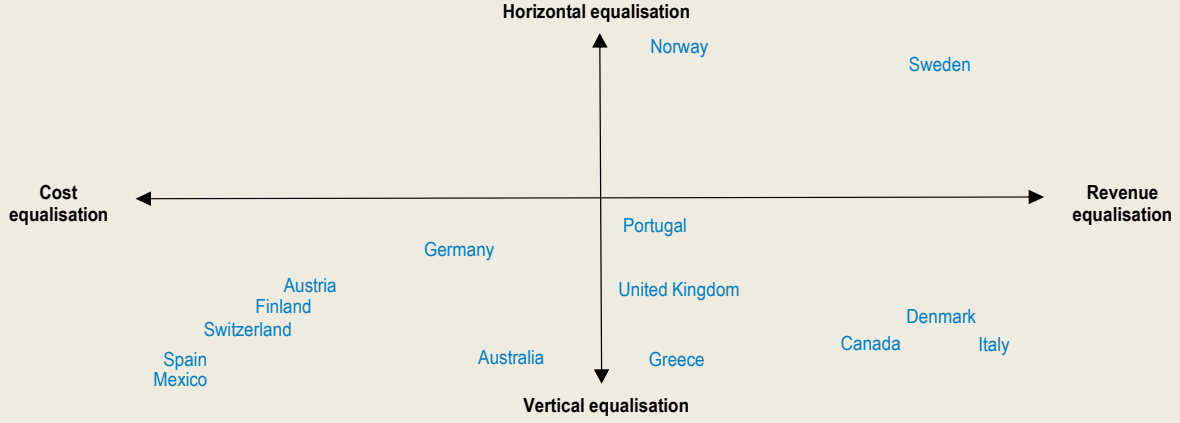
In most OECD countries there are significant imbalances between different local authorities' fiscal capacity. Therefore, central governments provide fiscal equalisation funds to narrow these gaps. Equalisation arrangements can be either:

- Revenue vs cost equalisation: the equalisation fund aims either to reduce differences in tax-raising capacity or in the costs of providing public services.
- Vertical vs horizontal equalisation: equalisation is provided either by the central government to fill the gap between municipalities' finances, or wealthy jurisdictions directly provide resources to their poor counterparts.

In OECD countries the combination of vertical and cost equalisation systems is most common (Figure 2.27). The data for Israel are missing, but it is likely that it would be positioned in the bottom-right quadrant with very low horizontal equalisation, which suggests that there is room to improve equalisation through higher compensation from wealthier municipalities.

Figure 2.27. Comparison of equalisation systems

Revenue versus cost-based and horizontal versus vertical systems, as % of total transfer flows



Source: H. Blöchliger (2014), "Fiscal equalisation - a cross country perspective", Paper prepared for the conference on “Fiscal Equalisation”, Berlin, 26-27 June.

The government could also merge municipalities, which could entail large efficiency gains and help address the differences between municipalities. In the past, several attempts to reduce the number of municipalities failed for political reasons. Many OECD countries have merged their municipalities. For example, in Denmark mergers scaled up each level of government and the number of municipalities fell from 271 to 98 in 2007 (OECD, 2016b). The new municipalities received more competencies and resources. In Switzerland cantons encourage mergers with financial incentives and some cantons grants for evaluating a potential merger (OECD, 2016b).

Widening inter-municipal cooperation and using more regional clusters and shared industrial zones is another option to improve efficiency. Inter-municipal co-operation has increased in OECD countries and provides benefits for both rural and metropolitan municipalities (OECD, 2018b; OECD, 2019d). There have been attempts in Israel to establish voluntary associations of neighbouring local governments. The government is already promoting the establishment of these regional clusters and today 26% of the Israeli population live in areas that are members of some kind of regional clusters cooperating on joint projects. These clusters operate on a voluntary basis and cooperate in a number of domains, such as shared waste management systems, joint procurement tenders and advancing regional education. The government's future plans involve gradual institutionalisation of these clusters so as to specialise in regional issues and promote operations to increase scale. At the same time, the plans also include discussions about transitioning to a multi-layered governmental structure. The metropolitan clusters would inherit responsibilities from the government and from local authorities. Establishing regional and metropolitan clusters could potentially help overcome fractional decision-making, which can delay projects involving several municipalities.

The government should continue with these efforts to enhance cooperation among local governments and should consider providing financial incentives to promote these efforts. In recent years many OECD countries have significantly enhanced municipal co-operation to partially solve municipal fragmentation by taking advantage of economies of scale for investments and service provision. For instance, in Estonia and Norway central government provides additional funds for joint public investments, and Slovenia encourages inter-municipal co-operation by reimbursing 50% of staff costs of joint management bodies – leading to a notable rise in the number of such entities (OECD, 2017e).

In terms of revenues more autonomy for municipalities should be considered. Evidence from other OECD countries suggests that local authorities with substantial tax autonomy have lower tax disparities and that tax autonomy allows poorer municipalities to better foster their economic and fiscal base, making it easier for them to catch up with the national average (Blöchliger and Campos, 2011).

This will require a uniform local tax base. A national audit uncovered substantial deficiencies and a lack of uniformity in the method of levying property taxes by local authorities (TOSC, 2015). It is at present impossible to make tax comparisons between different neighbourhoods or cities. There are too many classifications of property and different rates assigned to each sub-classification. There is currently no uniform method used to calculate the size of homes for tax purposes. Many OECD countries have moved towards a central tax base, thereby leaving less leeway for gaming it (Blöchliger, 2014). The Ministry of Interior has established a joint panel with representatives from different ministries to address the shortcomings of the current system, including by reducing the number of different classifications and sub-classifications used for property-tax collection and unifying measurement methods. The panel has been active for two years and has already outlined a draft reform to increase transparency and uniformity of the municipal property tax.

Table 2.3. Recommendations for reducing differences between municipalities in Israel

FINDINGS	RECOMMENDATIONS (key recommendations in bold)
Enhance the quality of public transport	
Road traffic intensity is much higher than in other OECD countries. Congestion causes real damage to the economy and quality of the life of residents due to the loss of both work and leisure hours and the increase in air pollution and in road accidents.	**Introduce congestion charges, accompanied by significant improvements in the quality of public transport services and higher parking fees.**
The coordination in infrastructure governance across levels of governments is one of the weakest in the OECD. Ineffective coordination between municipalities often leads to lengthy negotiations that hinder the advancement of projects.	**Establish metropolitan transport authorities in the Tel Aviv area and perhaps other areas in Israel to promote integrated transport networks and pricing systems and ensure stable financial support for public transport.**
Israel's infrastructure regulation is currently stricter than other countries. Only half of the total market for bus services is open to competition.	Reduce regulation in public transport by fully opening bus services to competition.
Improve housing affordability	
Rapid increases in housing prices have exacerbated inequalities and widened regional differences. They have been associated with a growing disparity in housing affordability. Poorer families cannot afford to own an apartment, and the rent burden is high in international comparison, particularly for low-income tenants.	Eligibility for social housing should be regularly reassessed, should target the most disadvantaged households and should be provided in areas of employment opportunities.
Arab-Israeli municipalities face significant housing challenges. Unregistered housing, which is widespread across Arab-Israeli municipalities, result in a delayed planning and construction process and represents huge tax losses for municipalities.	Provide support to formalisation of housing in Arab-Israeli municipalities, including legal, financial and technical support.
Improve education in the poorer localities	
Weaker municipalities do not have the necessary resources to build new buildings and ensure places for all 3-4 year-olds. Expenditure per pupils in pre-school education is much lower than in other OECD countries.	Continue with efforts to increase participation in high-quality pre-school education, and expand day care centres, particularly in poor and disadvantaged localities.
Teacher quality in areas where many people have a relatively low socio-economic background is significantly lower than in economically stronger localities, which can further diminish students' chances of success.	Provide financial and good working conditions to attract the best teachers to disadvantaged schools and poorer regions.
The existence of different school streams in Israel reinforces geographic segregation along religious/community lines and hinders mobility. The fragmented education system weakens skills formation and contributes to Israel having the largest dispersion in educational outcomes in the OECD.	**Promote teacher exchanges.** **Increase Hebrew courses in the Arab stream.** **Strengthen the core subjects in the curriculum of the Haredi stream.**
Reform the funding of local municipalities	
There are large differences in public-sector provision between poorer and wealthier municipalities. Differences in resources mean that poorer municipalities can find it difficult to provide adequate services levels for their residents.	**Strengthen fiscal equalisation within municipalities mainly through higher compensation from wealthier municipalities**
Israeli municipalities do not prioritise residential development, despite the pressing need for more housing in the country: the current property tax system creates incentives for them to favour business over residential development.	**Reduce the difference between non-residential and residential property tax rates. Replace the area-based property tax with transparent and uniform system based on property values.**
Income disparities between the richest and poorest localities are among the highest in the OECD and continue to widen.	Decrease the number of local authorities by merging municipalities. Enhance cooperation and coordination across regions by promoting regional clusters and shared industrial zones.

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3 Enhancing the efficiency and equity of the tax system in Israel

Israel's tax mix is reasonably growth- and employment-friendly. Nonetheless, tax reform is needed to foster an inclusive recovery from the COVID-19 crisis and help tackle Israel's main economic and societal challenges of high poverty, including among those in work, and slow aggregate productivity growth. The earned income tax credit has been an effective tool to reduce poverty and increase employment among the low-skilled and could be further expanded. The business tax system provides large benefits that aim to incentivise companies to become more productive, but the existing design may create distortions. This preferential tax treatment should be reviewed with a view to better targeting the scheme to ensure net benefits to society. There is also scope to simplify the tax system by removing inefficient tax expenditures and better leverage Israel's impressive technological capacity to further lower compliance costs and reduce tax evasion. Finally, excise taxes should be adjusted, including by taxing carbon more heavily, to improve environmental and health outcomes.

Main features of and challenges facing the tax system

The economy has experienced an unprecedented economic downturn due to the COVID-19 crisis, with profound negative effects on well-being, jobs, productivity and public finances. As part of the crisis response, the government temporarily enhanced the social safety net, provided transfers to the most vulnerable people, and took several tax measures to help firms shore up liquidity. This included temporary reimbursements of local property taxes and payment deferrals of value-added taxes and social security contributions for small firms. As economic policy shifts from the immediate crisis response, tax reform can play a crucial role in boosting an inclusive recovery while safeguarding fiscal sustainability.

The Israeli tax system has undergone several reforms in the recent past. Most importantly, in the early 2000s the government started to pursue a profound tax and transfer reform with the aim of containing the size of the government and making the tax system more business-friendly. The tax burden was shifted from direct to indirect taxation, and social transfers were cut to strengthen incentives to take up work. This policy shift ended in 2011 following social protests (the so called “tent protests”) and nascent fiscal difficulties. As a result, the government halted further planned cuts in the personal and corporate rates and partly reversed them. The progressivity of the personal income tax was increased, and certain customs duties were lowered with a view to containing retail prices. Yet the fiscal balance went off-target, which prompted the government to hike the value-added tax (VAT) rate (OECD, 2013).

The government that took office in 2015 aimed at keeping the tax burden low while increasing support for families: the VAT rate was reduced from 18 to 17% and the corporate income tax rate from 26.5 to 23%. Relief was provided for families in the form of higher tax allowances, an expansion of the earned income tax credit and higher transfers. Moreover, the progressivity of the personal income tax system was increased, including by raising the surtax on high-income earners from 2 to 3%.

These tax policy changes are reflected in the dynamics of tax revenues. The tax reforms of the early-2000s led to a sharp drop in revenues, which had exceeded the OECD average until then (Figure 3.1). This was mainly due to a marked reduction in personal income tax revenues. Since 2011 tax revenues have stabilised and edged up slightly. Nevertheless, the overall tax burden remains lower than in most OECD countries.

Israel’s tax mix is reasonably growth- and employment-friendly. The tax burden on labour is relatively low in international comparison, and the corporate income tax rate has been lowered in recent years to near the OECD average. Taxes on consumption (mainly through VAT), which are generally less distortive (e.g. Arnold et al. 2011; Akgun et al., 2017), are used more heavily than in other OECD countries (Figure 3.2). Tax revenues from immovable property are also higher than in most OECD countries. As discussed below, the property tax in Israel suffers from several deficiencies, which create distortions. Since taxing immovable property is in general less distortive, the property tax in Israel should be reformed in order to make it an efficient tax instrument. At the same time, the declining personal income tax share in total tax revenues in the 2000s contributed to the reduction in income redistribution wrought by the tax-transfer system (Strawczynski, 2015; Causa et al., 2018).

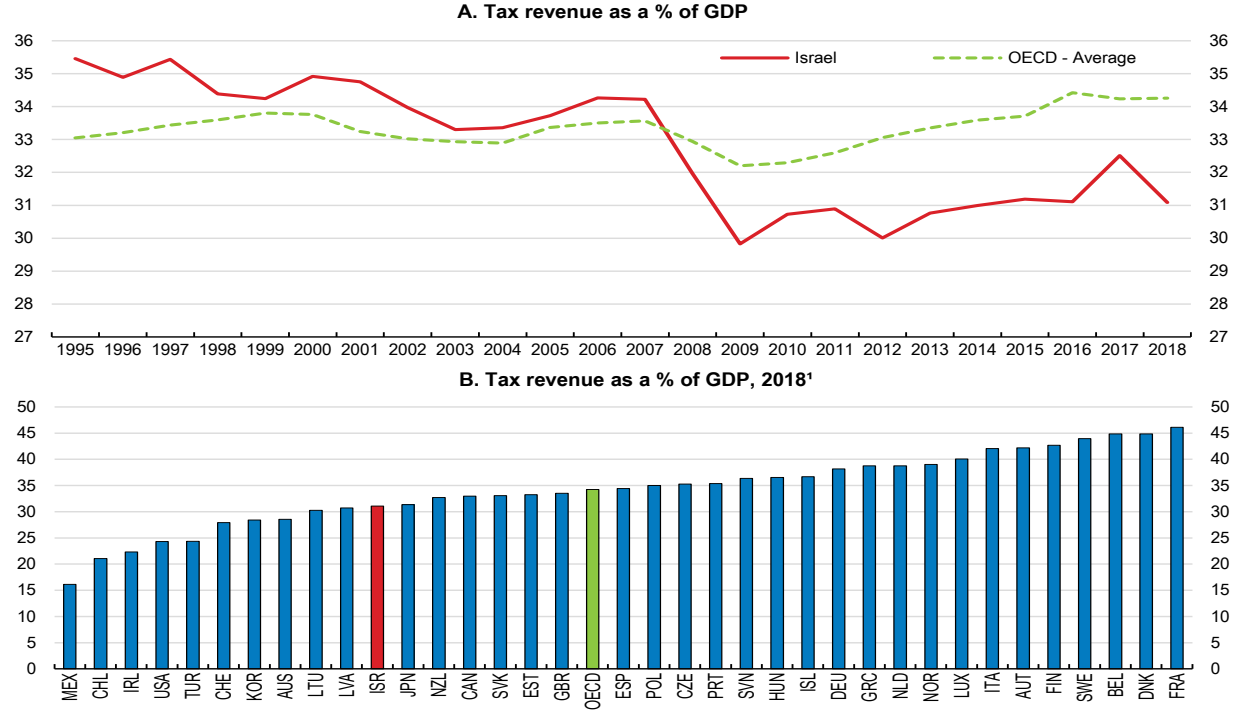
Tax reform is needed in a number of areas:

- There is scope to reduce tax expenditures to simplify the tax system and make it more efficient. The Ministry of Finance estimates that annual tax expenditures amount to about NIS 67 billion (4.8% of GDP) and sees scope to increase revenues by NIS 10-20 billion by removing some of them.
- Poverty remains high and is likely to increase due to the COVID-19 crisis as many low-skilled workers have been laid off (Figure 3.3). Poverty is especially high among the Ultra-Orthodox and Arab-Israeli, who participate less in the labour market, have lower skills, work fewer hours and live in larger households. Transfers to the poor are low in international comparison, reflecting a

government policy to incentivise labour market participation. This policy has contributed to raising employment rates among these groups, but they remain low and the income received from work has not been enough to make a substantial dent in poverty. Tackling poverty, while maintaining strong incentives to take-up work, therefore remains a key challenge to improve social cohesion.

- Israel's aggregate productivity growth has been lagging behind leading OECD countries. A marked productivity disparity exists between highly dynamic, trade-exposed, high-tech industries and more domestic-oriented, sheltered sectors (OECD, 2016a). The COVID-19 crisis may further exacerbate this disparity as the high-tech sectors were less affected and better able to cope with the crisis. Reducing this disparity will, first and foremost, require tackling the large educational gaps, insufficient infrastructure investment and lack of competition in several sectors. However, business taxation should be reviewed with a view to reducing distortions between sectors and creating a level playing field so that resources can flow to their most productive uses.
- Pollution is well above recommended levels, and road traffic intensity is the highest in the OECD (Chapter 2). Both lead to losses in well-being and productivity. This partly reflects inadequate transport infrastructure (OECD, 2018a), but adjusting excise taxes to better reflect externalities should also play an important role in improving environmental and health outcomes.
- Tax revenues may need to be sustainably raised, together with further efforts to increase spending efficiency, to bring debt back on a declining path while allowing for additional social and infrastructure spending. Extra spending in these areas can boost the recovery and is needed to help narrow Israel's large socio-economic gaps and foster productivity growth (OECD, 2018a). Despite recent increases, civilian expenditure remains low (Figure 3.4). In addition, the fiscal position started to weaken even prior to the crisis. Despite robust growth and near full employment, the general government budget deficit increased markedly from 0.9% of GDP in 2015 to around 4% of GDP in 2019 as the surge in expenditure coincided with the lowering of tax rates (e.g. VAT and corporate income).

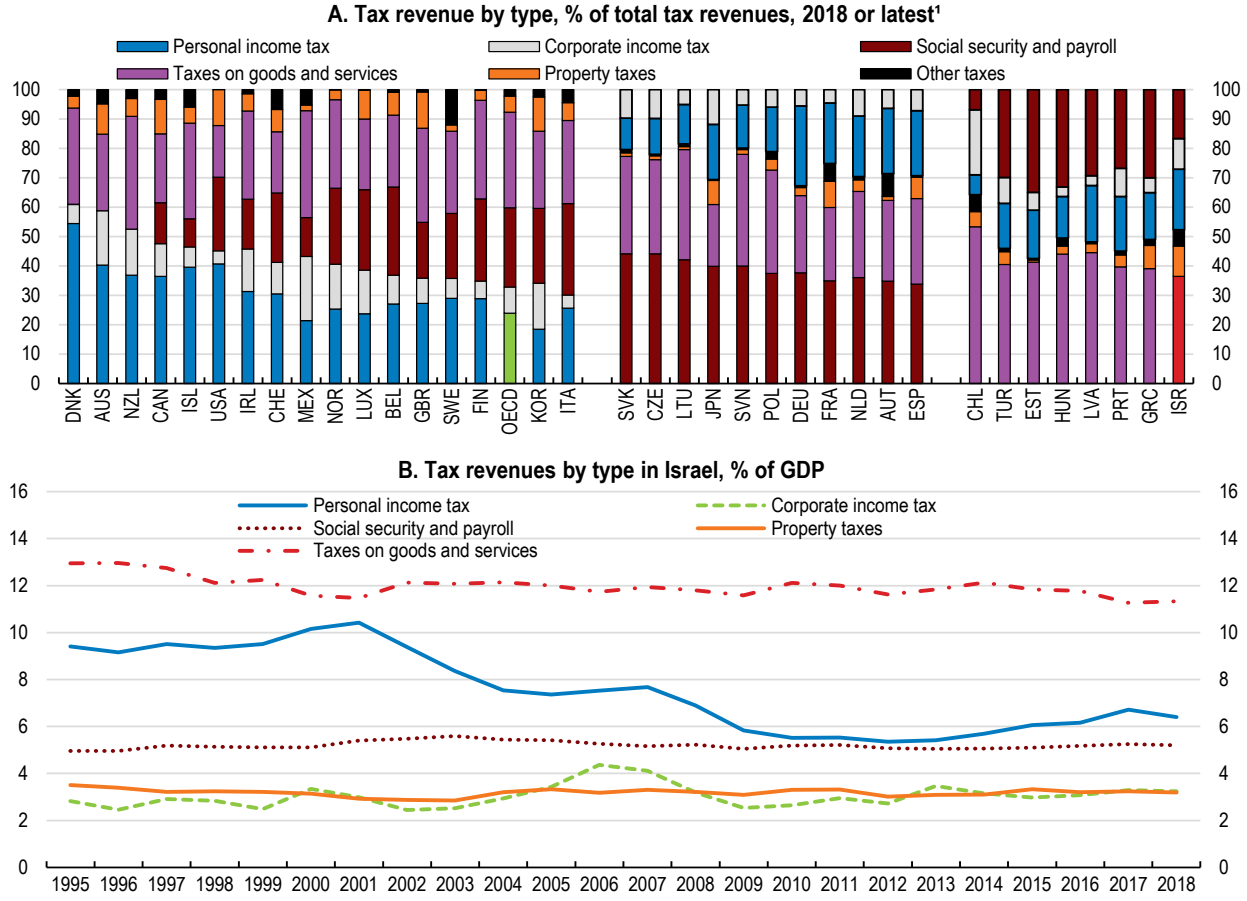
Figure 3.1. The tax burden is lower than in most OECD countries



1. 2017 for Australia and Japan.
Source: OECD, *Tax Revenue Statistics database*.

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Figure 3.2. Most tax revenues come from consumption taxes

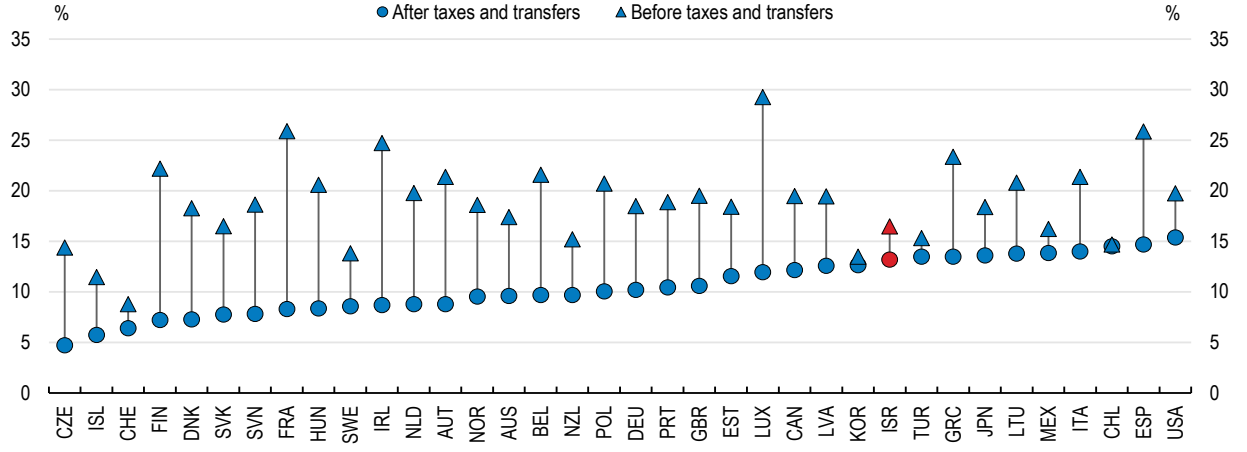


1. Countries are grouped and ranked by those whose income tax revenues (personal and corporate) are the highest share of total tax revenues, followed by those whose social security contributions are the highest share, and then where taxes on goods and services are the highest share.
Source: *OECD Global Revenue Statistics database*.

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Figure 3.3. Poverty remains high

Relative poverty rates, working-age population, 2017 or latest year available

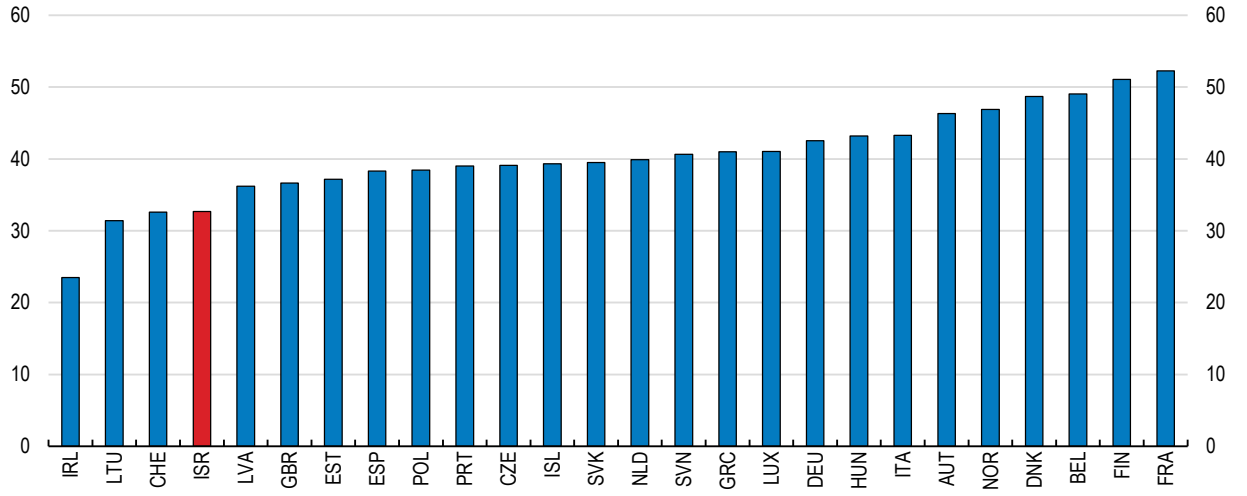


Note: Percentage of persons living with less than 50% of median equivalised disposable income. 2018 data for Australia and Israel.
Source: OECD *Income Distribution database*.

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Figure 3.4. Government civilian spending is lower than in most OECD countries

Primary civilian expenditure, % of GDP, 2018



Source: *OECD* National *Accounts Statistics database.*

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Personal income taxation

Israel's personal income tax (PIT) system is fairly progressive. Individuals are taxed separately. In 2017 some rates and the width of some brackets were changed, effectively decreasing the tax burden for low- and middle-income individuals, while increasing the burden for those on higher incomes. The top marginal rate of 50% is in the upper half of OECD countries', and the income threshold of the top tax rate, at around four times the average earnings, has moved closer over time to the threshold level in other countries with high top marginal rates (Figure 3.5).

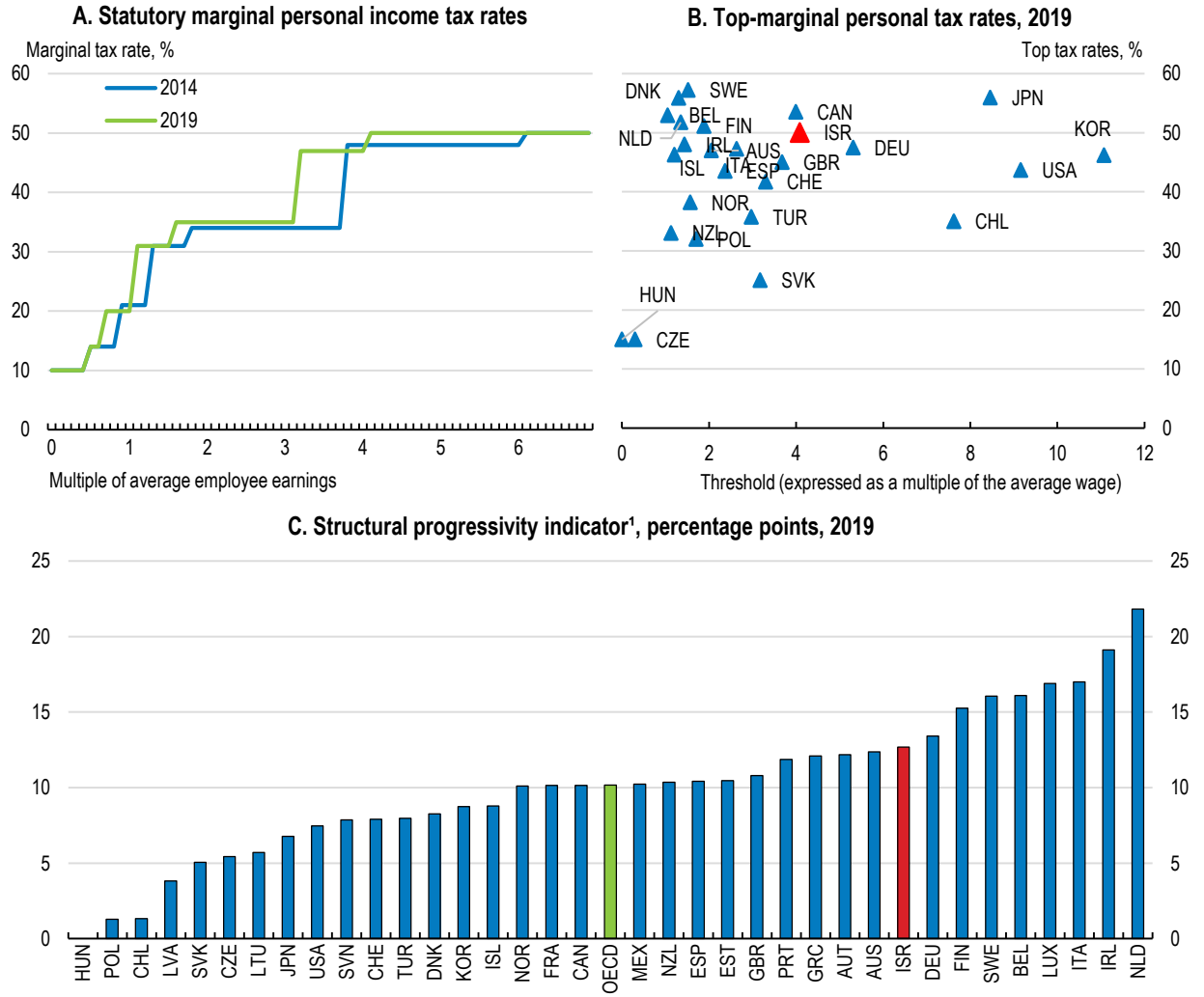
National social security contributions are levied at progressive rates up to a ceiling. The contribution rates paid by employees and employers are applied in two brackets: a reduced marginal rate for income up to 60% of the average wage of 3.5% for employees and 3.55% for employers; and a full marginal rate of 12% for employees and 7.6% for employers for income above 60% of the average wage up to a ceiling of NIS 43 370 per month (about USD 12 070). The full rate for employers was increased in several steps in recent years from 5.9% in 2011 to 7.5% in 2016.

As in other countries, individuals can benefit from a range of tax credits, which reduce the tax burden and can affect the system's overall progressivity. The basic tax credit implies that only individuals with income higher than about 40% of average earnings (slightly below the minimum wage) pay personal income tax. A range of additional (non-refundable) tax credits exists, which lowers the tax burden in particular for families with children, single parents and working women (Table 3.1). In addition, a (refundable) Earned Income Tax Credit was introduced to support low-income households in 2008 (see below). The distribution of incomes, together with the current personal income tax rate schedule and tax credits, implies that relatively few individuals pay income tax. According to data from the Ministry of Finance, the top two deciles of the income distribution paid 90% of all personal income tax in 2018, while the bottom five income deciles paid only 0.4%.

The costs of all non-refundable tax credits should be monitored closely and the effectiveness of reaching the intended goals regularly assessed. For example, the budgetary costs of the tax credits for residents of development areas have increased substantially over time, from NIS 1.4 billion in 2015 to NIS 2.3 billion in 2019. The purpose of the credits is to increase the attractiveness of poorer regions and encourage migration from richer regions (the centre in particular). However, research by the Bank of Israel finds little

evidence that the tax credits encourage migration to poorer regions (BoI, 2015a). In addition, the credits are prone to abuse. The same research shows that the number of residents who are registered in a region but do not actually live there is higher in areas that benefit from the credits than elsewhere. Furthermore, the income of these "fictitious" residents in areas that benefit from the credit is substantially higher than that of actual residents, suggesting that tax incentives play a role in wrongfully registering in these regions. As discussed in Chapter 2, a better policy to increase the attractiveness of poorer regions would be to ensure comparable basic services across municipalities, for example by modifying the inter-municipal fiscal framework.

Figure 3.5. The personal income tax system is progressive



1. The structural progressivity indicator measures the percentage point change of the average income tax rate for a single person with no children if their income increases from 67% to 167% of the average wage.
Source: OECD, *Taxing Wages Database.*

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Table 3.1. Main personal income tax allowances and credits

	Comment	Estimated budget cost 2019
Standard tax credits (wasteable)	Each credit point is worth NIS 2 628 in 2020. Each individual income earner is entitled to these credits.	
Basic credit	Every resident taxpayer is entitled to 2.25 credit points	
Additional credit for women	Women are entitled to a further half credit point.	NIS 0.97 billion
Child credit	- Both parents get 2.5 credit points per child aged under 5 -Working mothers with children aged under 18 are entitled to one additional credit point per child	NIS 5.5 billion
Single parent credit	- Single parents (male or female) are entitled to one additional credit point	NIS 0.16 billion
Non-standard tax credits (wasteable)		
Pension contributions	Tax credits of 35% are awarded for contributions to approved pension schemes, up to a ceiling that varies according to the employee's circumstances	NIS 17.7 billion (including tax benefits to contributions from employers)
Residence	Employees living in certain development areas or in conflict zones receive credits as a percentage of their income up to ceiling. Credits range from 7% in the lowest category, to 20% in the highest, with ceilings of NIS 132 000 and 252 840, respectively. About 20% of the population live in these areas.	NIS 2.3 billion
New immigrants	New immigrants are entitled to three additional credit points in their first 18 months in Israel, two additional credit points in the following year and one credit point in the year after that.	NIS 0.03 billion
Soldiers	Discharged soldiers receive 2 credit points for three years after the completion of at least 23 months of service or 1 credit point for a shorter service.	NIS 0.09 billion
Students	Graduates of academic studies receive 1 credit point for 1 year after completing a B.A. degree or the year thereafter (or after the completion of 1 700 study hours that led to a professional certificate) and 0.5 credit point for 1 year after the completion of an M.A or the year thereafter.	NIS 0.07 billion
Earned Income Tax Credit (non-wasteable)	Applies to workers aged 23 or older who are parents of one or more children aged under 18 and workers aged 55 or older even without children. Maximum monthly credit of NIS 330 for workers aged 55 and older without children, NIS 495 for parents (including single parents) of one or two children and NIS 720 for parents (including single parents) with three or more children. The minimum and maximum earnings thresholds for eligibility vary by family type (e.g. the eligibility window is NIS 2080 to NIS 6350 for parents of up to two children). A temporary measure in 2019 (for earnings in 2018) increased the grant by 30% for eligible workers if the spouse also works and earns a minimum income of NIS 3 650 per month.	0.16% of GDP

Source: OECD (2019), *Taxing Wages 2019*; Ministry of Finance.

Encouraging employment and combating poverty

Israel's approach to tackling poverty and inequality has focused on providing incentives to take up work. Social transfers are low, as policymakers are concerned that higher transfers slow the progress of job-market integration. The previous government, however, increased benefits for religious students, and eliminated the requirement for both parents to work to receive subsidies for childcare.

The government's strategy is reflected in a small tax burden on labour income. Thanks to low income tax rates, tax credits and reduced social security contributions, the standard labour tax wedge is especially small for low-income earners (Table 3.2). Individual-level taxation and basic tax credits for each individual earner avoid the disincentives of family-based taxation for second earners. In addition, women benefit from additional basic tax credits and extra credits for each child aged between 5 and 18 years. The preferential tax treatment of women could be justified by the fact that their employment rates are still lower than those for men, especially among the Arab-Israelis. However, the employment gender gap has narrowed substantially and is relatively small in international comparison. In addition, the tax credit mainly benefits women with high income. The government should therefore aim for a more gender-neutral tax treatment in the medium term or target the tax credit better to low-income women.

Table 3.2. The average tax wedge is lower than in most OECD countries, 2018

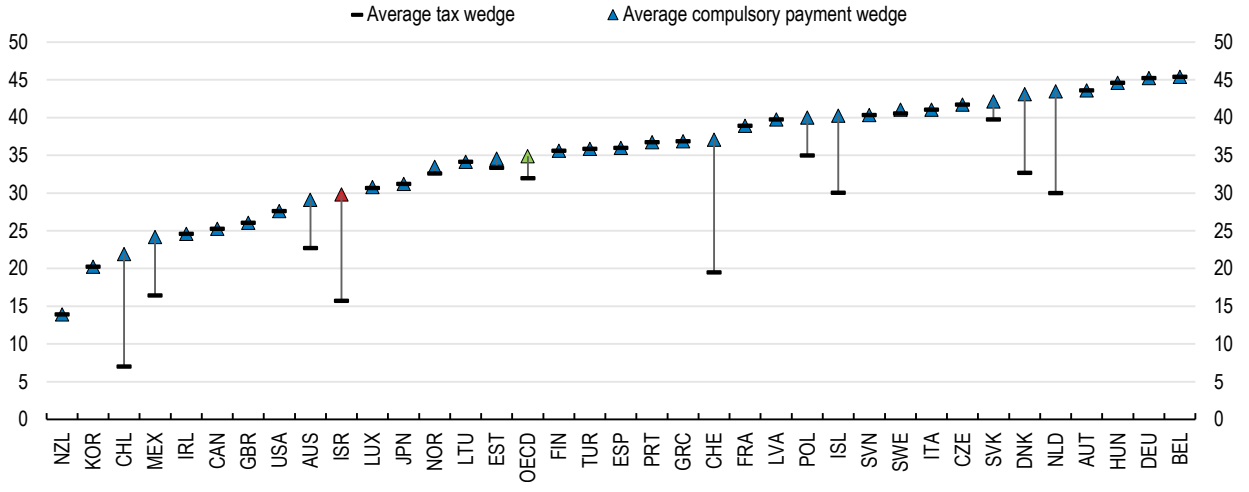
	Family type						
	Single, no children			Single, two children	Married, two children		
Wage level (% of average wage of each earner)	67	100	167	67	100-0	100-33	100-67
Standard tax wedge							
Israel	15.5	22.4	31.8	2.4	19.9	16.7	16.1
OECD unweighted average	32.1	36.1	40.4	16.0	26.6	28.1	30.8
Including all compulsory payments							
Israel	29.6	33.0	37.8	18	30.7	28.5	28.4
OECD unweighted average	34.8	38.5	42.6	18.9	29.4	30.8	33.4

Note: The children in the model are between 6 and 11, and single earners are male. The standard tax wedge is defined as income tax plus employee and employer social security contributions less cash benefits as a % of labour costs. The average compulsory payment wedge is expressed as a % of augmented total labour costs.
Source: OECD, *Taxing Wages database*.

Including mandatory pension contributions to private-sector pension funds ("second pillar" pensions) brings the compulsory payment wedge closer to the OECD average (Table 3.2 and Figure 3.6). The minimum rate of contributions is 18.5% of the employee's salary (up to the average wage). Employees pay about one-third and employers two-thirds of the contribution. The mandatory pension contributions for low-wage workers are high in international comparison (OECD, 2016a). In return, the pension system offers high replacement rates for workers earning less than the average wage. Furthermore, the pension-contribution component of the wedge probably elicits milder behavioural responses than the taxation component, to the extent that individuals view it as a redistribution of their own income over time. Nevertheless, it may diminish work incentives to some extent, tends to undermine low-income households' living standards during their working age and may lead to higher informality (Brender, 2011). The government should therefore avoid further increases of the compulsory payment wedge for low-income workers.

Figure 3.6. Tax and compulsory payment wedges

For a single taxpayer with no children at 67% of earnings, 2019



Source: *OECD Taxing Wages database*.

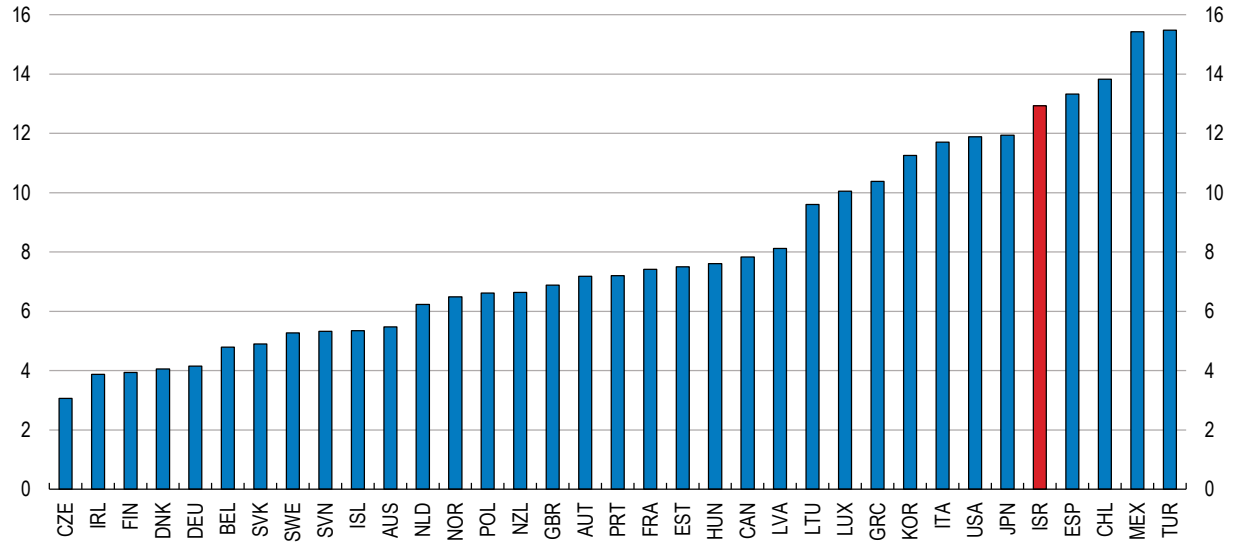
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The Israeli government's strategy of encouraging employment among previously non-working families has met with substantial success, but the share of working poor has risen and is internationally high (Figure 3.7). The average real income of poor households has grown faster than the average real income of their wealthier counterparts in the recent past. Many workers with traditionally low labour market

attachment have been able to find jobs, but their families remain poor, since in most cases these jobs are low-paid. This is particularly true for the Haredim and Arab-Israelis for whom the increased number of breadwinners per household in the last decade (including part-time workers) has had only a limited impact on their poverty risks given the typically large size of their families. Therefore, the authorities should focus more on decreasing poverty among those in work.

Figure 3.7. The share of working poor is high

Share of workers in poverty, %, 2017 or latest



Note: Working poor are those with income below the poverty line (50% of median disposable income), living in households with a working-age head and at least one worker. 2018 data for Australia and Israel.
Source: OECD, *Income Distribution database*.

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One way to address this poverty issue is to further expand in-work tax subsidies**.** Israel's Earned Income Tax Credit (EITC) is an effective redistribution measure with significantly positive employment effects for low-skilled workers (BoI, 2015b; MoF, 2017c; Brender and Strawczynski, 2019). Eligibility for the EITC in Israel is based on individual income, with a relatively high ceiling for family income.[1] This design mitigates negative employment effects on second earners found in similar in-work programmes in the United States and United Kingdom, which are based on family income (Brender and Strawczynski, 2019). The programme is available for workers with monthly wages of 15-55% of the average wage (10-90 % for single parents) and boosts income of eligible persons on average by up to 10-25%, depending on the family situation (Table 3.1). According to the tax authority about 290 000 employees and self-employed (7.5% of the total workforce) benefited from the EITC in 2017. The take-up rate of the EITC is around 70% (MoF, 2017c), similar to other countries'. The EITC is currently paid four times a year to eligible persons based on their income in the previous year.

Since its inception in 2008, the EITC has been progressively expanded. Most recently, the "Net Family" programme of 2017 included several temporary measures for the 2019 budget: a) an increase of the tax credit for fathers by 50% to the level of mothers of NIS 495 per month; b) the introduction of a 30% bonus in benefits if the spouse has monthly labour income above NIS 3630; and c) an increase in the wage range in which a worker is entitled to the maximum credit amount. These welcome changes have restored gender balance and strengthened work incentives for second earners. In addition, the expansion is estimated to reduce overall poverty by 0.9 percentage point, with the largest reduction among the Ultra-Orthodox (2.7 percentage points) (BoI, 2018). These temporary measures should be made permanent. In addition, the

EITC could be further extended, since its overall budgetary cost including the latest measures is only around 0.16% of GDP (IMF, 2018). Net costs of EITC programmes might be lower than these gross budgetary costs, as EITCs boost labour supply, thereby reducing other welfare payments (Bastian and Jones, 2019). The EITC could be expanded, for instance, by increasing the maximum pay-out amount or the bonus for second earners. However, care would need to be given to the particular design of any EITC expansion to avoid high marginal tax rates in its phase-out range.

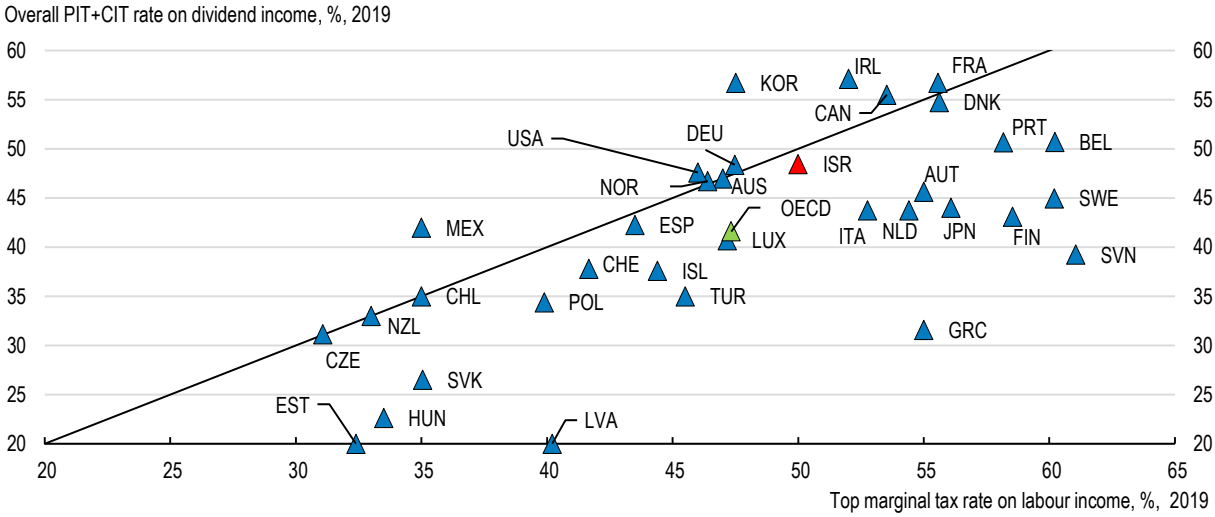
The Net Family programme also increased the (wasteable) tax credit for parents of children under the age of five to 2.5 points. The aim of the extension was to incentivise all working-age adults in a household to continue participating in the labour force while raising young children, and help families smooth consumption over the life-cycle (Brender, Strawczynski, 2015). The extension of the credit led to a reduction in the share of people paying income tax among parents with children below the age of six from 50 to 40%. This change, which costs about NIS 1.8 billion annually, mainly benefited well-off families. According to the Bank of Israel, about 60% of the benefits went to the two highest income quintiles, while only 2% went to the lowest quintile (BoI, 2018). The effect of the extension on labour market outcomes should be further evaluated.

Employment rates of the elderly have increased sharply and are higher than in most OECD countries, but incentives for labour force participation could be further strengthened to reduce high levels of old-age poverty (OECD, 2016a). The effective marginal tax rate for a pensioner choosing to work without postponing pension receipt is excessively high: 74-109% (for a salary between half and three-quarters of the average wage). This is due to the reduction of the first-pillar basic pension benefit, which is means tested for men and women below 70, the loss of rights to the earned income tax credit and the impact of additional income tax and social contributions paid (OECD, 2016a). As argued in previous *Surveys*, the government should reduce this disincentive to work by lessening the reduction of first-pillar basic pension entitlements in the presence of work-related income. For instance, in 2014 an inter-ministerial committee (the Orbach Committee) recommended to reduce the deduction rate of the pension entitlement from 60% for every shekel of income earned above the maximum ceiling to 30%.

There is room to reduce tax distortions in private saving and investment decisions

Israel generally applies a flat tax rate of 25% on dividends and inflation-adjusted interest income and capital gains. A higher tax rate of 30% applies to substantial shareholders that hold over 10% of a company. An additional surtax of 3% is levied on total income from all sources above NIS 649 560 (USD 188 000) per year. Differences in the taxation of labour and capital income can potentially create incentives for tax evasion by reclassifying labour income as capital income, which is especially easy for manager-owners of closely held corporations. However, in Israel labour and capital taxes are fairly well aligned. The top marginal tax rate on labour income is close to the combined tax on capital income accounting for both corporate and dividend taxation (Figure 3.8).

Figure 3.8. The all-in top marginal tax rate and dividend taxation are aligned



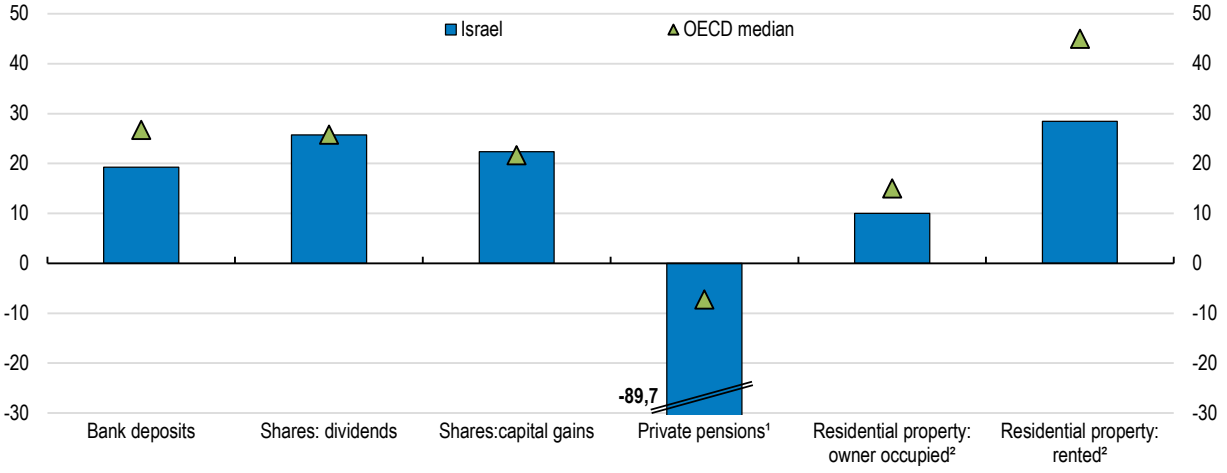
Note: The top marginal tax rate includes personal income tax and employee social security contributions (all-in rate). Non-tax compulsory payments are not included. The overall personal and corporate income tax (CIT + (1-CIT)*PIT) rate on dividend income reports the overall tax rate on distributed profit, taking into account taxation prior to distribution and at the household level and showing the highest rates.
Source: *OECD Tax database*.

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As in other countries, private pensions and owner-occupied residential property are significantly tax favoured (Figure 3.9). From an efficiency standpoint, such large differences in tax rates across saving vehicles should be avoided, as they distort saving decisions (OECD, 2018b).

Figure 3.9. Effective tax rates differ across saving vehicles

Marginal effective tax rates, average rate taxpayer (100% average wage), 2016



1. Deductible contributions.
2. Purely equity financed.
Note: Details of the methodology to calculate the marginal effective tax rates for each asset type can be found in Annex A of OECD (2018), *Taxation of household savings.* Country-specific inflation rates are used in the calculation.
Source: OECD (2018), *Taxation of household savings.*

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The tax benefits provided to the private pension system are among the highest in the OECD (OECD, 2018b; Achdut and Strawczynski, 2017). Employer contributions are exempt from tax for employees up to a ceiling that was reduced in 2016 from four times to 2.5 times the average wage. Employee contributions benefit from a 35% tax credit, up to the average wage. More than half the total value of the tax deductions on pension contributions goes to the top decile of the income distribution, while around 45% of employees, including the most vulnerable, do not pay income tax and therefore do not benefit (Brender, 2011; OECD, 2016a). Returns on the investment earned prior to payout are fully tax exempt. In addition, 52% of the pension benefits are tax free (with a ceiling). According to current law, this tax exemption is set to rise to 67% of the pension annuity by 2025. The favourable treatment of pension saving is often justified on the grounds that people tend to under-save for retirement. The estimated annual budgetary costs of the combined tax benefits are large, amounting to NIS 27 billion (1.9% of GDP).

The authorities should consider further paring back tax benefits to the private pension system. For example, Achdut and Strawczynski (2017) estimate that lowering the tax-free ceiling for employer contributions from 2.5 times to twice the average wage would generate about NIS 800 million (0.06% of GDP) in additional annual tax revenues. The tax exemption of pension benefits should be reduced or the government should at least scrap the plans to further increase them. In case of a reduction of the tax benefits, the extra revenues could be used to further expand the EITC or the income supplement to old-age pensioners in order to reduce old-age poverty (OECD, 2016a and 2018a).

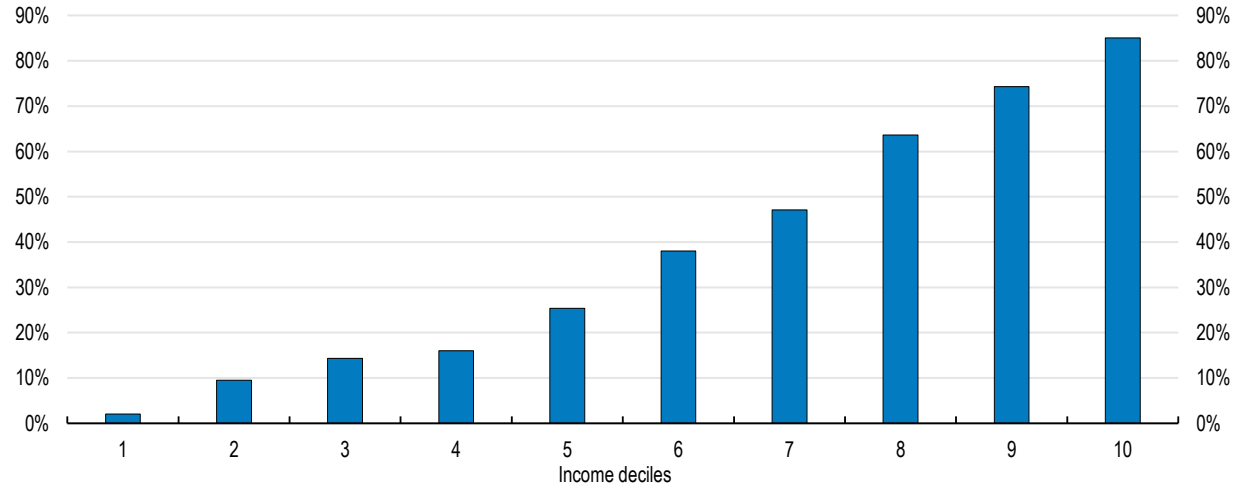
The government should also reduce the favourable tax treatment of advanced-study funds (Keren Hishtalmut), as argued in previous *Economic Surveys*. Employer (or self-employed) contributions to the funds are not included in taxable personal income and are hence exempt from personal income tax and social security contributions (up to a ceiling). Moreover, capital gains are tax exempt. To benefit from the tax advantages, funds have to be held for three years if the savings are spent on training or education. If held for at least six years they can be spent for any purpose. As part of the government response to the health crisis, withdrawal of funds held for less than six years have also been temporarily tax exempt for people who suffered income losses during the crisis. Around 40% of wage earners invest in these funds and the estimated annual budgetary cost are large, at NIS 8 billion (0.6% of GDP). According to the Ministry of Finance about 75% of the money currently invested in the funds has been held for more than six years. This suggests the funds are generally not used for training purposes. In addition, the tax benefits are very regressive: the share of employees who invest in the funds is much higher among high-income employees (Figure 3.10). The government should therefore abolish the favourable tax treatment of the advanced training funds entirely or, at a minimum, remove the exemption from capital gains taxes for funds held longer than six years.

While improving tax efficiency, reducing tax benefits to the private pension plans and advanced-study funds would increase the effective tax burden especially on middle and high-income earners. Any tax reform in this area should therefore take into account possible negative effects on the work and investment incentives for these groups. The reform impact on total savings and benefits towards retirement should also be evaluated.

The tax treatment of owner-occupied housing is more favourable than that applied to rented residential property and financial assets, as in other countries**.** The purchase (transaction) tax on the first home is subject to tax exemptions and is generally lower than for buyers of a second or subsequent homes, which ranges between 5-10%, depending on the purchase price. Capital gains from the sale of the first home are exempt from tax for sale prices below NIS 4.5 million (USD 1.3 million), while the standard capital gains tax rate of 25% rate applies for higher sale prices. Finally, neither imputed rents nor mortgage interest payments are taken into account in the tax liability of owner-occupied dwellings. In comparison, rental income from residential property is tax exempt up to a ceiling of NIS 5100 per month, and progressive tax rates apply for income exceeding this threshold. Alternatively, a 10% flat tax (without deductions) can be chosen for rental income.

Figure 3.10. Tax benefits from advanced training funds mainly accrue to high-income employees

Share of employees with advanced training funds by income decile, ages 25-61, 2017



Source: Central Bureau of Statistics Israel; and Israel Ministry of Finance.

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Differences in the tax treatment of residential property compared to other assets and between owner-occupied and rented property should be reduced. For instance, the residential property tax could be increased (see below). In addition, tax and reporting exemptions for landlords' rental income below NIS 5100 per month should be removed (Gruber, 2015; OECD, 2016a and 2018a). Stricter reporting requirements can help tackle tax evasion on such income, which seems particularly high (Horesh, 2019; Levi-Weinrib, 2017; MoF, 2017a), but would need to be combined with steps to minimise the administrative burden associated with paying and enforcing taxes. Enhanced tax-authority access to financial institutions' data could help detect evasion. In return, the authorities should lower purchase taxes as transactions taxes can have undesirable side effects such as reducing household mobility. As part of the response to the COVID-19 crisis, the government has recently lowered transactions taxes on second (or multiple) homes and thereby reduced the tax gap between the first home and the second (or multiple) home. This will help reduce incentives to evade taxes by using "straw" buyers, such as relatives who do not own residential property themselves, to benefit from the lower transactions taxes on first homes (Gruber, 2015).

The authorities should also rigorously assess if the tax exemptions on capital income for immigrants contributes to the goal of increasing immigration, and whether less costly measures are available. New immigrants (and returning residents who have lived abroad for at least 10 years) are entitled to a 10-year tax exemption on certain foreign-source income and capital gains. Moreover, during these years they are also exempt from annual reporting on assets and income derived abroad. This reporting exemption should be cancelled.

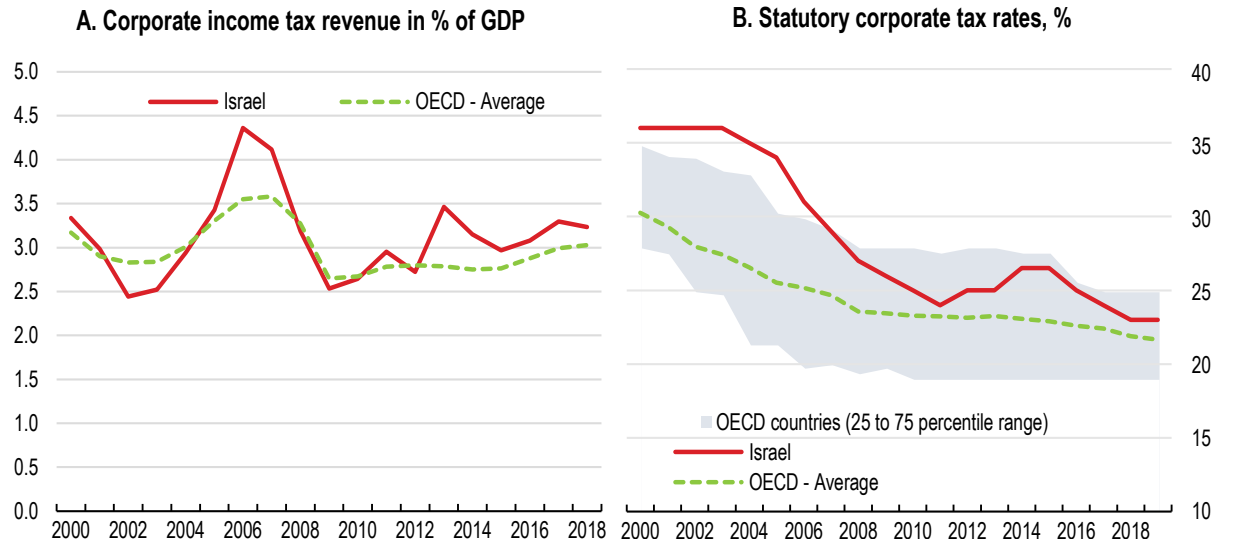
Business taxation

As a small open economy with a substantial high-tech sector, Israel is particularly exposed to capital mobility. Multinational enterprises (MNEs) have invested heavily in Israel's high-tech sector. The stock of inward FDI is around 45% of GDP. At the end of 2017 around 45% of the total FDI stock was invested in high-tech manufacturing (computer, electronic and optical products) and services (telecommunications, computer programming and R&D) sectors, and the United States was the single largest source of FDI investment, accounting for around 16% of the total FDI stock. Evidence for Israel suggests that domestic firms may benefit from the professional know-how and training that these MNEs provide (Slobodnitsky et

al., 2018). Nevertheless, a marked productivity disparity exists between dynamic, trade-exposed, high-tech industries and more domestic-oriented, sheltered sectors (OECD, 2016a). Hence, while it remains important to keep business taxes attractive to attract foreign investment, it is equally important to reduce barriers and distortions that may hamper technology diffusion and adoption in the economy more broadly.

Israel has recently lowered the statutory corporate income tax (CIT) rate to 23%, close to the (unweighted) OECD average. After a period following the tent protests in 2011 when the corporate tax rate was increased from 24% to 26.5%, the rate has been on a downward trend again since 2015. Revenues from corporate taxation are somewhat higher than the OECD average, both as a share of GDP (3.3%) and as a share of total revenues (10%) (Figure 3.11).

Figure 3.11. Corporate tax revenues and rates

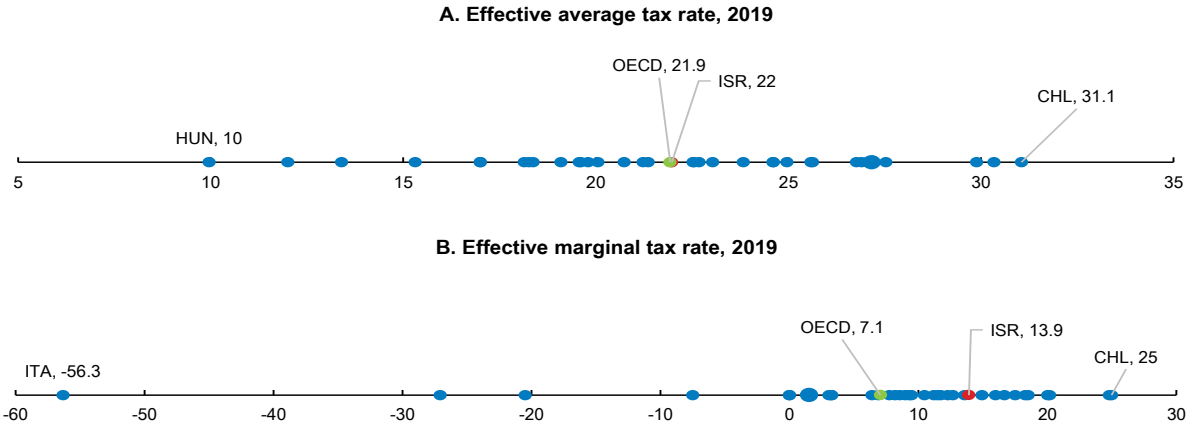


Source: OECD *Tax* database.

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While statutory tax rates provide important signals to investors about the business environment, differences in the definition of tax bases and various capital allowances can have important implications for investment decisions. Taking into account differences in the generosity of tax depreciation rules and interest-rate deductibility (including allowances for corporate equity) for a range of different assets, the OECD (2019b) has recently computed average and marginal effective tax rates across countries.[2] Average effective tax rates are useful to gauge investment incentives at the extensive margin, that is, location decisions. According to this indicator, Israel is again close to the (unweighted) OECD average. Marginal effective tax rates are more appropriate to analyse investment decisions at the intensive margin, that is, how taxes affect the incentive to expand investment, given a fixed location, and place a higher weight on capital allowances. Israel's marginal effective tax rate is somewhat above the (unweighted) OECD average (Figure 3.12). This suggests that the capital allowances captured in the analysis are somewhat less generous in Israel than in other OECD countries.

Figure 3.12. Effective corporate tax rates



Source: *OECD* Corporate *Tax Statistics*.

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However, these effective tax rates do not capture tax breaks and subsidies related to particular industries or regions. The Law for the Encouragement of Capital Investments (LECI) is Israel's flagship programme on this front. The LECI aims to foster productivity and provide employment opportunities in peripheral areas. The LECI offers corporate income tax rates well below the statutory rate, plus other support for firms that have demonstrated that they are highly productive including through their export performance (Table 3.3). In its current version, qualifying firms benefit from reduced tax rates of 8-16% (5-7.5% in development areas) and a reduced withholding tax on dividends. In addition, investment grants are available in development areas of up to 20-30% of the investment expenditure. These grants are more targeted towards SMEs and lower-tech manufacturing firms. For instance, over the period 2015-19, 86% of the projects and 60% of the budget was allocated to SMEs and 60% of the number of grants benefitted low-tech firms, according to the Ministry of Economy's classification.

In 2017 the LECI was amended to further encourage intellectual property-based activity, and a so-called innovation or IP box regime for (special) preferred technology enterprises was introduced. The tax on intellectual property income was cut to 6-12% (7.5% in development areas). These changes are in accordance with the nexus approach under the OECD's BEPS Action 5, which allows taxpayers to benefit from an IP box regime only to the extent that they have themselves incurred qualifying R&D expenditures that gave rise to the IP income. The OECD Inclusive Framework on BEPS classified IP measures as non-harmful. Overall about 2000 companies benefit from the LECI (BoI, 2018), whose fiscal costs are estimated to have amounted to around NIS 5 billion in 2019 (0.4% of GDP or around one-eighth of total corporate income tax revenue).

The LECI's substantial tax benefits for internationally competitive and high-tech firms may have helped to attract FDI and investment in peripheral areas, but it creates distortions in the economy. By increasing profitability, the tax benefits provide incentives to shift production to the tradables sector, driving up demand for factors of production in that sector. This raises the costs for more domestically oriented companies to attract capital and skilled labour (Hercowitz and Lifschitz, 2016; BoI, 2019). This problem is particularly acute in the current environment of skills shortages (notably for engineers). The support for exporting firms could be justified on the grounds that exporting leads to higher productivity (a "learning-by-exporting" hypothesis) or strong externalities from exports. However, the evidence across countries in support of learning-by-exporting or export externalities is rather mixed (e.g. Zimring and Moav, 2016), with evidence also supporting a self-selection of more productive firms into becoming exporters (e.g. Wagner, 2007). Furthermore, sector- and location-specific tax incentives can create tax-planning opportunities and potential for policy capture and may raise the costs of tax administration.

Table 3.3. Law for the Encouragement of Capital Investments (LECI)

Programme	Key eligibility conditions	Benefits
Preferred enterprise programme	Company needs to be "internationally competitive", i.e. having exports of at least 25% of total income from sales to a market with at least 15 million residents.	● CIT rate: 16% (7.5% in priority areas) ● Withholding tax on dividends: 20% ● Investment grants (in priority areas) ● Accelerated depreciation
Special preferred enterprise programme	As for preferred enterprises plus annual revenue over NIS 1 billion (or consolidated group revenue over NIS 10 billion), plus either: a) investment in productive equipment of at least NIS 800 million (NIS 400 million in a priority area) over a three-year period; or b) R&D investment of at least NIS150 million (NIS100 million in a priority area); or c) employment of at least 500 employees (250 employees in a priority area)	● CIT rate: 8% (5% in priority areas) ● Withholding tax on dividends: 20% ● Withholding tax on dividends to parent companies: 5% (until end 2019) ● Investment grants (in priority areas) ● Accelerated depreciation
Preferred technology enterprise	On income from IP developed in Israel according to the Nexus Approach. Company needs to be "internationally competitive" as defined above. In addition ● average R&D expenses in the three years prior to the current tax year of at least 7% of its total revenues or over NIS 75 million per year. ● one of the following conditions: ○ 20% of company's employees are R&D staff or the company has at least 200 R&D employees, ○ venture capital fund has invested at least NIS 8 million ○ average annual revenue growth over the three-year period prior to the tax year of at least 25% or the revenue above NIS 10 million in each year. ○ average annual growth in the number of employees over the three-year period prior to the tax year of at least 25% and at least 50 employees each year Companies not meeting the above conditions may still be considered as a qualified company if approved by the Israel Innovation Authority	On income from IP ● CIT rate 12% (7.5% in priority area) ● Withholding tax on dividends: 20% ● Withholding tax on dividends to a foreign company that holds at least 90% of the firm: 4%
Special preferred technology enterprise	On income from IP developed in Israel according to the Nexus Approach. As for preferred technology enterprise plus consolidated group revenue over NIS 10 billion	On income from IP ● CIT rate 6 % ● Withholding tax on dividends: 20% ● Withholding tax on dividends to a foreign firm that holds at least 90% of the firm: 4%

In addition, the recent US tax reform could potentially affect the activity of US MNEs in Israel, although the precise effects are still unclear. The United States is an important source of venture capital and FDI in the Israeli high-tech sector, and several important US high-tech firms have large subsidiaries in Israel. The US tax reform included a sharp cut in the federal statutory corporate income tax rate from 35 to 21%. This narrows the tax gap between the two countries, but the tax rate on international high-tech corporations in Israel, effectively in the range of 5–16%, remains lower. Other features of the US tax reform are, however, potentially more important. In particular, the Base Erosion Anti-Abuse Tax (BEAT) could make it more difficult for large US companies to offset payments to foreign companies for expenditure on services, intellectual property and interest against US profits. This may reduce incentives for US firms to conduct R&D in Israel. In addition, the Global Intangible Low-Taxed Income (GILTI) provision is essentially a minimum tax (of 10.5%) on US companies' profits earned abroad. This implies that any tax differential with respect to the minimum tax could simply lead to a transfer of corporate tax revenue from Israel to the United States.

The government should therefore thoroughly evaluate the tax breaks under the LECI with a view to better targeting the scheme in order to ensure net benefits to society. Such a cost-benefit analysis should evaluate its social benefits and costs comprehensively (IMF et al, 2015). For example, on the benefit side, only the net investment impact should be taken into account, *i.e.* positive effects on investment should be corrected for investment that would have occurred without the incentive or for possible reductions in other investments, which could occur, for instance, if FDI replaces domestic investment. Positive productivity effects on other firms through knowledge or technology spillovers should also be taken into account. On

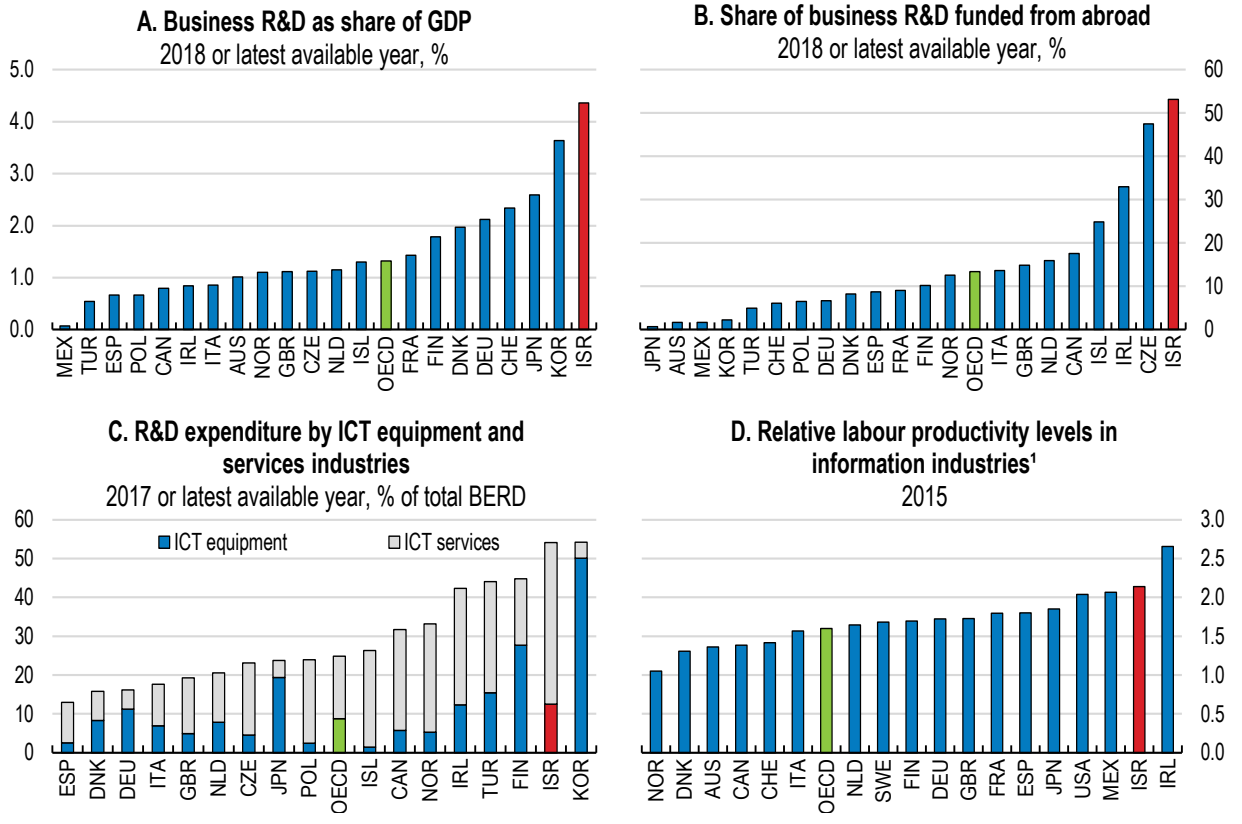
the social cost side, the evaluation should include net tax revenue losses, administrative and compliance burdens, and costs related to distortions in resource allocations as described above.

Reviewing and better targeting the tax incentives could create room to broaden the tax base and increase the resources available for the government. Reducing distortions in the economy could support GDP growth and aggregate productivity.

Rebalancing support for innovation

Israel's R&D performance is impressive. It has the highest share of business R&D spending as a share of GDP in the OECD (Figure 3.13, Panel A). The share of R&D by small and young (established less than five years ago) firms in total business R&D is exceptionally high at 9.3% in 2014 (OECD, 2017a), in part related to the fact Israel has one of the largest venture capital markets (relative to its size) in the world (0.4% of GDP in 2016). Funds from abroad are the source of more than half of business R&D (Panel B), with 65% performed by foreign controlled affiliates, the highest share in the OECD. However, R&D expenditure is concentrated in information industries, with ICT manufacturing and service sectors accounting for more than half of total business R&D, compared to about a fourth in the average OECD country (Panel C). Among the top 20 R&D investors with headquarters in Israel, 10 operate in software and computer services or technology hardware and equipment (EU, 2018). This strong concentration of R&D investment in ICT sectors may explain the particularly large gap in the productivity levels between the ICT sectors and the rest of the economy in international comparison (Panel D).

Figure 3.13. Business R&D spending is impressive but concentrated in ICT sectors

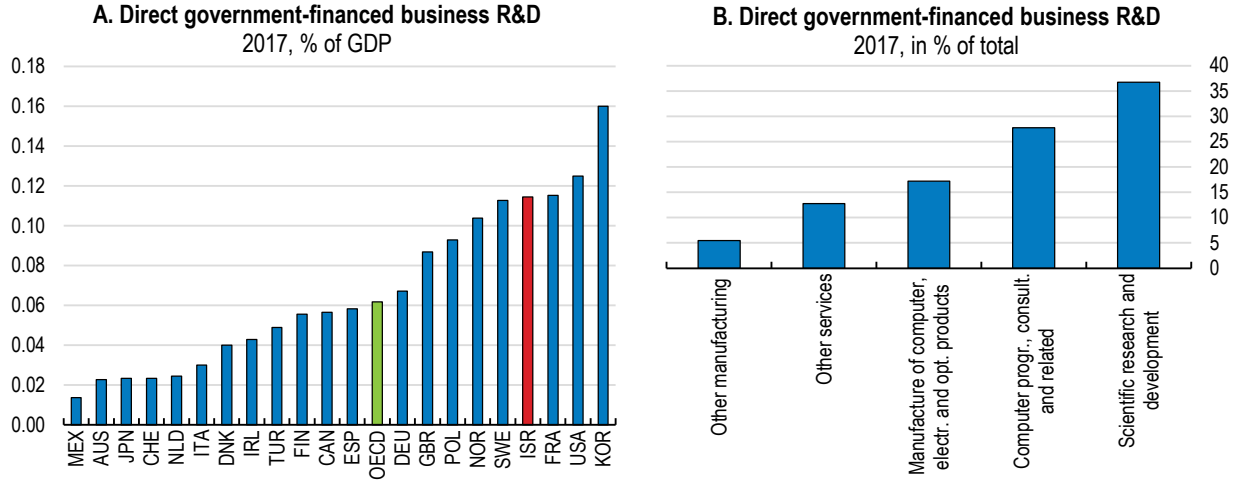


1. Value added per person employed relative to aggregate labour productivity of other industries in the non-agriculture business sector.
Source: *OECD, R&D Expenditure database*; OECD (2017), *Science, Technology and Industry Scoreboard 2017*.

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The authorities actively promote R&D and innovation through favourable tax treatment of expenses (e.g. accelerated depreciation (scientific investment deduction) for capital R&D expenditure) and income from intellectual property (under the LECI as described above) as well as direct support measures (e.g. R&D grants and procurement). The Israel Innovation Authority (IIA, formerly the Office of the Chief Scientist until 2016) manages R&D incentives. While data on the value of income- and expenditure-based R&D tax incentives are lacking, direct government support is high, amounting to around 0.1% of GDP (Figure 3.14, Panel A). Among the grant schemes, the R&D Fund is the main incentive programme. It offers conditional financial support of up to 50% of R&D expenditures and is open to businesses in all sectors. Companies with commercially successful projects are obliged to repay the grant in instalments via royalties. In addition, a host of targeted financial-support programmes exist, for example, for start-ups, academic research, business incubators, R&D centres and international R&D cooperation.

Figure 3.14. Direct government R&D support is substantial but concentrated in a few sectors



Source: OECD, *R&D Expenditure database.*

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The government's efforts to support innovation are commendable, but it could consider a stronger targeting of support to firms and sectors that are lagging behind the productivity frontier. Evidence suggests that public R&D funding can reduce the costs of adopting new technologies and ideas and hence speed up technology diffusion (Berlingieri et al., 2018). Despite the wide scope of the grant system, direct government R&D support mainly benefits a few sectors. Three sectors - manufacturing of computer, electronic and optical products; computer programming and consultancy; and scientific R&D – account for 80% of total direct government-funded business R&D (Figure 3.14, Panel B). To promote technology adoption by lagging sectors, the authorities have more recently established several grant programmes for firms in traditional manufacturing industries (such as plastic, metal, textiles and food). In particular, the "*Increasing Productivity in Industry*" and the "*Implementing Advanced Manufacturing Technologies*" programmes, established in 2017 and 2018, respectively, support productivity-enhancing investment and adoption of advanced manufacturing/industry 4.0 production technologies. These programmes should be assessed and, if found effective, could be further enhanced. Similar grants for domestically oriented services sectors could be made available.

The authorities could also consider replacing the current system of preferential tax rates for IP-based income with a broader system of tax incentives for R&D expenditure, beyond the existing accelerated depreciation provision (scientific investment deduction). Benefits of IP boxes and similar income-based provisions are likely to accrue mainly to large MNEs, as they hold most intellectual property (Appelt et al.,

2016). Young, innovative firms are often credit constrained and need the funds to conduct their research as early as possible, but IP-related incomes may materialise only years after the initial investment. IP boxes by their very nature also give an ex post reward only to successful innovators that already hold monopoly rights on their inventions and receive income from it. Furthermore, income-based provisions may push firms to focus on innovations that lead to outcomes that are likely to be protected by IP rights and, therefore, distort firms' choice regarding the form of R&D on which to focus (Akcigit et al., 2013). Finally, research shows that IP boxes' tax advantages do not stimulate local innovative activities (Alstadsæter et al., 2018), although the nexus provision of Israel's programme -- which requires that in order to benefit from preferential tax rates on IP income R&D expenditures have to have taken place in Israel (see above) -- has the potential to attenuate this effect.

Expenditure-based R&D tax incentives such as tax credits could avoid some of the drawbacks of income-based incentives and complement direct R&D funding. Tax incentives have become a widely used policy tool to promote business R&D in OECD countries (OECD, 2019c). The literature generally finds that R&D tax incentives lead to additional R&D investment (e.g. Appelt et al., 2016; Westmore, 2013). Expenditure-based measures have an advantage over income-based measures in that they more directly support the financing of R&D and thus help overcome difficulties in finding external funds, especially for small and young firms, which is the main rationale for providing public support in the first place. While direct grants have the advantage of being easier to target to projects with high social returns, tax incentives avoid "picking winners" and should require fewer administrative resources to operate.

To avoid overly favouring incumbents (Bravo-Biosca et al., 2016) it is important that tax benefits include carry-forward provisions or cash refunds (e.g. reductions in social security and payroll taxes), so that small and young firms and basic research projects can benefit (Appelt et al., 2016). Cash refunds may be particularly suited to mitigate financial market imperfections that hamper investment by young and small firms. For example, Australia, Canada, France and the United States offer refundable R&D tax incentives that particularly target smaller R&D performers, allowing them to make use of earned tax credits even in the case of insufficient tax liabilities. In order to contain the overall fiscal costs the authorities could use upper ceilings and thresholds to eligible R&D expenditure or tax benefits or apply differential rates for SMEs and large firms. Expenditure-based tax incentives could also go beyond R&D and target innovation activity more broadly, and include, for example, training, ICT investment or IP acquisitions as eligible expenditures. For example, the French innovation tax credit includes patent fees as eligible expenditure for SMEs, which may help small firms adopt new technologies. Effective *ex post* evaluation should be an integral part of every innovation policy, and R&D and innovation tax incentives should be no exception.

Protecting the corporate tax base in a globalised and digitalised world

In an increasingly globalised economy protecting the tax base from erosion is a major challenge. Israel has 58 tax treaties in force. It was among the first 11 countries to ratify the OECD's multilateral instrument, developed as part of the Base Erosion and Profit Shifting (BEPS) package, in September 2018 and included 53 of its treaties therein. The multilateral instrument covers treaty-related minimum standards and enables the parties to implement other tax treaty measures developed in the BEPS project. Peer reviews on the BEPS minimum standards for Israel have been positive but have concluded that further progress is needed in the implementation of country-by-county reporting (Action 13), which requires all MNEs to provide data on the global allocation of income, profit, taxes paid and economic activity among tax jurisdictions in which they operate. Israel has not yet introduced a country-by-county reporting obligation into its domestic law due to the internal political situation. The newly elected Knesset will discuss the relevant bill. Israel should implement these reporting measures and start exchanging country-by-country data as soon as possible.

In Israel, as in many countries, the growing digitalisation of the economy is challenging the effectiveness of the existing income tax system to deal with new business models. Since digital activity often requires only a minimal physical presence in countries where value is created, traditional rules, which rely on a physical presence to determine taxing rights, fail to capture the income from this value creation. To address this issue, the authorities introduced a "Significant Economic Presence" test in 2016, which establishes criteria based on digital/online presence, under which a foreign company deriving income from online sales to domestic customers may become subject to taxation in Israel, subject to relevant tax treaty provisions. Israel is actively participating in the development of a long-term, consensus-based solution within the OECD/G20 Inclusive Framework on BEPS, based on two pillars, which is key to avoiding a fragmentation of the international tax architecture and to putting an end to tax avoidance. Significant progress has been made in the development of the two pillar approach, with the aim to reach political agreement by the end of 2020. Without a global long-term solution, a proliferation of unilateral, fragmented rules, would have negative impacts on international trade and investment.

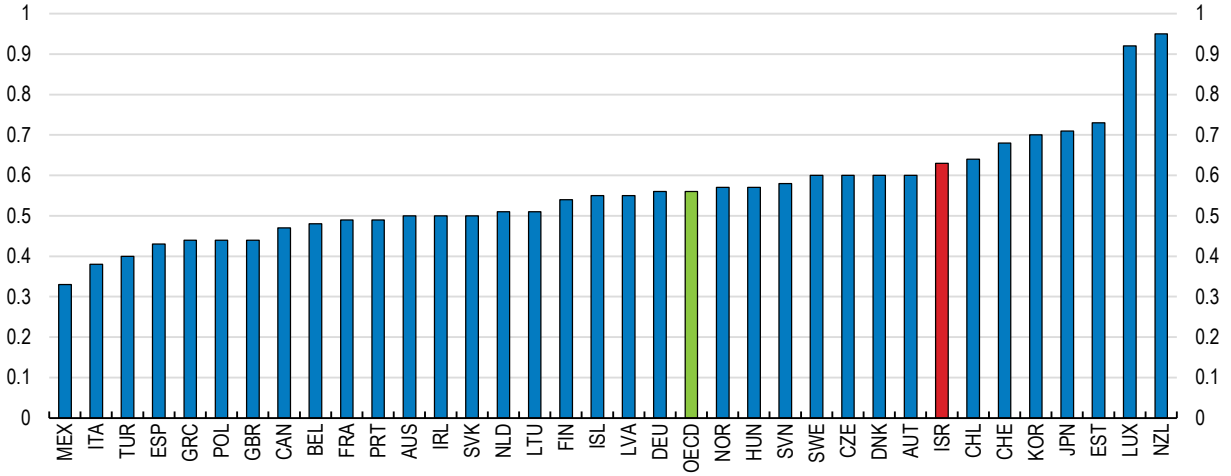
Taxes on goods and services

Israel relies heavily on indirect taxation of goods and services, raising revenues of more than 11% of GDP in 2018 therefrom. At least since the mid-1990s revenues from taxes on goods and services have been consistently above the OECD average both as a share of GDP and of overall revenues. In revenue terms the value-added tax (VAT) is by far the largest single item (65% of revenue in this category). Excise taxes (13% of revenue in this category) and recurrent taxes on the use of goods are also important sources of revenue.

The VAT has few exemptions, but the base could be further broadened

The VAT system is efficient and characterised by a single rate, which at 17% is low in international comparison, with relatively few exemptions. Hence, the VAT revenue ratio (the difference between the VAT revenue collected and what would theoretically be raised if VAT was applied at the standard rate to the entire potential tax base in a "pure" VAT regime) is relatively high by international standards (Figure 3.15).

Figure 3.15. The VAT revenue ratio is higher than in most OECD countries



Source: *OECD (2019), Consumption Tax Trends 2018: VAT/GST and Excise Rates, Trends and Policy Issues,* OECD Publishing, Paris.

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However, once the economy has fully recovered from the COVID-19 crisis, the VAT base could be further broadened by removing inefficient tax exemptions (Table 3.4). Preferential rates and exemptions are frequently used to address equity issues and correct for externalities. However, this is often inefficient, because exemptions and preferential rates benefit all households, including the affluent (OECD, 2018c). Furthermore, differential VAT rates provide opportunities for tax evasion by re-classifying goods to benefit from lower rates. Finally, raising VAT revenues through base broadening instead of rate increases tends to be more growth-friendly (Acosta-Ormaechea and Morozumi, 2019).

Table 3.4. VAT exemptions, 2019

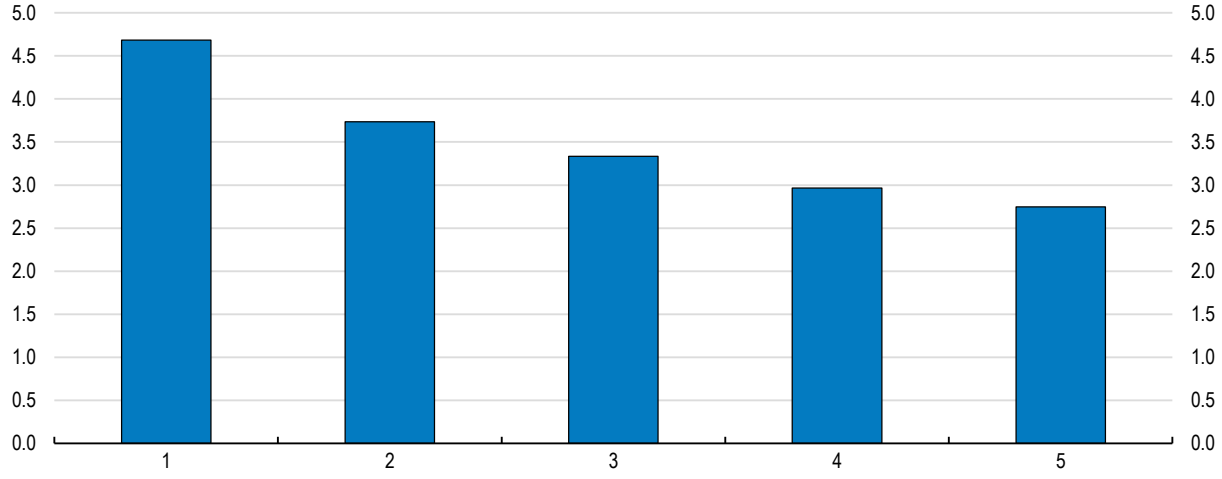
	Cost in million NIS	Cost in % GDP
Fruit and vegetables	3 490	0.26
Eilat Law	880	0.07
Tourism services	860	0.06
Online purchases	500	0.04
Total	**5 730**	**0.43**

Source: Ministry of Finance.

OECD *Surveys* have long argued that tax exemptions on fruit and vegetables, on certain tourist services (e.g. accommodation) and on goods and services in the tourist centre of Eilat are inefficient and should be gradually phased out. Poorer households in Israel indeed spend a slightly larger share of overall consumption on fruit and vegetables than more affluent households (Figure 3.16). Thus abolishing the exemption would have regressive effects. However, the extra revenues could be spent on existing and more targeted transfer schemes to more than offset such an effect. For example, simulations in Gotlibovski and Yaacobi (2018) show that abolishing the exemptions on fruit and vegetables and using the extra tax revenues to increase child allowances or the EITC would lead to an overall decline in inequality. Removing still high tariffs on certain fruits and vegetables along with other tariffs on agricultural products would help offset resulting price increases (OECD, 2019e).

Figure 3.16. Poorer households spend slightly more on fruit and vegetables than the more affluent

Household expenditure on fruit and vegetables by income quintile, % of total expenditure, 2017



Source: Israel Central Bureau of Statistics, *Household Expenditure Survey*.

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The tourism sector has been one of the hardest hit sectors during the crisis. Hence abolishing the VAT exemption on tourist services (including in Eilat) in the current circumstances would be counterproductive. Nevertheless, abolishing VAT exemptions on tourism services should remain on the government's medium-term agenda as they create an uneven playing field between companies in different sectors, diverting resources from their most efficient use. In addition, they also tend to have an adverse effect on administrative and compliance costs, as they complicate the tax system. Finally, VAT exemptions on tourism services are generally regressive, as poor households travel little. Israel is one of few cases in the OECD, where the VAT exemptions for tourism services only apply to foreigners (with the exception of the exemptions in Eilat). This differentiation may increase the compliance costs for firms, even as distributional effects would be less of a concern.

To avoid overly disruptive effects, VAT tax exemptions could be phased out over time. For instance, the government could announce its intention to abolish VAT exemptions 1-2 years ahead of the scheduled date.

The authorities should also remove the exemption threshold for imports of low-value goods, accompanied by improvements in the efficiency of processing and collecting the VAT on such imports. Personal imports below a value of USD 75 are currently exempt from VAT. Many countries operate such exemption thresholds, as the administrative costs of bringing these low-value items into the customs and tax net tend to outweigh the extra revenue. However, these exemptions have become increasingly controversial in the context of the growing digital economy (OECD, 2018c). Other countries have seen rapid growth in low-value imports of physical goods from online sales on which VAT is not collected. This results in potentially unfair competitive pressures on domestic retailers, who are required to charge VAT on their sales to domestic consumers, and in decreased VAT revenues. The estimated cost of this exemption in terms of foregone tax revenue is currently relatively low in Israel (Table 3.4), but the Ministry of Finance estimates that the value will more than double in the next five years as online commerce expands. Several OECD countries (Australia, New Zealand, Switzerland) as well as the EU (VAT e-commerce package) have implemented or are planning to implement simplified VAT registration and collection procedures for foreign online vendors to lower the cost of collection of VAT on low-value goods in return for scrapping the VAT exemptions (OECD, 2019f).

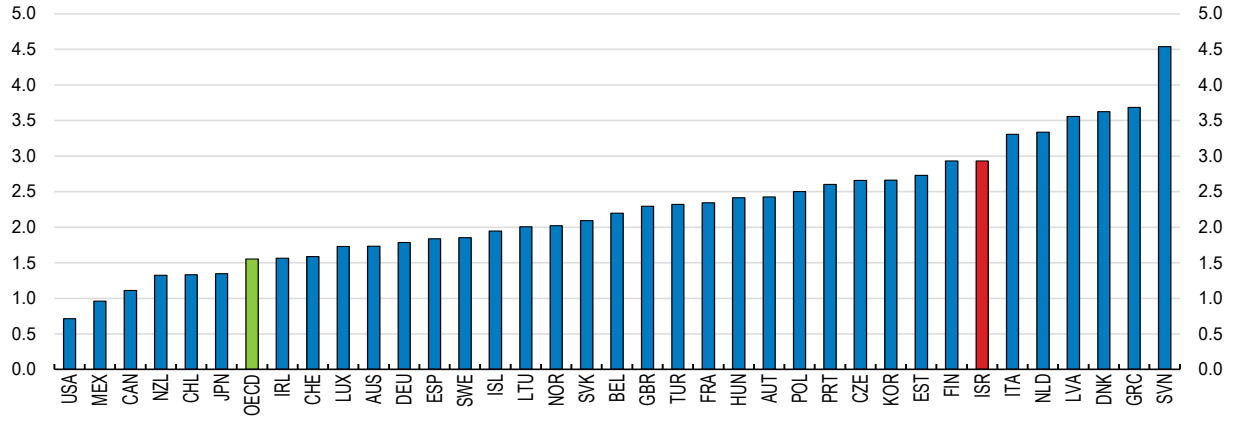
There may be room to increase the VAT rate to generate additional revenue if necessary**.** The Bank of Israel estimates that an increase of the VAT rate by 1 percentage point to 18% could raise additional revenues of NIS 5.5 billion (0.4% of GDP). The extra revenue could be used to lower public debt, finance productive spending and/or reduce other more distortionary taxes.

Excise taxes should be adjusted to improve environmental and health outcomes

Environmentally related tax revenues are high compared to other OECD countries (Figure 3.17). Revenues originate mainly from taxation of motor vehicles in the form of excise on gasoline and diesel as well as a vehicle purchase tax. Indeed, in 2009 Israel introduced a sophisticated vehicle tax rebate system. The system combines a high purchase tax rate of 83% of the import value for the most polluting cars with rebates, which are set according to the pollution and CO_2-emissions performance of the vehicle. It also includes reduced tax rates on hybrid cars, plug-in hybrids and battery engine vehicles, which the government started to gradually remove in 2020. The 2009 reform was successful to the extent that it led to significant reduction of market shares of heavily polluting cars (OECD, 2016b; MoF, 2018).

Figure 3.17. Revenues from environmental taxes are fairly high in Israel

Environmentally related taxes, % GDP, 2018 or latest year available[1]



1. 2014 for Canada, Israel and Korea; 2016 for Australia and the United States; 2017 for France.
Source: OECD, *Going Green database.*

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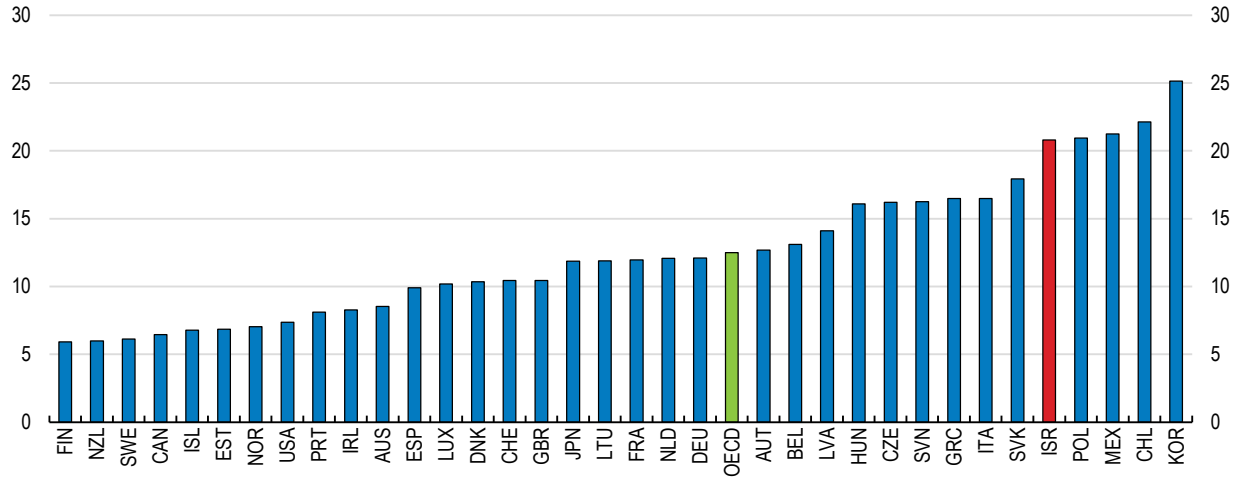
Vehicle use should be taxed more heavily to better reflect the external costs of car use, including congestion, air pollution, accidents, noise and infrastructure use. Small-particle pollution is high (Figure 3.18), and traffic congestion in the big metropolitan areas, especially Tel Aviv, is severe and likely to worsen without policy action. Road traffic intensity is much higher than in other OECD countries (see Chapter 2). The costs of congestion alone are estimated at around 2% of GDP (Trajtenberg et al., 2018), above levels in other high-income economies. Congestion charges are a cost-effective way of reducing congestion (van Dender, 2019). For instance, in Stockholm traffic volumes fell by around 20% immediately after a congestion charge was introduced. The authorities are considering two approaches to congestion charges: charges for entering three concentric rings or cordons in Tel Aviv and a kilometre charge, which would be higher during congested hours. The OECD (2019g) conducted a preliminary analysis of the two proposed schemes and found that the cordon scheme could result in an unequal and inefficient treatment of trips within zones compared to trips crossing zones. In contrast, the kilometre charge is proportional to the distance driven so that no trip is left unpriced, and drivers who mainly travel within zones are not disproportionately favoured by the policy. Regardless of the chosen scheme, a GPS-based monitoring technology can increase its efficiency and leave enough flexibility to adjust the design as the system is implemented.

Congestion charges should be complemented by allowing municipalities to set higher parking prices. On-street parking prices in Israeli cities are very low or zero for many car users (OECD, 2019g). Setting efficient parking tariffs is necessary to prevent cruising for parking. The associated external costs in terms of CO_2 emissions, pollution and congestion in busy downtown areas can be substantial (Brandt, 2012; Shoup, 2011).

The revenues from any eventual congestion charges could be used for investment in better public transport. Revenues could also be used to reduce car ownership taxes, which may also help with acceptability by the public, but could weaken the contribution of these taxes to achieving environmental and mobility policy objectives. Equally important are information campaigns that focus on the rationale and benefits of the proposed scheme. Israel's major ongoing investments in metro and light-rail systems will transform mobility in the longer term and provide alternatives to car use. In the near term the congestion charges should be accompanied by improvements in the quality of bus services – the current main public transport service in Israel – and measures to facilitate the uptake of carpooling.

Figure 3.18. Air pollution is high in Israel

Mean exposure of the population to PM2.5, in micrograms per cubic metre, 2017



Source: OECD, *Going Green database.*

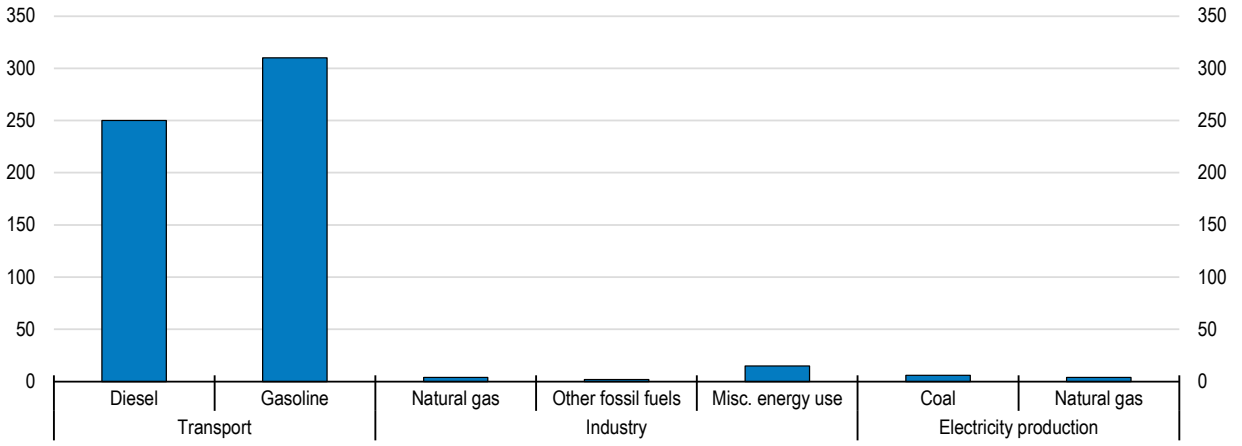
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Tax rates on gasoline and diesel are relatively high by international standards. Nonetheless, they cover only a fraction of the costs of vehicle use in urban areas (OECD, 2018h), and therefore additional road-use charges in metropolitan areas are warranted. Road-use charges would also prepare Israel for the planned phase out of petrol- and diesel-fired cars from 2030. Tax rates are slightly lower on diesel than on gasoline, although combusting diesel emits higher levels of carbon dioxide per litre than gasoline and often also more of other harmful air pollutants such as fine particulate matter (PM). In 2018 Israel started a welcome programme to gradually phase out diesel tax rebates in the transport sector including for trucks, buses and taxis by 2026 (OECD, 2019c). These rebates cost about NIS 2.5 billion (0.2% of GDP) per year.

Most importantly, taxes on non-transport carbon-based fuels should be increased to better reflect their environmental externalities**.** Coal and natural gas are taxed very lightly (OECD, 2018h; Figure 3.19). Israel already generates a substantial part of its electricity from natural gas, and this share will increase markedly in the future thanks to several large offshore discoveries of natural gas over the past decade. The government plans to end electricity generation from coal by 2026. A planned tax hike on coal for 2019 was postponed to 2021, though. Replacing imported coal and oil by gas in power generation will cut CO_2 emissions and reduce air pollution. Gradually raising the existing excise tax on primary fuels (heavy oil, natural gas and coal) or introducing a carbon tax to better reflect externalities would lower CO_2 emissions in a cost-minimising way, make renewable energy generation more competitive and help to further reduce air pollution.

Figure 3.19. Israel's effective carbon tax rates on non-transport carbon-based fuels are very low

Effective carbon tax rates, EUR per tonne of CO_2



Note: Tax rate applicable on 1 July 2018. CO_2 emissions are the result of OECD calculations based on energy use data for 2016.
Source: OECD (2019), *Taxing Energy Use 2019*: *Using Taxes for Climate Action*, OECD Publishing, Paris.

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A more effective pricing of CO_2 emissions would help Israel to reach its greenhouse gas emissions-reduction targets cost-effectively. Israel taxed around 98% of all CO_2 emissions in 2015, a high share by international standards (OECD, 2018d). However, only 27% of emissions were priced at EUR 60 per tonne, a midpoint estimate of carbon's costs in 2020 (and a low-end estimate for 2030). The High-Level Commission on Carbon Prices (2017) found that carbon prices should amount to USD 40 - 80 per tonne of CO_2 by 2020 and USD 50 - 100 by 2030 to induce the technological change in the electricity sector and the electrification of industry, household heating and transport necessary to reach the goals of the Paris Agreement. A carbon tax or ramping up the excise tax on primary fuels to reflect the shadow price of CO_2 would internalise this particular externality throughout the supply chain. Part of the extra revenues from carbon taxation could be used to avoid real income losses, in particular of low-income households, which could also increase support for such a tax. British Columbia in Canada successfully implemented a carbon tax, redistributing the revenues from the tax to households via lump-sum transfers and cuts in other taxes.

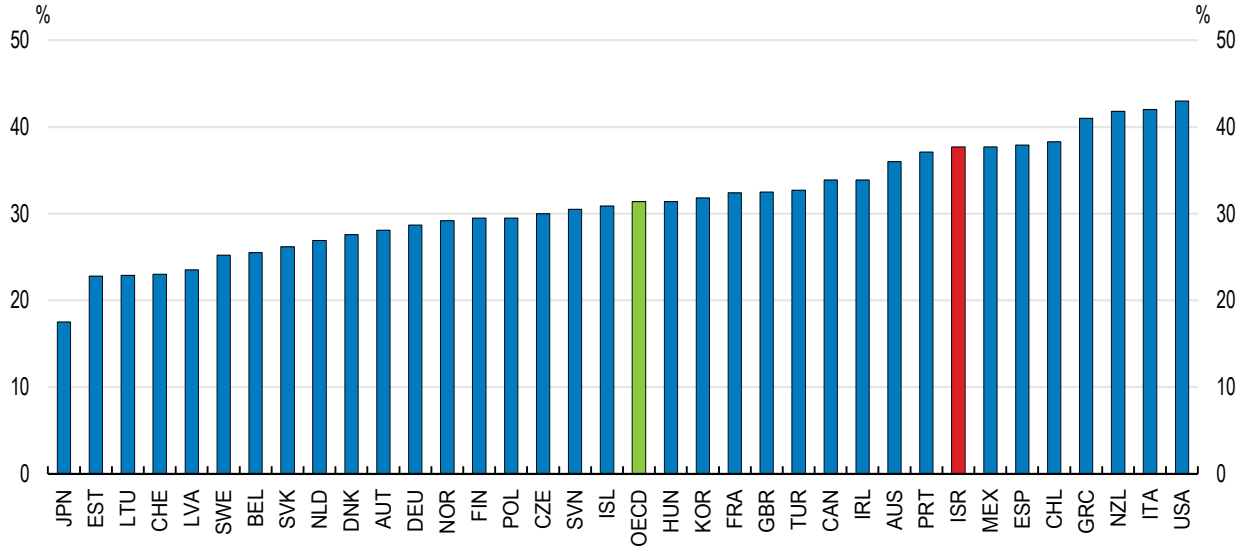
There is no immediate need to adjust alcohol and tobacco excise taxes. Alcohol consumption is low in Israel compared to other OECD economies and its taxation close to OECD averages (OECD, 2018c). Levels of tobacco consumption have fallen as in other OECD countries and are close to the OECD average. Taxes on cigarettes are fairly high and account for about 83% of the price of a standard pack of 20 cigarettes, compared to 73% on average in OECD countries. The government's decision in 2019 to hike the tax on rolling tobacco and equalise the tax treatment with cigarettes is welcome. The government also plans to tax electronic cigarettes.

The Ministry of Health has recently called for a tax on sugary foods and beverages, as Israelis seem to consume a large amount of such foods in their diets. Obesity rates are still comparably low among adults but have been rising and are higher than the population average for lower socio-economic groups. Overweight (including obesity) among the young (5-9 year-olds) is high (Figure 3.20). A sugar tax or a tax on sweetened beverages is an increasingly common tool to fight obesity and other diet-related diseases. Such taxes have been introduced in a number of OECD countries, including Finland, France, Hungary, Mexico, Norway, Belgium and the United Kingdom (OECD, 2018e). Increasing prices of sugary and high-caloric food items through appropriate tax levies could promote healthier diets, as the consumption of these products seems to have a high price elasticity (Sassi, 2016; Sassi et al., 2013). Studies for Mexico show

that taxation of sweetened beverages was correlated with a decrease in consumption when a healthier untaxed alternative was provided (Marron et al., 2015; Sassi et al., 2013; Sassi, 2016). Lower socio-economic groups would likely experience greater-than-average health improvements (Sassi et al., 2014). Such a tax should be complemented by additional measures to promote healthier lifestyles including stricter food labelling requirements and mass-media campaigns.

Figure 3.20. Overweight among the young is high

Overweight (including obesity) among 5-9 year-olds, 2016



Source: OECD (2019), *Health at a Glance 2019: OECD Indicators*, OECD Publishing, Paris.

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Property taxation

Israel's property taxes account for roughly 10% of total tax revenue and 3.3% of GDP - a high share compared to other OECD countries. Revenues from recurrent taxes on immovable property (i.e. housing or other buildings) are among the highest in the OECD area, representing about 2% of GDP and accounting for the majority of property tax revenues. The Israeli property tax (Arnona) is a municipal tax, accounting for roughly 40% of local governments' revenues. The Arnona is levied on the user of the property, and Israel is among only a small group of OECD countries that still use an entirely area-based assessment, while the majority now take property value into consideration.

The Arnona system suffers from several major deficiencies and should be reformed, as discussed in detail in Chapter 2 and in a recent OECD in-depth evaluation (OECD, 2020). The current system gives local authorities discretion over the precise methodology to calculate the tax base. This has led to a very non-transparent system in which it is impossible to compare the property tax burden across municipalities. The central government should therefore introduce a transparent and uniform system to establish the tax base. In particular, it should be based on (regularly updated) property market values. Moving towards a value-based system would probably not be overly costly. Data to establish non-residential property values already exist from other taxes with which businesses have to comply, and recently developed techniques for property assessment have greatly reduced the costs involved in determining the market value of residential property. However, a change towards a value-based system would potentially involve large changes in individual taxpayer liabilities and should thus be phased in gradually over time.

It would also be advisable to reduce the current differences between residential and non-residential tax rates. The property tax charged for non-residential land can be up to 11 times higher than that on residential properties. This is inefficient, as business property taxes tend to have stronger distortionary effects, for instance by affecting location decisions. Moreover, the difference incentivises municipalities to assign land for commercial use at the expense of residential housing, contributing to housing shortages and large revenue differences across municipalities. Cutting the non-residential property tax rates and raising the residential rates would contribute to reducing this gap. The central government should also establish bands with minimum and maximum rates for both the residential and non-residential Arnona and give local authorities the autonomy to choose rates within these bands. To offset possible regressive effects of higher residential property tax rates, the central government should standardise most residential Arnona discounts and exemptions for low-income households (see Chapter 2).

A fundamental reform of the Arnona also needs to take into account interactions with the rest of the tax system, especially with other taxes related to property, such as the land betterment tax (a levy on property-value increases due to changes in zoning and land-use regulations), the taxation of (imputed and actual) rents and property transaction taxes. While a somewhat higher tax burden on residential immovable property seems appropriate, a gradual and coordinated approach is needed to avoid sharp hikes in property-related tax liabilities.

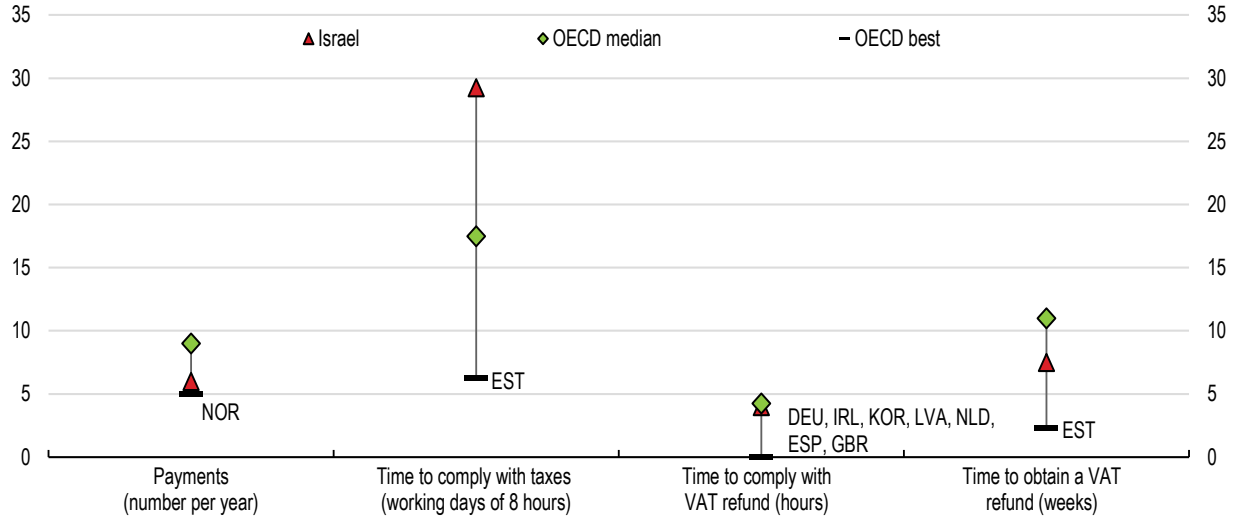
Strengthening tax administration

Efficient and effective tax administrations help reduce the compliance costs of businesses and individuals and lower tax evasion. Evidence from OECD countries highlights that well-resourced tax administrations increase tax capacity and therefore revenue (Akgun, Bartolini and Cournède, 2017). The Israeli Tax Authority is reasonably well resourced. Its budget, around 0.2% of GDP, is close to the OECD average, and the number of staff relative to the adult population or active personal income taxpayers somewhat above that in the average OECD country (OECD, 2017b).

Israel has made significant recent progress in reducing the tax compliance costs for businesses. The Israeli Tax Authority is moving forward in taking advantage of digitalisation and in developing electronic systems designed to support client services and facilitate procedures, and tax simulators and online payments have been developed for several taxes. Most notably, Israel recently introduced an electronic system for filing and paying value added tax and social security contributions. Nevertheless, the time needed to comply with taxes remains greater than in other OECD countries (Figure 3.21). In addition, on-time filing rates of corporate income tax and personal income tax returns are somewhat lower than in the average OECD country, suggesting further room to simplify tax filing (OECD, 2017b). The Israel Tax Authority's strategic plan contains a number of digital projects that are likely to improve service levels and strengthen enforcement capabilities in the coming years. Some of these projects are expected to be implemented in the short term such as the full digitisation of annual tax reports.

In addition, enhancing tax certainty, stability, and transparency can reduce compliance costs for taxpayers and have a positive impact on growth. Changes in tax rates have been frequent in Israel and at times pro-cyclical, reducing the capacity of the tax system to offset fluctuations in economic activity. For instance, the VAT rate has been changed 9 times since 2002.

Figure 3.21. The time needed for businesses to comply with taxes is still relatively long



Source: World Bank, Doing *Business 2020.*

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Greater use of third-party data can help move from post-assessment verification to pre-assessment and possible pre-filling of tax returns, which reduces compliance costs and non-compliance. An increasing number of OECD tax administrations are moving towards pre-filling of tax returns (OECD, 2017b). The data needed for pre-filling is simplest in the case of employees with only one source of income and where the employer has provided the relevant income information to the tax authority. Conducting regular taxpayer satisfaction surveys, as is done in most other OECD countries, can also help assess performance and identify areas where progress is needed. As previous *Economic Surveys* have argued, the government could also consider integrating the collection of tax and social security contributions to improve efficiency and effectiveness and to reduce the compliance burden on businesses (OECD, 2013).

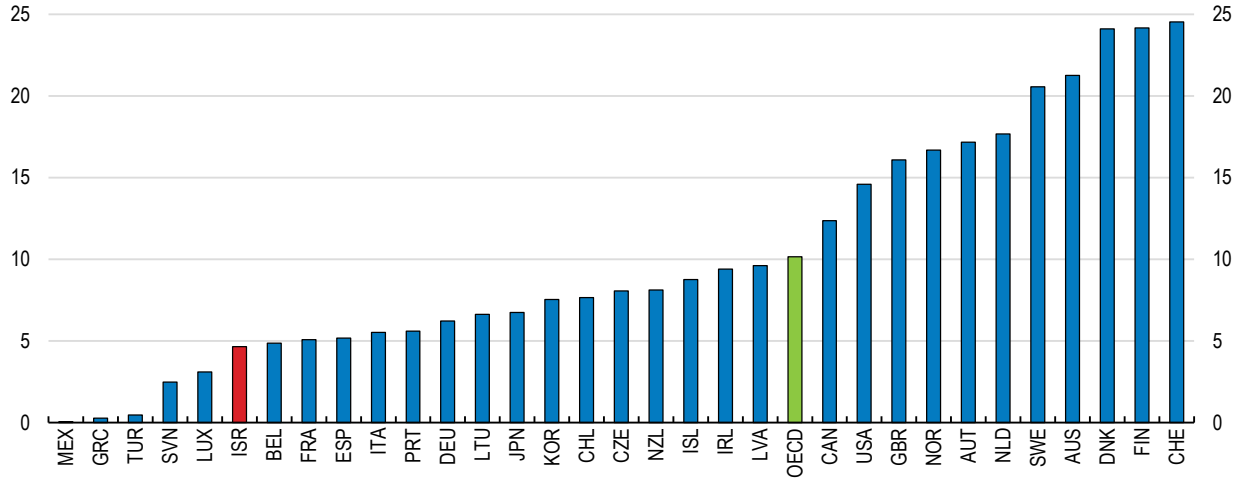
Tackling tax evasion and strengthening compliance remain important. Estimates of the shadow economy in Israel vary widely, as in other countries. According to recent estimates by Medina and Schneider (2018), the size of the shadow economy in Israel is 13-19% of GDP, depending on the methodology used for its estimation, which is slightly larger than in other high-income OECD economies. The Ministry of Finance estimates that reducing the shadow economy by 1% of GDP could boost revenues by about NIS 3.5 billion (0.25% of GDP). The authorities have taken recent steps to shrink the shadow economy. For example, in January 2019 the Law for Reducing the Use of Cash came into effect. The law limits the use of cash in transactions between private individuals and businesses and among businesses to NIS 11 000 and to NIS 50 000 for transactions among private individuals.

In order to gain a better understanding of tax evasion, the Ministry of Finance publishes VAT gap analyses. This should be complemented by analyses of the corporate income tax compliance gap. An increasing number of OECD countries estimate tax gaps (the difference between the theoretical revenues the government should have collected assuming perfect compliance and the revenues actually collected), most commonly for VAT but also for corporate and personal income tax (OECD, 2017b). Tax gaps can provide valuable insights to inform policy and compliance strategies and help revenue authorities to better understand the scale of non-compliance and emerging risks. Bottom-up corporate income tax and VAT approaches, in particular, provide information about characteristics of non-compliant firms, such as size, sector and region, that can help improve the Israeli Tax Authority's predictive, risk-based analytical tools for audit selection.

Improving analytical tools using modern data analysis to detect tax evasion may require further investment in ICT, which is relatively low in Israel (Figure 3.22), and expanding data collection. Many tax administrations in OECD countries are moving in this direction. For example, Poland created a centralised data warehouse, introduced improved modelling tools to better detect irregularities and facilitated information exchange with banks when there is a suspicion of tax fraud (OECD, 2018f).

Figure 3.22. There is room to increase the tax authority's IT spending

IT operating expenditure in % of total operating expenditure of the tax administration, 2017



Note: For Japan: the total operating expenditure includes capital expenditure. OECD average is an unweighted average of the countries with available data shown in the graph.
Source: OECD (2019), *Tax Administration 2019: Comparative Information on OECD and other Advanced and Emerging Economies*, OECD Publishing, Paris.

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There is scope to improve tax transparency. In particular, the government should scrap the 10-year exemption for immigrants and returning residents on annual reporting of assets and income from abroad, as well as the reporting exemption on monthly rental income below NIS 5100. As discussed above, tax evasion seems particularly prevalent in the real estate market.

The government should also continue to support international efforts to improve tax transparency and reduce tax evasion. In January 2019 Israel passed regulations necessary to participate in the Automatic Exchange of Information (AEOI) under the OECD's Common Reporting Standard (CRS), which will facilitate transfers of information to and from Israel. In July 2019 Israel started exchanging financial information with 53 countries for the tax year 2017 and 70 countries for the tax year 2018

Table 3.5. Recommendations for tax policy reform

FINDINGS	RECOMMENDATIONS (key recommendations in bold)
Enhancing efficiency and simplifying the tax system	
There is scope to reduce inefficient tax expenditures, which complicate the tax system and introduce distortions. Reducing these tax benefits can help finance extra spending needs.	**In the medium-term streamline VAT exemptions**. Offset any regressive effects with an increase in existing welfare programmes. Phase out the threshold for VAT exemptions on online sales.
Private pensions, medium-term saving plans and owner-occupied residential property are significantly tax favoured, which distorts saving decisions and opens up tax-planning opportunities.	Reduce differences in the tax treatment of personal savings across sources. Pare back tax benefits to the private pension system. **Consider reducing tax breaks on savings in the "advanced training funds" taking into account effects on income distribution and work incentives.** Abolish the tax exemption on rental income below NIS 5100 per month in exchange for lower purchase taxes for residential property.
The municipal property tax system is opaque. Non-residential property tax rates are substantially higher than residential rates, which provides incentives for municipalities to assign land for commercial use at the expense of residential housing, contributing to housing shortages and large revenue differences across municipalities.	**Reduce the difference between non-residential and residential property tax rates. Replace the area-based property tax with a transparent and uniform system based on property market values.**
Improving social cohesion and maintaining strong work incentives	
The share of working poor is high.	**Make the temporary changes to the earned income tax credit permanent. Evaluate and consider expanding the programme further.**
The effective marginal tax rate for a pensioner choosing to work without postponing pension receipt is excessively high.	Reduce the disincentive to continuing to work beyond the pension eligibility age by lowering the reduction of first-pillar basic pension entitlements in the presence of work-related income.
Boosting productivity by reducing distortions and levelling the playing field	
The business tax system provides large benefits to internationally competitive and high-tech firms. This may have attracted FDI but also creates distortions and tax planning opportunities, and raises the costs of tax administration.	**Review the preferential tax treatment under the Law for the Encouragement of Capital Investment with a view to better target the scheme.**
R&D expenditure is concentrated in information industries. Benefits of IP boxes and similar income-based provisions are likely to accrue mainly to large MNEs, as they hold most intellectual property.	Consider replacing the current system of preferential tax rates for IP-based income with a broader system of tax credits for R&D expenditure with cash refunds or carry-forward provisions.
Improving environmental and health outcomes	
Pollution is well above recommended levels and road traffic intensity is the highest in the OECD. Congestion causes the loss of both work and leisure hours, and increases in air pollution and road accidents. Israel plans to end the sale of petrol- and diesel-fired cars in 2030.	**Introduce congestion charges, accompanied by significant improvements in the quality of public transport services and higher parking fees.**
Effective carbon tax rates on non-transport carbon-based fuels are very low. Higher rates would lower CO2 emissions in a cost-minimising way, make renewable energy generation more competitive and further reduce air pollution.	**Either introduce an economy-wide carbon tax or increase the existing excise tax on primary fuels to levels that reflect estimated emissions externalities. Offset real income losses, in particular of low-income households, through transfers.**
Strengthening tax administration	
Greater use of third-party data can help move from post-assessment verification to pre-assessment and possible pre-filling of tax returns, which reduces compliance costs and non-compliance.	Enhance access and use of third-party data to move towards pre-filling of tax returns.
Estimates of the size of the shadow economy put Israel somewhat above those of other high-income OECD. Improving analytical tools using modern data analysis to detect tax evasion may require further investment in IT by the tax authorities, which is relatively low.	Abolish the temporary reporting exemption for immigrants and returning residents on assets and income from abroad and the reporting exemption for landlords' rental income below NIS 5100 per month. Increase tax authority investment in IT to improve analytical tools and modern data analysis to detect tax evasion.

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Note

[1] The maximum monthly amount that a family can earn and still be eligible for the full individual credit is NIS 13 000 (about 130% of the average salary). If the couple's earned income exceeds this amount, the credit of the eligible individual is offset against the excess income (Brender and Strawczynski, 2019).

[2] The effective tax rates presented here are “forward-looking” rates, which are synthetic tax-policy indicators calculated using information about specific tax-policy rules. Unlike “backward-looking” rates, they do not incorporate any information about firms’ actual tax payments. For details see Hanappi (2018).

OECD Economic Surveys

ISRAEL

The Israeli economy was performing well before the COVID-19 shock but the pandemic is threatening to reverse some of Israel's recent economic achievements, raise poverty and exacerbate wide productivity disparities between its vibrant high-tech sector and lagging sheltered sectors. Lockdown measures and high uncertainty have led to a sharp contraction in output and reduced employment. In this environment, macroeconomic policy needs to remain supportive and flexible to adapt to the evolving health situation. Enhancing training and job search support is crucial to help laid-off workers transition to new jobs quickly and avoid long-lasting negative economic effects. Structural reforms and additional public investment to improve educational outcomes, boost infrastructure and foster product market competition are key to strengthening the recovery. Reducing wide differences in resources between municipalities will promote equal opportunities for everyone. Tax reforms to further strengthen in-work benefits, cut inefficient tax expenditures, reduce distortions created by the business and property tax system and better align taxes with environmental externalities will make the recovery more inclusive and sustainable, while generating additional revenues.

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