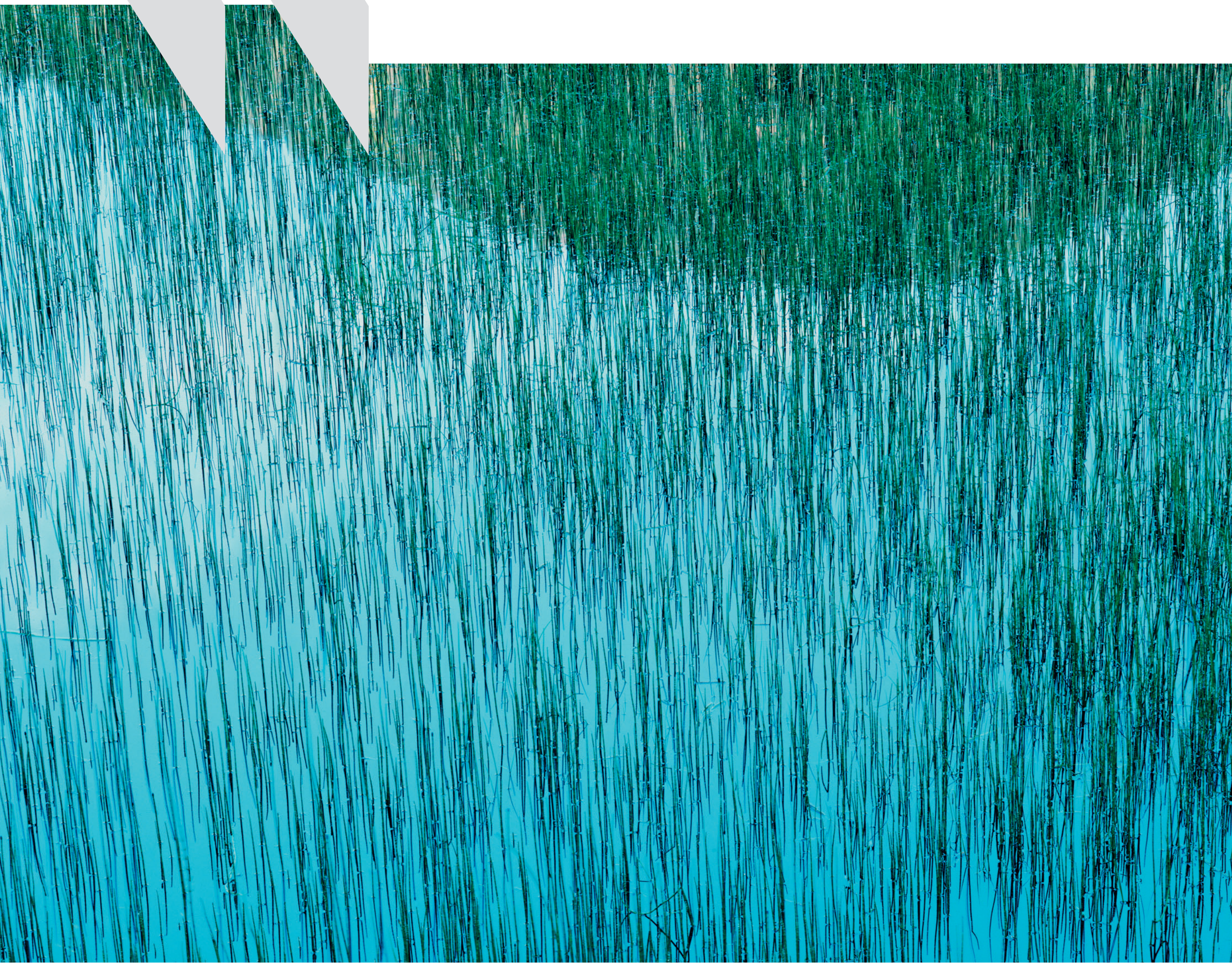
OECD Economic Surveys

ISRAEL



Volume 2009/21– January 2010

Supplement No. 3

OECD Economic Surveys: Israel
2009

OECD

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ISBN 978-92-64-07663-1 (print)
ISBN 978-92-64-07664-8 (PDF)
DOI 10.1787/eco_surveys-isr-2009-en

Series: OECD Economic Surveys
ISSN 0376-6438 (print)
ISSN 1609-7513 (online)

Also available in French.

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Table of contents

Boxes

Tables

Figures

This review is not intended to cover the territories known as the Golan Heights, the Gaza Strip or the West Bank. However, for technical reasons, this review uses Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

On 16 May 2007, the OECD Council decided to open discussions with Israel on accession to the Organisation and, on 30 November 2007, an Accession Roadmap, setting out the terms, conditions and process for accession was adopted [C(2007102/FINAL].

In the Roadmap, the OECD Council requested a number of OECD Committees to provide it with a formal opinion. The Economic and Development Review Committee was requested to review Israel's overall economic policies in order to provide a formal opinion on the degree of coherence of Israel's policies with those of OECD member countries. In light of the formal opinions received from OECD Committees and other relevant information, the OECD Council will decide whether to invite Israel to become a member of the Organisation.

The present Economic Survey of Israel *was prepared for the purposes of the accession review of Israel and was discussed by the Economic and Development Review Committee on 9 November 2009. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 25 November 2009.*

The Secretariat's draft report was prepared for the Committee by Philip Hemmings and Charlotte Moeser under the supervision of Peter Jarrett. Research assistance was provided by Françoise Correia.

This Survey is published on the responsibility of the Secretary-General of the OECD.

BASIC STATISTICS OF ISRAEL, 2008

THE LAND

Area (1 000 km^2)	22.1	Land area (1 000 km^2)	21.6

THE PEOPLE

Population, 31 December (1 000)	7 374.0	Civilian labour force (1 000)	2 957.1
of which:		*of which*:	
Jews	5 569.2	Jews	2 507.9
Arabs	1 487.6	Arabs	372.7
Population under 15 (% of total)	28.4	Employment (1 000)	2 776.7
Population aged 15 to 64 (% of total)	61.9	*of which (% of total)*:	
Population over 65 (% of total)	9.7	Agriculture, forestry and fishing	1.7
Population of major urban areas (31 December, 1 000 persons)		Manufacturing	15.6
		Trade (wholesale and retail)	13.6
Tel Aviv district	1 227.0	Business activity	14.0
Jerusalem district	910.3	Education, health and community services	27.2
Haifa	528.5		

GENERAL GOVERNMENT

Present composition of Knesset:		Present government: coalition	
Kadima	28	Last general election: February 2009	
Likud	27		
Yisrael Beitenu	15	General government (% of GDP	
Labor Party	13	Total expenditure	43.3
Shas	11	Total revenue	41.2
Torah Judaism	5	Gross public debt	78.0
Political parties with less than five seats	21		

PRODUCTION

Gross domestic production (NIS billions)	726.9	GDP per capita (NIS)	98 572

FOREIGN TRADE

Main exports (percentage of total value):		Main imports (percentage of total value):	
Diamonds	25.3	Petroleum, petroleum products	16.7
Chemicals and related products	21.5	Chemicals and related	11.0
Telecommunications, sound recording and reproducing	6.7	Machinery and transport	27.7
		Road vehicles	6.4
Electrical machinery and appliances and parts	6.3	Diamonds (gross)	14.4
Petroleum, petroleum products	5.0		

THE CURRENCY

Monetary unit: New Israeli Shekel		Currency unit per US dollar, average of daily figures:	
		Year 2008	3.5849
		November 2009	3.7206

Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Executive summary

Effective macroeconomic stabilisation policies along with market-oriented structural reforms have helped support a high average rate of growth. Also, the economy has weathered the recent global downturn well, and the policy responses have been generally appropriate. However:

- *The Bank of Israel should cease heavy exchange-rate intervention to avoid damaging its credibility.*
- *As elsewhere, the authorities need to reflect on financial regulation; one useful change would be to transfer the Ministry of Finance's supervisory roles to a more independent body.*

Levels of public debt and expenditure have been brought well within the range of OECD countries' outcomes. But slimmer government also means sharper trade-offs between reducing debt, accommodating legitimate spending demands and cutting taxes. Long-term fiscal sustainability needs to be reinforced.

- *Caution in pursuing further corporate and personal income tax cuts, making the temporary increase in the VAT rate permanent, and the elimination of low-priority tax expenditures would all be helpful.*
- *The budget expenditure rule should be replaced by one anchored in a long-term debt goal, and measures should be implemented to make budgeting processes more transparent.*

Secondary and tertiary attainment in the working-age population is impressive as a whole, but weak outcomes in the Arab and Ultra-orthodox communities are contributing to low employment rates and poverty. Also, international test scores indicate a more widespread problem of weak core skills.

- *Reforms underway in state primary and secondary education (particularly the New Horizon programme) are welcome, and a similar package should be negotiated for upper-secondary schools.*
- *More strenuous efforts are required to level the educational playing field for Arab-Israelis.*
- *More vocationally oriented learning needs to be encouraged in the Ultra-orthodox community.*
- *Another attempt should be made to boost state tertiary-education funding while raising tuition fees and strengthening the student loan system.*

The welcome "welfare to work" approach in social policy will help to enhance work incentives, thereby achieving a sustainable reduction in poverty levels. It should be developed further and be accompanied by other measures that more strongly focus labour-market and social policies on low-income households:

- *The Light for Employment programme and the earned-income tax credit (EITC) should be rolled out on a nationwide basis, though in both cases close monitoring must continue.*
- *The EITC should be raised along with an increase in the level and coverage of Income Support benefit. Savings on the universal child allowance should be considered.*

- *Labour-market regulation should be more uniformly enforced, particularly the minimum wage. At the same time its value relative to the average wage should be reduced progressively over time.*

Despite much progress, there is plenty of scope to improve the business environment:

- *OECD indicators suggest firms are overly hampered by regulation, calling for review.*
- *Support for investment, R&D and SMEs is complex and demands regular and rigorous programme assessment. Agricultural support should be pared back.*
- *General competition legislation and enforcement is suitable, but network-industry reform is lagging in some sectors, notably in the production and distribution of electricity.*
- *Strained road and rail infrastructure require continued policy attention.*

Assessment and recommendations

A small open economy with a dramatic history

Israel's economic development has certain parallels with that of some OECD countries, in particular its earlier move towards market-oriented policies that aided an expansion of high-value adding export sectors. A sea change in macroeconomic policy and a shift towards market-oriented structural reforms was prompted by chronic hyperinflation and unsustainable public-debt levels in the mid-1980s. Anti-inflationary measures were particularly successful, allowing the introduction of inflation targeting in the early 1990s, which brought price increases down to low, single-digit levels by the end of the decade. The early 1990s also saw the emergence of a world-class, export-based high-tech sector specialising in computer hardware and software, medical technologies and pharmaceuticals. Thus, the economy rode high on the dot.com bubble but also slumped following its collapse, with a recession in the early 2000s.

But Israel's unusual history and geopolitical situation means the economy is atypical in many respects. Significant financial and human resources are absorbed by a large defence force and civilian security services; military aid contributes to a large net balance of inward transfers in the current account; and trade and investment flows are substantial with the wider world, but relatively limited with neighbouring economies. Furthermore, society is complicated, with many policy agendas rooted in ethnicity and religion. And the population has been profoundly shaped by immigration, most notably in recent history by a massive influx from the former Soviet Union in the early 1990s. Immigration flows have subsided since then, but population growth remains well above that in most OECD countries due to high birth rates in the Arab-Israeli and Ultra-orthodox Jewish (Haredi) communities.

A high average long-run growth rate but substantial room for catch-up

In light of the substantial and frequent past shocks to the economy, growth from mid-2003 to mid-2008 was uniquely stable, with almost constant annual real GDP growth at a little over 5%. And, despite past fits and starts and the current downturn, growth has averaged nearly 4% since the mid-1990s, a fast pace compared with most OECD countries. That said, per capita performance has been less impressive, and substantial gaps in living standards with those of top-flight countries remain. GDP per capita on a purchasing-power-parity basis is currently about 80% of the OECD average but, for instance, only 60% of that in the United States. The key challenge here is the need to increase productivity growth over the longer term through both improving the business environment and raising educational outcomes.

Recovery from the downturn is underway

The current downturn is the result of one of the few purely external shocks in Israel's recent history. Conservative lending by banks and relatively light exposure to foreign toxic assets saved the authorities from bailouts, takeovers or emergency surgery to financial-market regulation. Nevertheless, credit flows did contract severely, and the market for corporate bonds dried up completely at one point. This damped domestic demand at the same time as external demand was hit by the wider global recession. Real GDP growth was negative in the final quarter of 2008 and the first quarter of 2009 before turning positive again in the spring. For the full year it is expected to be near zero. For 2010 and 2011, according to OECD projections, growth may be about 2¼ and 3¼ per cent, respectively.

Monetary responses to the recession and recovery have been vigorous…

Following the deepening of global financial problems in September 2008, the Bank of Israel cut its policy rate aggressively. As with many OECD central banks, more unconventional steps were also taken to ease liquidity, including quantitative easing through the purchase of government bonds and technical adjustments to the management of liquidity. The Bank has also responded boldly as the downturn has receded. In August 2009 it raised its policy rate from 0.5 to 0.75% (and did so again in November), a still expansionary stance. No OECD central bank had yet raised rates at that stage in the cycle. In recent months, inflation has been ramped up by one-off factors. However, there are no signs of significant *upcoming* inflationary pressure; yield differentials between indexed and non-indexed bonds indicate that expectations of inflation one year ahead are well within the Bank's target band of 1 to 3%. December-to-December inflation on OECD projections is expected to be 4.3% in 2009 and 2% in 2010 and 2011.

… and other policy responses generally appropriate

In addition, the government took several measures to assist the corporate bond market, and businesses and households more generally. Though individually helpful, these did not constitute a substantial fiscal boost to the economy. In the Israeli context this was sensible. Falling tax revenues have acted as a significant automatic stabiliser and have strained fiscal balances uncomfortably as it is. As elsewhere, the global financial crisis has prompted debate on the regulation and oversight of the financial sector. *Even though the current system has not shown itself to be obviously problematic, one useful change would be for the supervisory duties directly carried out from within the Ministry of Finance to be transferred to a more independent body*; such direct ministerial supervision is unusual.

A "clean float" policy on the shekel should be readopted

Until 2008, the Bank had been following an orthodox approach of non-intervention in the foreign exchange market. In March that year it began pre-announced, daily foreign-currency purchases of a fixed amount on the grounds that the strong position of the shekel provided an ideal opportunity to build up low foreign-exchange reserves. But intervention continued after reserve targets were met, and the Bank's press releases increasingly referred to concerns about the level of the exchange rate. Regular interventions were stopped in early August 2009, but simultaneously the Bank announced a policy of *discretionary* intervention, and foreign-currency purchases have continued. Markets began to consider that there is a "dirty float" policy on the exchange rate and speculate as to what the Bank's intervention price is. In October the Bank attempted to clarify its position, stating that current conditions are considered exceptional and that the market is expected to return to a situation where intervention is only rarely required.

The build-up of international reserves proved useful, attenuating external vulnerabilities when concerns about the downturn were at their greatest. *However, reserves are now more than adequate, and hence a "clean float" should be readopted as soon as possible*. Although the intervention has not been incompatible with inflation targeting thus far, the risk that it becomes so is greater the longer it is sustained. To wit, the pick-up in economic activity is likely to prompt monetary tightening at some point and in these conditions continued heavy intervention would work against the policy-rate hikes and would thus damage transparency and credibility in policy. Other objections to sustained intervention are the opportunity cost of holding extra reserves and the risk of associated capital losses.

Monetary policy is set to become better anchored through new legislation

While Israel was among the first countries to adopt inflation targeting, it was never enshrined in law. Recently, the Bank of Israel and the Ministry of Finance reached final agreement on the details of useful new legislation governing the Bank. The draft law not only specifies inflation as the primary target of policy but also alters the conduct of policy. Most notably, policy-rate decisions will no longer be made solely by the governor but by majority vote in a new monetary committee. In addition, a board of directors will be appointed to manage the Bank. The Bank will retain its role of official advisor to the government on economic policy.

Commitment to reducing the debt-to-GDP ratio needs to accommodate the costs of achieving structural reform…

Trade-offs in fiscal policy between vital debt reduction, strong spending pressures and promised tax cuts have been heightened by the recent recession. Despite at times draconian past efforts at fiscal consolidation, the ratio of public debt to GDP has remained too high. The upswing to mid-2008 helped bring the ratio down to 78%. However, revenue losses incurred during the downturn are pushing it back up despite impressive efforts made to contain the deficit in the exceptional 2009-10 two-year budget. Central-government deficits are projected to turn out at around 5.5 and 5% of GDP for 2009 and 2010, respectively, and the debt-to-GDP ratio may reach 82% by the end of 2010. Substantial reduction in the debt ratio will require much lower deficits. Achieving this in 2011 may prove difficult because several temporary tax increases are scheduled to end. *Sustainable reductions in the deficit and debt need to be the central focus of fiscal policy.*

This is especially the case because the longer-term outlook for the public finances is mixed. Fiscal pressures due to population aging are expected to be relatively mild by OECD benchmarks, due to favourable demographics and fairly light commitments to pensions, health care and long-term care from the public purse. However, defence spending is several percentage points of GDP higher than most OECD countries. And civilian spending as a share of GDP has already been whittled down to a relatively low level. Thus, much of the low-hanging fruit for cutbacks through efficiency gains or cuts in services and transfers has probably been picked, though there remains some room to cut back on bureaucracy in some areas. Indeed, the analysis of education and welfare policies in this *Survey* illustrates that progress in structural reform will most likely require an initial fiscal investment.

… by not overplaying rate cuts in corporate and personal-income tax

Cuts in the headline rates of corporate tax and the upper rates of personal-income tax are a central theme in the current government's policies, based on a belief that they significantly boost competitiveness and, in some quarters, that they are largely self-financing. However, while such tax cuts have beneficial effects on incentives, some caution is in order. Tax burdens are not the only concern of investors (who are also put off by red tape), nor are headline rates the only determinant of effective tax rates. Rate cuts are generally not self-financing, and positive feedbacks on revenues are anyway neither immediate nor certain. Moreover, as mentioned, creating some budgetary headroom for structural reforms that would enhance competition and achieve social goals would be advantageous. Accordingly, a decision to go ahead with rate cuts in 2010 was surprising under the prevailing macroeconomic circumstances. However, in 2010 the cut will be smaller than originally planned, and the schedule of cuts for subsequent years was pushed out, which is welcome in light of the uncertain fiscal outlook for that year.

Trade-offs in fiscal policy would be eased by making the recent temporary increase in the rate of VAT to 16.5% permanent. Also, the abolition of some VAT exemptions should be revisited, notably those on some tourist services (including those for the town of Eilat) and for fruit and vegetables. This said, the continued imposition of high purchase tax on cars lacks strong justification. The schedule of rates has been recently adjusted to reflect environmental considerations, but the attractive revenue-raising properties of such taxation probably remain the primary motivation. The environmental returns would be better sought by targeting car use (for instance, through more use of road pricing) rather than ownership. Increased revenues should also be sought by casting a wide net to weed out low-priority tax expenditures. There is room for some cutback in the context of welfare policy (see below). And tax support for the "advanced training funds" (Kranot Hishtalmut), which encourage medium-term saving, makes little sense, especially as, despite the name, the savings can be used for a wide variety of purposes. Finally, international comparison suggests there is room for simplifying tax procedures.

… and by reforms to the "spending rule" and budget processes

While the current budgeting rule that limits real public spending increases to 1.7% per year has played an important and constructive role in fiscal control, *it should be replaced in the not-too-distant future*. Complexities and discretionary leeway in its application undermine its outward simplicity, and the rule makes little sense for the long term. With annual population growth also at around 1.7% and only marginal decline in prospect, increases in GDP per capita of any substance imply public spending as a share of GDP will be continually eroded. Any new rule should be simple, credible and robust. *The alternative rules currently being discussed that anchor spending increases to an explicit debt-to-GDP goal and accommodate cyclical considerations would certainly be an improvement*. "Top down" fiscal discipline should be augmented by other measures. Particular consideration should be given to: requirements on spending ministries to submit more comprehensive multi-year spending plans; greater transparency in the budget material presented to the Knesset; and, obligatory periodic reporting on the long-term sustainability of public finances.

At present the Ministry of Finance not only has strong powers in directing aggregate fiscal policy, but it is also the progenitor of most economic reforms. In principle, a more even balance of expertise and influence across ministries may lend itself to better policymaking. On this basis, and with the budgeting reforms suggested above, line ministries ought to be given more leeway, for instance by cutting the number of budget lines. But caution is required. In the Israeli context the Ministry's powers are arguably a necessary foil to the idiosyncrasies of Israel's democratic system. Minor coalition parties are often relatively powerful because their Knesset seats are necessary to the government retaining office. In light of this, a more devolved structure might be more workable if a fiscal council were introduced, such as those in Austria, Sweden, Canada and the Netherlands, although other bodies already monitor public finances.

Tackling the high rates of poverty has to remain a priority

Despite the need for a tough fiscal regime, *Israel's deep socio-economic cleavages must be given due priority*. Just over 20% of households are below the relative poverty line compared with an OECD average of 11%. Poverty is concentrated among the 20% of the population who are Arab-Israelis whose poverty rate is around 50% and the (estimated) 8% who are Ultra-orthodox Jews whose poverty rate is around 60%. Both groups typically live and work in communities that are separate from the mainstream population and that are some distance from the core of economic activity. Both share the same immediate causes of poverty – low employment rates and large families – but the socio-economic backdrop differs enormously. Arab-Israeli poverty is fuelled by poor education feeding through to low-paid jobs for men and by cultural norms limiting learning and work for women. In addition, the OECD's parallel review of Israel's labour-market and social policies documents econometric evidence comparing wages and employment rates that points to discrimination against Arab-Israelis. In contrast, low material living standards among the highly insular Ultra-orthodox community stem more from choice than circumstance. The community puts a great emphasis on learning for men, but largely of a religious nature. Indeed the majority of adult men devote their lives to full-time religious study, with substantial implications for living standards. As for women, a large percentage (over 95%) participate in final examinations in secular subjects although often using a different system of coursework and tests from that that used in mainstream education.

Unrealised educational potential and low employment rates represent not only hardship for those immediately concerned, but also untapped resources for the economy as a whole. Issues relating to these communities are core to many of the problems in education and labour-force participation discussed in Chapters 3 and 4 of this *Survey*. Work on solutions cannot wait. Rapid population growth means Arab-Israelis and Ultra-orthodox now account for over 45% of children currently starting primary school.

There are considerable strengths but also some profound weaknesses in the education system

In some dimensions the education system has coped well, considering Israel's high population growth and socio-economic diversity. Indeed, tertiary attainment in the working-age population is remarkably high. However, there are deep concerns regarding Arab-Israeli and Haredi education streams, which are separate from the rest of the population's. In addition, the OECD's PISA study, along with other international tests, indicates that there is a much more widespread problem of weak skills in mathematics, reading and science among secondary-school students. To the extent that workplace training and tertiary programmes fail to offset this deficiency, skills and tertiary qualifications are, on average, weaker than in most OECD countries, putting at risk further expansion of high value-adding activities.

In compulsory education some promising reforms are underway

The "New Horizon" deal struck between government and unions in primary and lower secondary education moves in the right direction, particularly its introduction of additional classes for small groups of students. *In light of this, the obstacles that have prevented a similar deal with upper-secondary school teachers should be overcome in the revived negotiations underway.* Reforms outside the New Horizon deal, many of which are in the process of implementation, are also admirable, in particular, the extension of compulsory education, caps on class sizes and the efforts to shift away from rote learning. However, the measures being taken suggest that further reforms to the system of final examinations (Bagrut) may be required. The new funding formula (the Strauss Index), which factors in the socio-economic characteristics of schools' catchment areas, is also welcome. *Budgetary arrangements should be altered so that the formula, or other similar funding strategies, are used more widely. Alternative pathways in the teaching profession should also be expanded.* A small-scale programme to bring professionals from other sectors, as well as other programmes to attract young teachers to the profession, reflect a promising approach and one which should be exploited further as a means of widening the pool of potential teachers and increasing flexibility in allocating teaching resources.

A stronger focus on tackling weaknesses in Arab-Israeli and Ultra-orthodox education is required

More strenuous efforts should be made to level the playing field for the Arab-Israeli population. Despite the policy attention that has been paid to this issue, substantial gaps in educational inputs have remained, such as wide differences in average class size. *The various targeted programmes should be evaluated and, if necessary, reformed. In addition, more general reforms in education should put a high priority on reducing inequalities. Equity targets for inputs and outcomes should be adopted.*

For its part the Ultra-orthodox community needs to be encouraged to strengthen vocational skills in education as part of wider efforts for a more self-sufficient, and less poverty-ridden, balance between worship and work. With independence from mainstream state education, boys' schools often do not teach "secular" subjects such as mathematics and science. Girls' schools focus more on vocational skills, but early marriage and family life means education and job potential is often not fully realised. Despite this weak commitment to job-oriented skills, the state provides considerable funding for these schools. *Existing curriculum requirements on grants for teaching services in primary education need to be more stringently enforced. Similar conditions should be applied to secondary schools and other sources of state funding, such as infrastructure grants. Indeed, universal core curricula should be considered, which would apply to all schools whether or not they receive state funding.* In areas where schools choose not to accept the conditions for state funding, the budgetary savings could be used to subsidise optional out-of-school private-sector education and training.

… and reforms need to be pushed through in tertiary education

Tertiary-level reform should be brought back on track following the aborted 2008 "Shochat" measures that would have linked increased state funding to a commitment from providers to raise tuition fees and adopt a range of structural changes. *The overhaul had many strengths and should be revived, preferably with deeper changes in some areas. In particular, providers should be allowed greater leeway in setting tuition fees. Similarly, bolder reforms to make staff pay more transparent and flexible ought to be made. As well, disadvantaged groups' access to tertiary education should be monitored and targeted measures adjusted as appropriate.* The Shochat Committee proposed bolstering loans and stipends to counter the increase in tuition fees: *indeed no student should be denied access to higher education for financial reasons.* More generally, difficulties in implementing change suggest a need to strengthen government control over education policy in the tertiary sector. While the Ministry of Finance already plays a key role, the Ministry of Education does not, and the central body for tertiary education, the Council for Higher Education, has, at least in the past, represented mostly the interests of providers.

Laudable initiatives to encourage working are underway…

For some years, a "welfare-to-work" approach similar to that in a number of OECD countries has been underway. *First*, contracted private-sector services are partially replacing the regular public employment service (PES) in job placement and in administration of the "employment test" required for income support. The Light for Employment programme (familiarly known as the Wisconsin programme) operates in four areas, and nationwide rollout is planned after further parametric adjustments. This is broadly welcome. *However, the PES's future role must be firmly established prior to rollout and should dovetail appropriately with contracted services. Also, an open mind to further adjustment of the programme, post rollout, is imperative.* Significant uncertainties regarding the programme's effectiveness remain. *In particular, the lack of immediate competition between providers may prove to be a serious weakness. Second*, a small earned-income tax credit (EITC) is available in those areas where Light for Employment operates. Plans to expand this are also welcome. *Indeed, the credit should be increased, particularly if combined with other measures* (see below). That said, take-up so far has been limited and should be closely monitored. *Third*, admirable efforts are underway to help parents combine family and work through wider provision of daycare and early-childhood education. These include significant additional resources and requirements on municipalities in Arab-Israeli neighbourhoods to provide free services for three and four year-olds.

… but need to be backed by additional measures

However, other measures should be taken to tighten the focus of policy on low-income households. As regards the level of cash benefits, *some increase in income support should be made*. If backed by Light for Employment and a more generous EITC, this could reduce poverty levels without excessively compromising work incentives. *At minimum, universal child allowances should not be increased more than is currently scheduled and preferably savings should be sought, for instance by wider application of the lower rates that currently apply only to children born after May 2003.*

The coverage of income support also needs attention. Large numbers of working-age and pension-age households below the poverty threshold are seemingly not eligible for income support. Excessively stringent conditions on car ownership should be reviewed and a general investigation of the coverage of welfare support conducted. Conversely, relatively rapid growth in the numbers receiving disability benefit is somewhat worrying. Initial processing and reviewing of benefit applications requires attention to curb inflows as a complementary move to the Laron Committee reforms that have made it easier for those already on disability benefit to work.

At the same time, there is room for savings in tax credits that primarily help middle- and upper-income earners. In particular, the introduction of mandatory second-pillar pension savings weakens the case for tax breaks on such savings. Also, standard credits on earnings could be reduced. However, on the grounds of equal treatment, the basic credit should be made the same for men and women and those for children ought to be made claimable by either fathers or mothers (at present only the latter may do so).

Tighter enforcement of labour regulation is required, particularly as regards the minimum wage. Light application of the rules is notably contributing to employers' preference for non-Israeli workers in low-wage sectors, because these employees are typically more willing to accept below-minimum conditions. This said, the minimum is high in relation to the average market wage compared with OECD countries, risking negative employment effects, and *the ratio should be progressively reduced* over time in parallel with increased enforcement; there are better ways of ensuring workers a minimum standard of living (notably enhancing the EITC). Some sectors of the economy are dominated by non-Israeli workers under temporary work permits (around one quarter of which are cross-border workers; the remainder are from much further afield). *Measures to limit rent-taking in the permit system in these sectors should be taken.* For some years now it has been Israeli government policy to limit the number of permits given to temporary foreign workers so as to support wages at the low end of the earnings distribution.

There is plenty of scope to improve the business environment…

The business environment is broadly conducive to economic activity but could be further improved. The establishment of low inflation has been helpful, as have reductions in the overall "size" of government and concomitant cuts in tax rates. However, the longstanding presence of a large public debt may have been crowding out business investment, and the flaws in education and low employment rates are compromising the skill base. Also, the OECD's product-market regulation indicators suggest firms face excessive red tape in setting up and running business operations. The government intends to make the process of licensing new firms faster and less costly. A recent land reform includes provisions giving some lease-holders the option of technically owning land (or apartments). This is welcome but is unlikely to have a significant impact on property markets. However, the same legislation also aims to reform the Israeli Land Authority, which may well cut red tape in some aspects of property development.

Government support to business is wide-ranging, with three principal themes: promoting large-scale greenfield investment, small and medium-sized enterprises, and research and development. As elsewhere, the economic arguments for intervention rest on hard-to-measure spill-overs and externalities, and there are multiple options for intervention itself. In light of this, and as frequently recommended in reviews of OECD countries, *the authorities should ensure there are good processes for assessing, modifying, innovating, and where necessary, pruning programmes.*

Support for the agriculture sector remains substantial. Costs are held down by favourable water prices and access to cheap labour *via* the permit system for foreign and cross-border workers, though agreements have been reached that are reducing these supports. Revenues are notably supported by high seasonal import tariffs. *The menu of support should be reduced and made less distorting, for instance through reduction in support payments based on input use.*

… and challenges remain in network industries and transport infrastructure

Competition legislation and its enforcement by the competition authority (the Israeli Anti-Trust Authority) are in good shape. However, some areas of network-industry reform lag developments in many OECD countries. *In particular, the Israeli Electricity Corporation's stranglehold on production and distribution needs to be broken.* More generally, though privatisation has been substantial, strong powers have been retained through "golden shares" in some network companies and other enterprises. Also, there appears room to improve oversight in the telecommunications sector: at present there is no independent regulator. And there is ground to be covered in privatisation and exposure to competition in post, sea port and water services. Rapid increases in population and economic activity have generated problems in transport infrastructure, chiefly road congestion in major urban areas and poor public transport in peripheral areas. This will require continued policy attention.

Chapter 1

Economic developments and policy challenges

Israel's economy has admirable strengths but also some serious weaknesses. Rapid expansion of hi-tech activities over the past two decades has contributed significantly to an impressive rate of GDP growth; an environment of low inflation is firmly established; and the economy has weathered the recent global recession relatively well. However, the economy is particularly vulnerable to shocks, and per capita growth has been less remarkable. Furthermore, public debt remains uncomfortably high. Also, high rates of poverty and weak labour-market attachment among the rapidly growing Arab-Israeli and Ultra-orthodox Jewish communities as well as wider weaknesses in the country's human capital hinder growth. Though tertiary educational attainment statistics are impressive, PISA results show core skills among secondary school students to be weak. This is undermining the environment for business, which is also hampered by regulation, according to preliminary analysis of the OECD's product-market indicators.

Israel's relatively small economy has few natural resources and a heavy reliance on imports. But, aided by a shift towards market-oriented policies that began in the 1980s, a number of high value-adding export sectors have developed, which have contributed substantially to GDP growth. From this perspective there are parallels with some east European countries and arguably Ireland as well. Yet in many respects Israel's short but dramatic history has created a combination of economic, social, demographic and political circumstances without close parallel with any single OECD member country. This *Survey* investigates similarities and differences in macroeconomic and structural policy developments in relation to member countries and makes recommendations on future policy directions. It is the OECD's first such review of Israel's economy. This chapter overviews the main features of the economy, the current downturn and the policy response to it and considers the longer-term challenges for economic policy and the environment. The key points are summarised in a concluding box (Box 1.7).

Key aspects of the economy

Market-oriented reforms since the mid-1980s

Anti-inflationary macroeconomic policy and market-oriented structural reforms have been underway since the mid-1980s. Israel's initial decades of economic management saw a corporatist approach, with widespread public ownership, strong trade unions and severe trade restrictions. Energy and telecommunications sectors were entirely operated by state-owned enterprises, and government had significant holdings and influence in many other sectors. The 1977 general election saw a political watershed with the Labor Party defeated for the first time, and no single party has dominated the political scene to the same extent since. Following the latest general election, Likud formed a government with five other parties, including Labor (see Box 1.1). Although trade-union power has diminished substantially since the mid-1980s, it is still considerable. In recent years the unions and employers' representatives have increasingly presented a common front on policies. Most recently, a semi-official "round table" of unions, employers' representatives and the Prime Minister's Office was instigated temporarily after formation of the government and had an influence on the 2009-10 budget.

An economic watershed occurred in the mid-1980s. Although economic liberalisation (particularly in international trade) had progressed under Labor, the 1980s and 1990s saw a considerable acceleration. Macroeconomic policy reached a turning point in 1985 with a radical set of measures (the Stabilisation Programme) to tackle hyperinflation and put the debt-to-GDP ratio on a downward path (see Box 1.2). The anti-inflation measures were particular successful and were followed up by the establishment of inflation targeting in the early 1990s. The 1990s also saw extensive structural reform. As in many OECD countries, this included privatisation and regulatory reforms to encourage market competition, most notably in network industries, and greater use of market mechanisms

Box 1.1. **The current government**

General elections were last held on 10 February 2009. As in all previous elections in recent decades no single party won sufficient votes under the system of proportional representation to govern single-handedly. The centre-right party, Likud, was selected by the President, Shimon Peres, to form a coalition government. Likud had received 27 seats in the 120-seat parliament (the Knesset) compared to 28 seats won by its main rival, the centre-left party Kadima. Following several weeks of negotiation a government was sworn into office on 31 March comprising Likud plus five coalition partners: right-wing Yisrael Beitenu (15 seats) and Habayit Hayehudi (3 seats), the centre-left Israel Labor Party (13 seats), and two religious parties, Shas (11 seats) and United Torah Judaism (5 seats). In addition to Kadima, there are six small parties outside of government representing a diverse range of political interests. The governing coalition is typical of its predecessors in recent decades in that it is heavily reliant on minor parties for maintaining the 60 Knesset seats required for an operating majority. Some observers are critical of this and other aspects of the political system.

The formation of the government saw the creation of several new ministries, and a majority of members of the Knesset (MKs) in the coalition are either Ministers or Deputy Ministers (there are 49 posts in total for the 69 MKs in the governing coalition). Several ministries of key importance for macroeconomic and structural policy are controlled by Likud. Notably, the Ministry of Finance, which has a particularly elevated position (see Chapter 2), is headed by Likud member, Yuval Steinitz. Prime Minister Benjamin Netanyahu is also Minister of Economic Strategy, Minister of Health and Minister of Pensioner Affairs.

in other spheres. For instance, private-sector firms operating under contract with government are being used to manage welfare-benefit caseloads.

High aggregate growth but weak per capita performance

Average economic growth since the mid-1980s has been relatively high, but is less impressive once population growth is taken into account. Real GDP growth has averaged nearly 4% per year since 1996, the 6th highest figure when compared alongside OECD countries (Figure 1.1 and Box 1.3). Over the same period, per capita growth was only 1.7% and some way down the equivalent ranking. On a purchasing-power-parity basis, the level of GDP per capita has reached 80% of the OECD average, which is roughly the same level as New Zealand and Korea and slightly lower than Greece. However, it remains far below that of top-ranking OECD countries.

Several shocks have affected the pattern and pace of real GDP growth, even during the relatively stable post-1980s era (Figure 1.2). Mass immigration from the former Soviet Union in the early 1990s initially strained public finances but later translated into a positive supply shock, because the incoming workforce had relatively good qualifications and skills. A twin shock hit the economy in the early 2000s. By the end of the 1990s the high-tech sector (see below) was making an important contribution to GDP. Thus, while growth benefited from the dot.com bubble, it also suffered when it burst in 2001. In addition, the Second Intifada, which began in autumn 2000, cut tourism and had wider economic effects. Economic expansion between 2004 and 2008 was exceptionally smooth,

Box 1.2. **The "Lost Decade" and the 1985 Stabilisation Program**

The Economic Stabilisation Program of 1985 was precipitated by a crisis that marked the accumulation of economic difficulties during what is now referred to as the "lost decade". The roots of the crisis lay in the 1973 Yom Kippur War and the subsequent oil embargo. Sharp increases in public spending during the following decade resulted in public debt soaring to 300% of GDP combined with monetary accommodation and repeated large devaluations, which led to rising inflation that by 1983 had reached hyperinflationary rates. The business and several other sectors (in particular health insurance, pension plans, and the *kibbutzim*) became dependent on government support.[1]

A banking crisis in 1983 contributed further to the severe situation. Weak financial market regulation had allowed banks to invest in their own stock and to recommend that customers invest in bank shares. The bubble burst in 1983, shares collapsed, and all the main commercial banks were put into public ownership.[2] Re-privatisation did not begin until 1996 with the sale of Bank Hapoalim. Mizrachi Bank was re-privatised in 1996-98, and government scaled back its shareholdings significantly in Bank Leumi and the Israeli Discount Bank in 2005 and 2006, respectively.

The Stabilisation Program used several instruments to combat the country's macroeconomic difficulties. Inflation was primarily tackled by wage and price freezes, combined with nominal anchors (for example, initially the exchange rate against the US dollar was fixed). Fiscal profligacy was curbed in particular by preventing the government from printing money to cover deficits (the Non-Printing Law) and by significant cuts in public spending. An aid package from the United States worth USD 1.5 billion bolstered the credibility of the programme. The impact was swift: inflation fell from 400% to 20% within a few months, the balance of payments stabilised, and the fiscal deficit was reduced substantially.

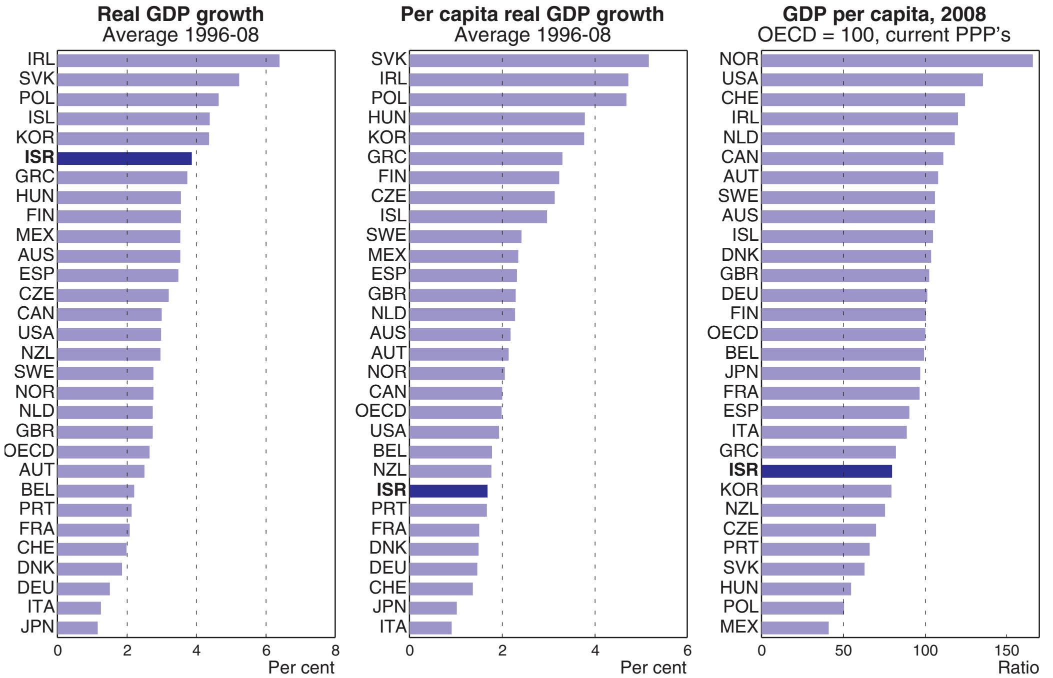
1. For general descriptions of the economic crisis and the policy responses to it see Bruno and Fischer (1986), Blass and Grossman (2001) and Barkai and Liviatan (2007).
2. Sargent and Zeira (2008) argue that the anticipated monetary and fiscal effects of the massive government bailout of owners of fallen bank shares caused the last big jump in inflation that occurred in October 1983. The government had promised to reimburse owners for the diminished value of bank shares, but only after four or five years. Since the promise was credible, public debt implicitly increased by a large amount, implying future monetary expansion.

with annual growth around 5%. Since then the economy has been caught up in the recent global economic downturn.

In contrast, no major inflationary shocks have struck since the mid-1980s, certainly when compared with the preceding period (see Box 1.2). Annual inflation has typically been well below 5% since the late 1990s, and in recent years it has for the most part been below the OECD average (Figure 1.2). Nevertheless, as Chapter 2 discusses, inflation outcomes have frequently fallen outside the values set in the Bank of Israel's targets. In part this reflects the inherent volatility of small open economies. But there is also strong immediate pass-through of exchange-rate movements to prices in some private-sector markets and in regulated pricing formulae, which include elements based on the US dollar. Despite inflation targeting having been operating for nigh on two decades, it has not yet been enshrined in law. Progress with the latest draft legislation is reported in Chapter 2.

The slow pace of catch-up implied by Figure 1.1 is confirmed by other indicators. Figure 1.3 shows percentage-point differences in growth rates between Israel and the OECD area as a whole and compares these with the equivalent differences for the average

Figure 1.1. **Israel's long-run growth compared with OECD countries**[1]



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Luxembourg and Turkey excluded.

Source: Central Bureau of Statistics and OECD, *Economic Outlook 86 Database.*

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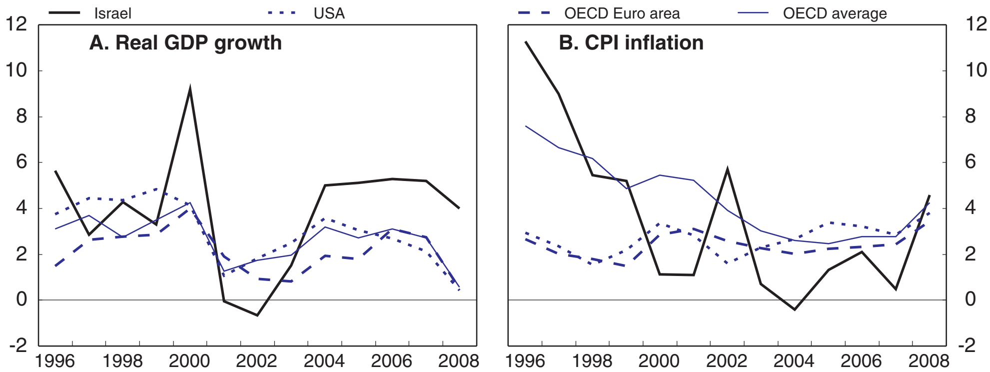
Box 1.3. **Coverage of this review**

This *Survey* is not intended to cover the territories known as the Golan Heights, the Gaza Strip or the West Bank including East Jerusalem. In terms of statistical coverage, however, for technical reasons the *Survey* almost exclusively uses macroeconomic and other data that are regularly published and updated by the Central Bureau of Statistics (CBS) or other authorities, which include data relating to East Jerusalem and the Israeli settlements in the West Bank. A sizeable number of Israelis live in these areas. A recent UN publication estimates that the total population of these areas, as of end-2008, was 485 thousand, of which 195 thousand in East Jerusalem (UN, 2009). According to the Central Bureau of Statistics, Israel's population was 7 374 thousand at end-2008, thus implying that those living in East Jerusalem and the Israeli settlements in the West Bank represent 6.6% of the total. The share of economic activity is likely to be of a similar magnitude. For most of the analysis, the difference between data including these areas and data that exclude them is unlikely to make any qualitative difference to conclusions on economic policy, if only because the focus is typically on rates of growth.

of the five OECD countries that had the fastest growth in real GDP per capita between 1996 and 2008 (Slovak Republic, Ireland, Poland, Hungary and Korea). These margins, or "gaps", in growth rates indicate the pace of catch-up in economic development. The Figure confirms that for the period 1996-2008 Israeli per capita real GDP growth was

Figure 1.2. **Past developments in annual real GDP growth and inflation**

Per cent change from previous period



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: OECD, *Economic Outlook 86 Database*.

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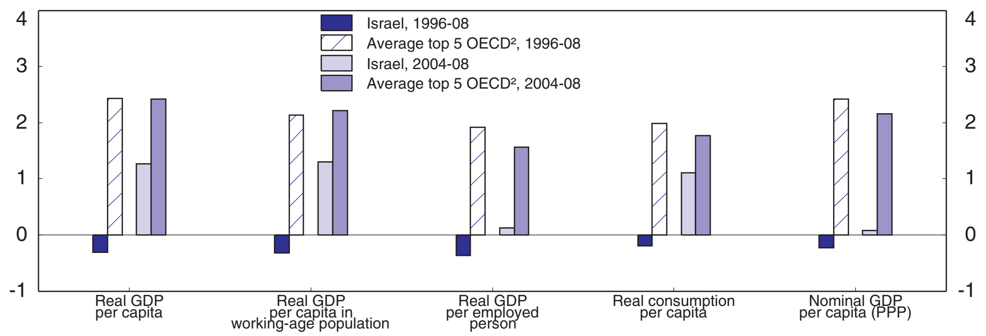
lower than in the OECD area, implying a widening gap in living standards relative to the OECD area, rather than a narrowing one. And it shows that this is not immediately linked to the demographic composition of the population, as the result is very similar when calculated using the working-age population instead of the total population.[1] Furthermore, these outcomes are echoed in per capita real consumption growth and in the growth of nominal per capita GDP calculated using purchasing-power parities (Figure 1.3). In contrast, the top five performers in terms of real GDP growth per capita over the same period averaged 2.5 percentage points higher growth than the OECD area and did well on the other indicators.

If Israel's consistently high GDP growth between 2004 and 2008 reflects a new potential "cruising speed" for the economy, then the prospects for catch-up are somewhat brighter. During this period its excess over OECD-wide growth in real GDP per capita was more than one percentage point, compared with over two percentage points for the

Figure 1.3. **Catch-up from various perspectives**

Gap in average annual growth rates with OECD-wide[1] growth, percentage points



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Luxembourg and Turkey excluded.
2. Top five for GDP per capita growth rate are Slovak Republic, Ireland, Poland, Hungary and Korea.

Source: Central Bureau of Statistics and OECD, *Economic Outlook 86 Database*.

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average of the top five. Interestingly, between 2004 and 2008 the margin of growth was largely generated by relatively fast employment growth; there was practically no margin in terms of labour productivity growth (growth in GDP per employee in Figure 1.3). This is welcome in view of the country's relatively low employment rates (see below), so long as the economy is capable of shifting towards high labour productivity growth when labour reserves are used up.

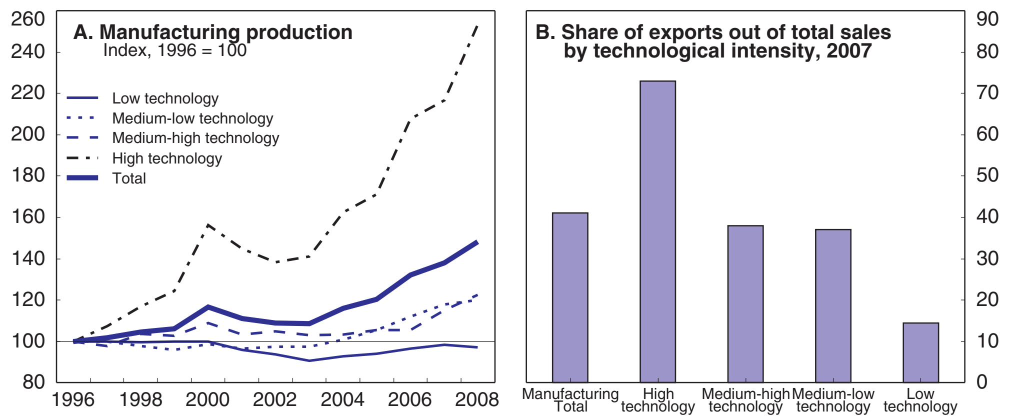
Impressive development of high-tech sectors

High-tech activities have played the leading role in growth. Contributory factors include: a fairly large defence industry; training with sophisticated technologies during military service; a large pool of researchers in the Jewish Diaspora; and, engineering and science skills brought by the wave of immigrants in the early 1990s. Aside from defence industries, the main hi-tech activities are computer component manufacturing, software engineering, medical technologies and pharmaceuticals. For example, one of the world's largest generic pharmaceutical companies, Teva, is headquartered in Israel. High-tech manufacturing has grown very rapidly and is strongly geared towards exports (Figure 1.4).[2]

Outside the high-tech sectors, Israeli businesses play an important role in the world diamond industry, which accounts for a large share of trade and is often reported separately in statistics. However, the sector accounts for only a small share of value-added in GDP. There are a number of "traditional" manufacturing activities such as textiles. Success in developing the country's relatively poor soils for agriculture was important to early economic development, but this sector now accounts for only around 2% of GDP. Related experience in managing scarce water resources has developed into another area of high-tech expertise.

Family-based business groups with complex and diverse shareholdings are a prominent feature of the business landscape (notably the Arison, Ofer and Delek groups). One study (Kosenko, 2000) has estimated that the 20 largest family business holdings totalled 30% of the market value of Israeli company shares, a relatively high value compared with equivalent calculations for other countries. Business groups have a strong

Figure 1.4. **Manufacturing output and exports by level of technology**



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: CBS, *Statistical Abstract of Israel 2009*.

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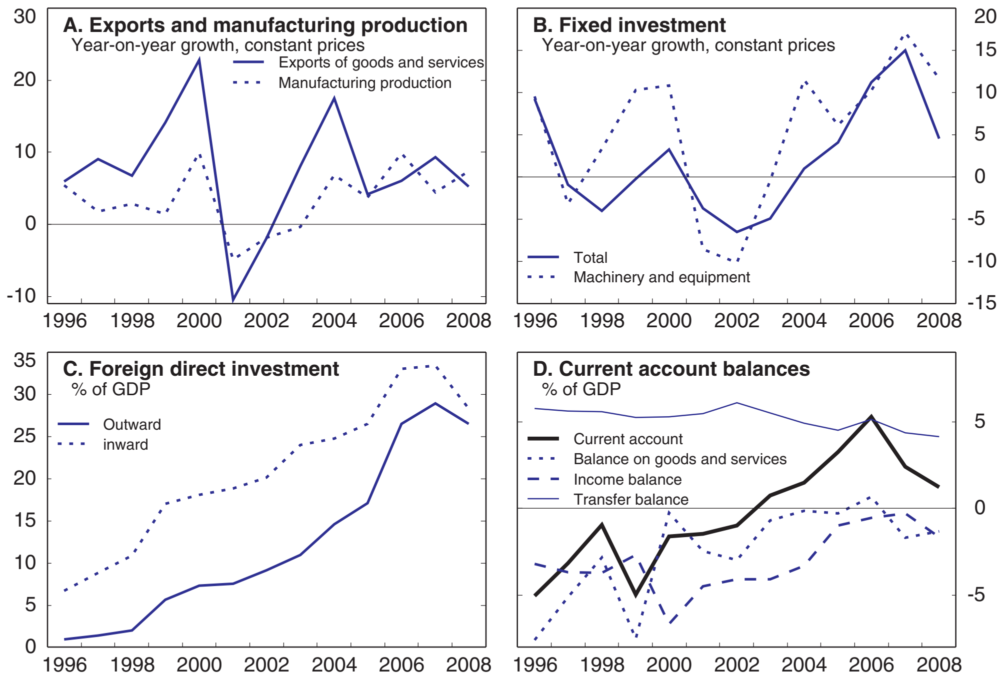
presence in the financial sector, with half of all domestic banks and insurance companies affiliated to them.

Aggregate indicators of trade, manufacturing production and investment echo, usually in a magnified way, developments in GDP growth, reflecting the importance of production for export in the economy (Figure 1.5). Even on an annual basis, the growth rate of exports displays large swings. For instance, exports grew by 23% in 2000 and then shrank by 10% the following year. Despite the large volume of exports, the balance of trade in goods and services has typically been negative; the demand for imports for final consumption more than offsets the value-added generated by the export sector (which itself draws in substantial imports). Past substantial inward foreign direct investment means that the income balance of the current account is also typically negative. However, there is a large positive balance on the transfers account (see below).

Figure 1.5. **Past developments in exports, manufacturing, investment and the current account**

Per cent



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Central Bureau of Statistics, and OECD, *Economic Outlook 86 Database*.

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Unique geopolitical and historical influences on the economy

Unusual economic relations with other countries and arrangements in land ownership

Israel's history and the geopolitics of the region have a bearing on several economic issues. The country is described by some as an "island economy". Although trade and investment flows are substantial with the wider world, those with neighbouring economies in the Middle East are relatively small. Also, cross-border movement of labour from Gaza and the West Bank into Israel is strictly limited. This has prompted a widening of channels to temporary foreign workers from further afield (such as the Philippines and Thailand), who now account for about three-quarters of the non-Israeli workforce. Non-Israeli workers are numerous; they are estimated to account for 12% of private-sector employment. Their impact on the low-wage jobs market is considered by many to be contributing to poverty in the Israeli population (see below and Chapter 4).

Economic ties, particularly with the United States and Europe, go beyond trade and investment. As shown in Figure 1.5, there is a large positive net balance of transfers comprising government-to-government transactions (notably US military aid), but also transfers between private households (including remittances) and transfers to non-governmental organisations that support a wide range of groups and causes. Though the share of transfers in GDP has been declining in recent years, it nevertheless remains significant. In 2008 the net balance of transfers was 4.2% of GDP, of which net private transfers amounted to 2% of GDP. The three OECD countries with the largest total net transfers in that year were Mexico (with 2.3% of GDP), Poland and Portugal (each with 1.5%).

Land property rights are also somewhat unique: only 7% of land is privately owned, 12% is owned by the Jewish National Fund and the remaining 81% either directly by the State of Israel or by the Development Authority.[3] Management of state land, and land planning and building permission more generally, is conducted by the Israeli Land Administration (ILA, soon to be transformed into the Israeli Land Authority). The market for property is primarily through private trading in the ILA's leases (these are typically for either 49 or 98 years).[4] Recent legislation that includes reform of the ILA and permits the conversion of some state land from lease-holding to private ownership is discussed in Chapter 5.

Substantial resources devoted to the military and security services

Government spending on defence equipment and personnel is now well below previous peaks, but it is nevertheless still comparatively high at around 8% of GDP. About 1.5 percentage points of that amount is accounted for by the military aid from the United States.[5] But even when this is taken on board, Israel typically faces an additional fiscal burden equivalent to around 5 percentage points of GDP compared with the majority of OECD member countries' defence budgets, which lie between 1 and 2% of GDP.

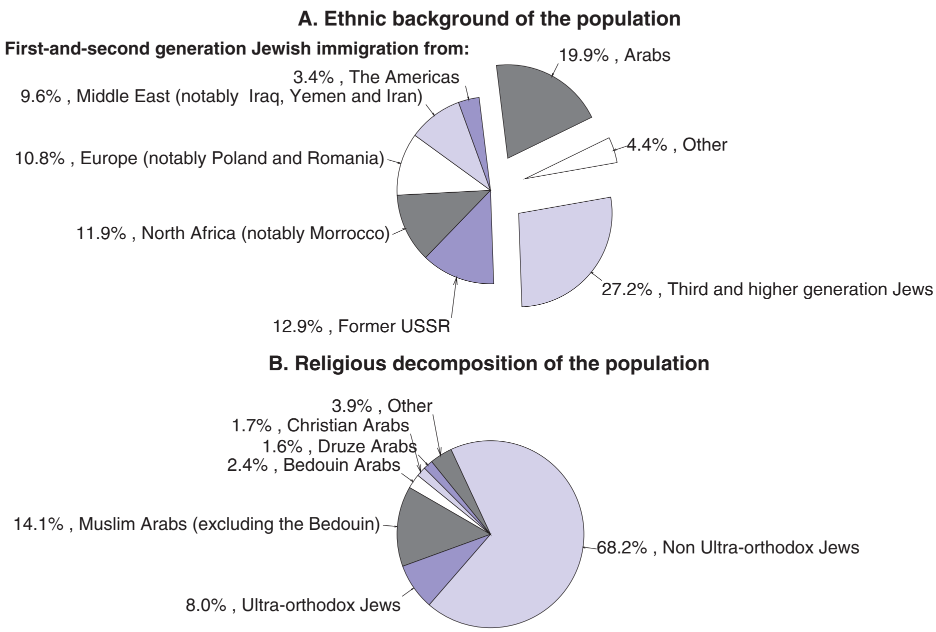
Maintaining a large military force also has implications for human resources. Compulsory military service (three years for men, two years for women followed by reserve-service requirements) affects education and the labour market and also contributes to divisions within society. Ultra-orthodox Jews and Arab-Israelis are exempt, freeing them from the downsides of service but excluding them from a range of subsequent fringe benefits and other support. In addition, there is little doubt that a greater share of resources is devoted to civilian security arrangements than in most OECD countries. Checks on entry to government offices are tight; transport networks, offices, shops, restaurants and bars are often manned by private security guards; and scanning devices similar to those used in airports are often found on larger premises.

A complex society

Israeli society is characterised by many political agendas rooted in ethnicity and religion. The diverse migrant roots of the Jewish population in Israel are still very evident (Figure 1.6, Panel A). Also, there is an influential, rapidly growing but also insular Ultra-orthodox Jewish (Haredi) minority that represents about 8% of the total population (Figure 1.6, Panel B).[6] Arab-Israelis account for about 20% of the population; the majority are Muslim, but there are significant minorities of Christians and Druze. Also, the nomadic traditions of the Bedouin (around 2% of the population) are particularly distinctive. This wide-ranging cultural mix has meant that, partly but not wholly through necessity, there is systematic segregation in some areas of policy. For instance, the education system has several parallel streams. The country's demographics are also unusual. Historically, population increase was largely driven by Jews exercising their right to Israeli citizenship (*aliya*). Inflows have dwindled since the large wave of immigrants in the early 1990s. But the Arab-Israeli and Ultra-orthodox populations continue to have high birth rates, which is contributing to poverty (see below).

Figure 1.6. **Decomposition of the population**

Percentage of total population, 2007



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Central Bureau of Statistics.

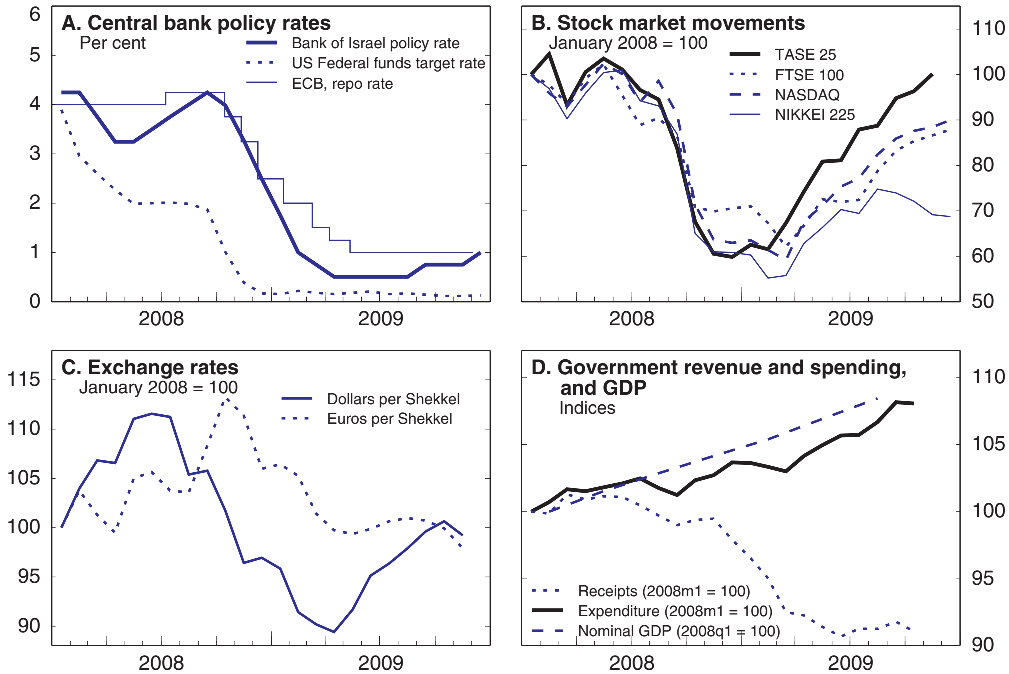
The current downturn, the policy response and prospects to 2011

A severe but not critical credit crunch

Unlike most previous shocks to the economy, the recent downturn originated almost purely from outside Israel. Conservative commercial banking (guided in part by regulation), particularly lending to households and businesses, meant an absence of significant over-extension of domestic credit.[7] Partly for this reason, there was no bubble in the housing market similar to those that have amplified the downturns in some OECD countries. Furthermore, and, with hindsight, fortuitously, there had been limited progress on "reforms" to the financial sector that, if completed, may well have led to increased holdings of foreign toxic assets. Though less calamitous than in some other countries, the credit crunch was nevertheless severe in the months following the acceleration of the global crisis in September 2008, particularly in the market for corporate bonds. And the strongly correlated swings in the world's stock markets were echoed in domestic indices (Figure 1.7, Panel B).

Figure 1.7. **Recent monetary, financial and fiscal developments**

Per cent



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Central Bureau of Statistics, Bank of Israel and OECD, *Economic Outlook 86 Database*.

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Broadly appropriate policy responses

As an immediate monetary-policy response to the crisis, the Bank of Israel reduced its policy rate following the events of September 2008. The rate was lowered in several steps from 4.25%, reached 0.50% in March 2009 and was held at this level for several months thereafter (Figure 1.7, Panel A). As in many other economies, the policy rate cuts were not initially passed on fully to borrowers as banks ramped up risk premiums.

These steps were backed with purchases of government bonds in the secondary market in order to increase liquidity and enhance the impact of monetary-policy changes on longer interest-rate maturities. This intervention ran from March to August 2009. Also, technical adjustments to the Bank's monetary operations sought to shift the liquidity mix towards longer-term holdings. Specifically, the Bank reduced the absorption of excess liquidity by means of *Makam* (short-term Bank of Israel bills), issuing additional discount-window loans, offering tenders for terms of more than a day or a week and narrowing the "corridor" around its key interest rate. Also, somewhat controversially, the Bank increased and extended a pre-announced programme of daily foreign-currency purchases that began in the spring of 2008. This operated until August 2009 and since then the Bank has been intervening on a discretionary basis. This issue is discussed in more depth in Chapter 2.

The government also stepped in fairly quickly with measures to support the corporate bond market and to ease credit conditions for businesses in general. The corporate bond market, which had become a key source of business finance and an important investment vehicle for pension funds, practically ground to a halt at one point. The government response included the establishment of investment funds partially supported by government capital to shore up the market. Wider support to the financial sector included guarantees to banks (it is understood that none of these have yet been called upon) and a temporary guarantee on the returns to second-pillar pension savings. This latter move was motivated partly by concerns for the welfare of some older individuals but also by worries that the unfavourable market conditions might prompt a flight from long-term savings plans.

Several steps were also taken to support the non-financial business sector and help the unemployed, though these do not add up to a large fiscal stimulus. In March 2009 the Ministry of Finance announced a plan comprising a number of spending measures (see Box 1.4), which notably proposed spending NIS 9.5 billion (equivalent to about 1.2% of GDP) *via* accelerated infrastructure investment. Other support was proposed for SMEs, innovation, active labour market policies and the unemployed (through eligibility conditions for unemployment benefit). However, the total proposed spending on these measures was modest. Furthermore, implementation of the plan had only just begun before being overtaken by wider discussions in preparation for the 2009-10 budget. This has made identification of the fiscal "response" to the crisis rather more difficult.[8] Nevertheless, it is clear that the sum total of the measures in fiscal terms has been modest, certainly compared with the packages put together by some OECD governments. In particular, while some infrastructure spending has been accelerated, nothing like the amount quoted in the March plan has been committed. At most, the measures listed above plus tax changes are estimated to have added up to no more than about 0.5% of GDP in the 2009-10 budget. In any case that budget focussed on adhering to spending goals, and so the measures were implicitly financed to some extent (Chapter 2).

All things considered, the relatively small active fiscal stimulus has been appropriate. Public debt in relation to GDP was already at undesirable levels prior to the crisis (see below). And, the significant downturn in revenues (only in tax receipts, not in national insurance contributions) has acted as an automatic stabiliser that anyway brought about a large increase in the deficit. By mid-2009 revenues had shrunk some 8% in nominal terms compared with the beginning of 2008, while expenditure had expanded by the same amount (Figure 1.6, Panel D).

Renewed discussions on financial regulation and supervision

As elsewhere, the global financial crisis is prompting discussion on financial-market regulation and oversight. In particular the Bank of Israel's latest *Annual Report* (Bank of Israel, 2009) makes a number of recommendations. These include a call for placing non-bank supervision under tighter oversight, alluding to a long-standing debate on the supervisory framework. Currently, banking is supervised by the Bank; securities markets and mutual funds are the responsibility of the Israel Securities Authority (ISA); and insurance, pensions and provident funds are supervised by the Ministry of Finance. Critics of the system have primarily focussed on issues of independence in the Ministry's

Box 1.4. **Measures taken by the government in response to the crisis**

Measures to support financial markets

Several measures aimed at directly supporting the corporate bond market:

- Establishment of private investment funds partially supported with government capital. The government contribution to these funds was NIS 1.1 billion, with total funding of NIS 4.5 billion. This expenditure will be recorded as government credit allocation (included in expenditure) but not be counted in the headline deficit.
- Suspension of mark-to-market rules for institutional investors up to a maximum of 3% of their assets and conditional on commitment to holding the bonds to maturity. Also, the Israeli Securities Authority has proposed a blueprint for procedures to restructure corporate bonds.
  - A legal framework was created to allow the appointment of credit officers to help manage the tradable debt of companies that have issued corporate bonds in the past.
  - A temporary tax exemption was granted on interest from corporate bonds for foreign investors as well as a reduction in the tax rate on dividends from abroad.

Other measures included:

- State-backed guarantees to banks to the value of NIS 5 billion.
- Special provisions allowing small and medium-sized businesses to pay taxes in instalments, and reduced guarantee requirements for businesses supplying government (the value of this is estimated at NIS 0.8 billion).
- A pension-savings guarantee ensuring that provident funds deliver a minimum real yield equal to that as of end-November 2008 to policyholders aged 57 years or more. If the guarantee were to be triggered, payment would be made to the financial institution, not the individual policyholders.

Other measures

The following list of measures is based on a "package" outlined by the authorities in March 2009. Evolution of the measures since then, and implementation issues, mean that the values indicated may no longer be relevant. No detail on the distribution of the estimated amounts over time was given in the package, further complicating analysis of the potential impact of these measures on annual fiscal budgets.

- Accelerated investment in infrastructure (NIS 9.5 billion; the value of additional funding actually committed is believed to have been much smaller than this).
- Increase of government credit guarantees to exporters (NIS 3 billion).
- Guarantees for residential construction (NIS 0.2-0.5 billion).
- Credit funds for business, estimated at NIS 0.3 billion, and total increase in credit estimated at NIS 1.55 billion, and increased government contributions to private equity funds for SMEs.
- R&D investments: increase in Chief Scientist Fund budget (NIS 0.35 billion), Bio-Technology Fund (NIS 0.25 billion), and Periphery R&D Fund (NIS 0.05 billion).
- Active labour market policies (NIS 0.54 billion).
- Relaxation of the eligibility rules for unemployment benefit. In June 2009 a mechanism was introduced triggering lighter eligibility conditions if the unemployment rate rises above 7.5%.

responsibilities.[9] The Ministry conducts its supervision by a regular department (the Capital Market, Insurance and Savings Commission), which is not protected by special legislation or budgetary arrangements. Ministry-based supervision is somewhat unusual. Although this has not been obviously problematic to-date the authorities ought to consider shifting this area of supervision to a more independent body. Some experts debate the relative merits of banking supervision by the central bank, though there is no strong consensus on this issue, which largely reflects the state of similar debates elsewhere. Also some argue for a profound shift away from the "separate" supervisory framework (see Box 1.5). However, any such deep reform should be approached cautiously, as the relative merits of different supervisory structures have become clouded in the wake of the financial crisis.

Other recommendations in the Bank's report emphasise measures to make financial institutions more transparent and rigorous in their analysis, such as rules that lessen the use of rating agencies and increase disclosure of off-balance-sheet instruments. The report also recommends close monitoring of the nascent securitisation market in light of developments elsewhere. Somewhat aside from the recent crisis, concerns about concentration in the banking sector continue; this is discussed briefly in Chapter 5.

Box 1.5. **Supervisory structures for the financial sector in OECD countries***

Separate financial supervision: Different financial services sectors, such as banking, insurance and securities, are subject to separate supervisory authorities with the most common form generally including banking supervision as a function of the central bank (France, Spain), and the United States are common examples of this approach). Separated authorities can develop specialisation in their respective fields.

Single integrated supervisory body: In the integrated model, all the supervisory functions are brought together under one umbrella organization. The UK Financial Services Authority (FSA) is often cited as the classic example of this approach. The main advantage here is enhanced efficiency from combining tasks and a unified view on overall market risks. In practice, there are variations on the two core models. A single agency could be totally integrated in its internal functions (for example with departments for licensing, supervision and enforcement, rather than by reference to financial sectors) or could be little more than a formal association of semi-autonomous sector-based departments.

Twin-peaks model: Australia and the Netherlands have adopted a "twin-peaks" model, which emphasises supervision by two broad objectives, "prudential regulation" and "conduct of business", instead of supervision by function, as is currently the case in Israel. In this system, there are two integrated supervisory bodies, one of which is responsible for the prudential safety and soundness of all financial-sector institutions and the other for the conduct of business.

* See de Michelis (2009) for further discussion.

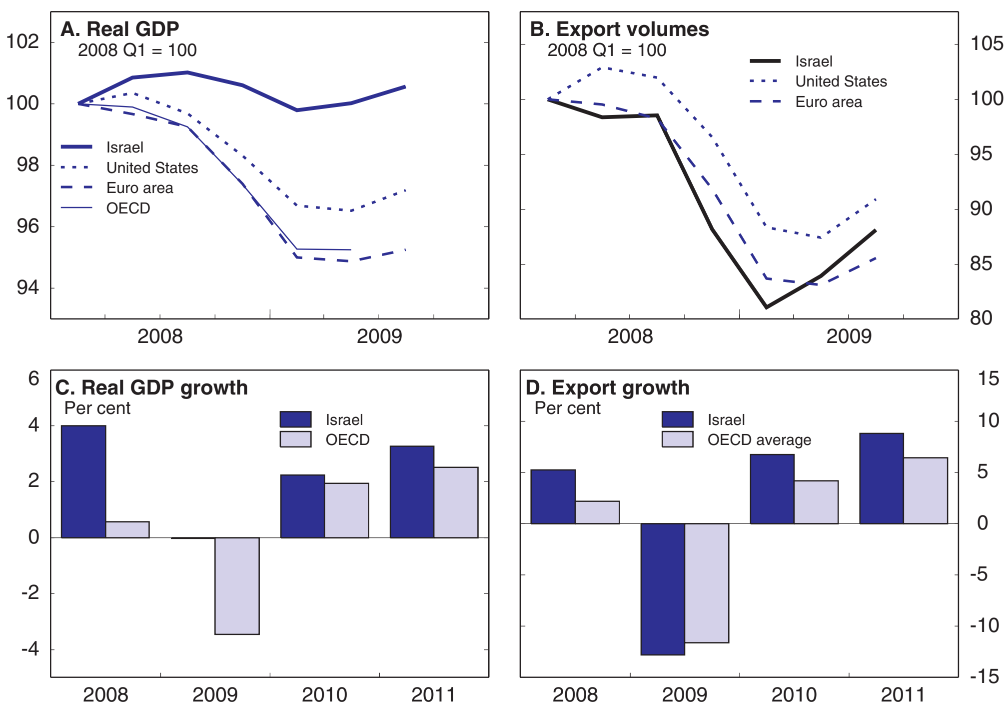
Green shoots in economic activity and upward revisions to projections

As elsewhere, the downturn in real activity is proving to be milder than many initially feared. Technically the economy came out of recession in the second quarter of 2009 with 1% growth in GDP, quarter-on-quarter (annualised) and continued growing in the third quarter. Viewed in terms of the level of real GDP the downturn has been much less severe than in the OECD area (Figure 1.8, Panel A). This said, export volumes tumbled by a similar magnitude to those for the euro area and the United States (Panel B), and the percentage-point drop in real GDP growth has nevertheless been large.

Positive one-off factors, notably accelerated car sales in advance of purchase-tax increases partly drove the positive growth figures in the second and third quarters of 2009. Nonetheless, the outcomes do contain some green shoots of recovery: growth in the consumption of non-durables and exports both turned positive in the second quarter, for instance. The improved outlook has led to upward revisions inforecasts. OECD projections prepared for the autumn 2009 *Economic Outlook* (and prior to the release of the third-quarter GDP figures) estimate zero growth for 2009 and project growth of 2.2 and 3.3% for 2010 and 2011, respectively (Figure 1.8, Panel C and Table 1.1). The projection foresees strengthening consumption and investment, a positive contribution from accelerating stockbuilding and a significant pick up in trade. Interestingly, the results of a dynamic stochastic general-equilibrium (DSGE) model suggest the Israeli economy, in general, has flexible price adjustment and is indeed likely to recover relatively quickly from the downturn.[10] Although the labour market is generally responsive to economic conditions, there is nevertheless some lag, and a fall in the annual rate of unemployment is not expected before 2011.

Concerns about a deflationary spiral have similarly subsided. Indeed, in August 2009 the Bank raised its policy rate for September from 0.5 to 0.75%; no OECD central bank had yet raised its policy rate at that stage in the downturn. The increase represented a less expansionary stance, rather than a shift to a contractionary one. Even following the increase, real market rates of interest have remained low, and the Bank's

Figure 1.8. **Recent developments and projections in GDP and trade**



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: OECD, *Economic Outlook 86 Database*.

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Table 1.1. **Short-term economic outlook**

	2006	2007	2008	2009	2010	2011
	Current prices ILS billion	Percentage changes, volume (2005 prices)				
Private final consumption expenditure	359.9	6.4	3.6	0.1	2.6	3.3
Government final consumption expenditure	165.0	3.4	1.9	3.0	1.7	0.4
Gross fixed capital formation	111.7	15.0	4.5	–6.3	3.7	5.5
Final domestic demand	636.6	7.1	3.3	–0.4	2.6	2.9
Change in inventories (contribution to growth in real GDP)	10.4	–0.8	–0.6	–0.4	0.6	0.0
Total domestic expenditure	647.0	6.2	2.8	–0.7	3.1	2.9
Exports of goods and services	277.0	9.3	5.2	–12.8	6.8	8.8
Imports of goods and services	274.0	11.8	2.3	–14.9	10.0	7.8
Net exports (contribution to growth in real GDP)	3.1	–1.0	1.2	1.0	–0.9	0.4
Gross domestic product, volume, market prices	650.0	5.2	4.0	0.0	2.2	3.3
GDP deflator	–	0.4	1.8	5.0	1.9	1.9
Memorandum items:						
Inflation (CPI), average increase		0.5	4.6	3.4	3.3	1.7
Inflation (CPI), December-to-December increase		3.4	3.8	4.3	2.0	1.7
Private consumption deflator		1.5	4.7	2.4	2.9	1.8
Unemployment rate		7.3	6.1	8.5	9.2	7.0
General-government financial balance (% of GDP)[1]		–0.2	–2.4	–5.9	–4.9	–3.9
Current-account balance (% of GDP)		2.4	1.2	2.9	1.9	2.0

Note: For technical reasons this table uses Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.
1. Excluding Bank of Israel profits and the implicit costs of CPI-indexed government bonds.
Source: OECD *Economic Outlook 86 Database* and Israel's Central Bureau of Statistics.

press statements did not hint that the move heralded the start of a period of successive rate increases. Indeed, the Bank left the rate unchanged for October and November, though it did raise it to 1% for December (this was the final decision prior to finalisation of this publication). Inflation has been pushed up in recent months by indirect tax increases and by exchange-rate effects on the housing component of the inflation index (see Chapter 2). However, as of early December 2009 there were no signs of significant upcoming inflationary pressures. One of the Bank's preferred measures of inflation expectations (based on comparison of yields on indexed and non-indexed government bonds) has continued to indicate that inflation 12 months ahead would be within the target of 1 to 3% headline CPI growth, though marginally in the upper half of this range. It is believed that the markets have been assuming early policy rate increases, and the Bank claims that this is one factor driving its decisions to increase its policy rate. Money aggregates had been increasing rapidly in the wake of the global financial crisis. However, declines were recorded in autumn 2009, and the previous increase is anyway not expected to have significantly fuelled inflationary pressures.

Economic policy challenges beyond the downturn

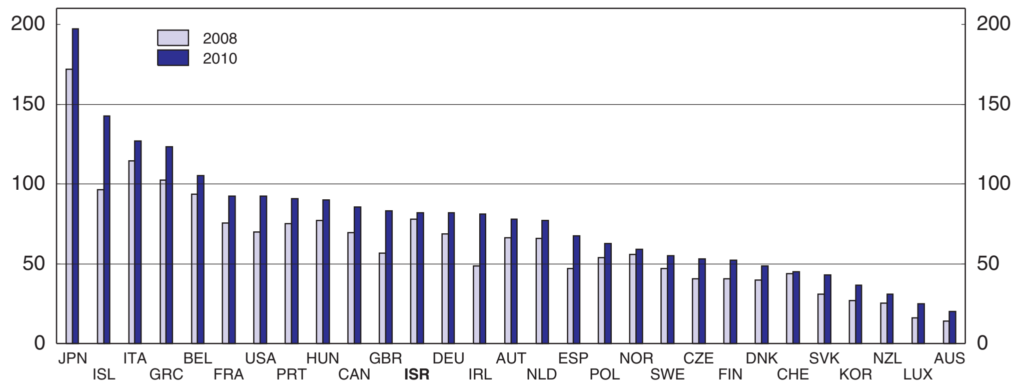
Acute trade-offs in fiscal policy

While the new era of policymaking since the mid-1980s has brought inflation down to healthy single-digit levels, success in fiscal policy has been rather more mixed, and tough challenges remain. There has been a broadly welcome reduction from the very high shares of government spending and revenue in GDP, reflecting the wider shift to a more market-based economy. Indeed, the ratio of primary *civilian* public spending to GDP (*i.e.* excluding interest payments and spending on defence) is now low compared with many OECD countries; in 2008 it was 33% of GDP, compared with an OECD average of 41%.

However, public debt has yet to be brought within comfortable bounds. To be sure, there has been considerable progress; the debt-to-GDP ratio was pulled down from extreme levels fairly quickly during the late 1980s and saw further declines during the 1990s. But, there has been little sustained reduction since then. The ratio bottomed out at around 85% in 2000, bounced back to 100% in the following downturn and reached 78% in 2008. The current downturn is expected to see it increase to nearly 82% in 2010 (Figure 1.9). Recognising the public-debt problem, the authorities have set their sights on getting the debt-to-GDP ratio down to 60% – the Maastricht ceiling. Prior to the current downturn, it was widely hoped this milestone could be reached by the mid-2010s, but this has been pushed back. The government budgeted to keep the central-government deficit (excluding net credits) to within 6% and 5.5% of GDP in 2009 and 2010, respectively, and aims to reduce it to 3% of GDP in 2011.

Figure 1.9. **Israel's public debt in international comparison**

As a percentage of GDP



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: OECD, *Economic Outlook 86 Database* and OECD estimates for Israel.

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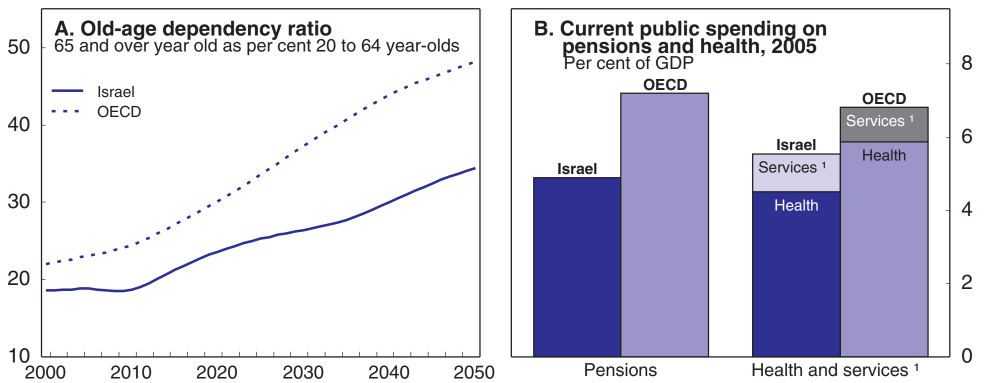
Sustained reduction in the burden of public debt would bring two principal payoffs. Most directly, a pronounced and continuous decline in the ratio would help free up capital (*i.e.* by reducing "crowding out") and reduce debt-servicing costs. Less easily measurable, but also important for an open economy, are reductions in the risk of the economy sliding into unpleasant macroeconomic configurations, such as loss of confidence in sovereign debt and consequent currency devaluation and inflation. Reductions in such possibilities are also likely to cut debt-servicing costs further due to reductions in risk premia.

In some respects, Israeli policymakers have a harder job than their counterparts in many OECD countries in bringing debt down. As mentioned above, spending on defence is relatively high, which adds an additional fiscal burden. Furthermore, because civilian public spending has already been whittled down, low-hanging fruit in terms of efficiency gains or cuts in services and transfers has probably already been picked. In fact, in some areas savings may have "overshot", and additional spending may be needed to achieve goals in structural policy. Finally, room for manoeuvre in taxation is also limited, and taxes that closely affect businesses, such as corporate income tax, should preferably be lowered in light of the important role played by internationally mobile businesses in the economy.

That said, additional fiscal burdens due to population ageing look set to be significantly milder than in many OECD countries. Youthful demographics are helping: the old-age dependency ratio is 19% compared with an OECD average of 24% (Figure 1.10). Population ageing will accelerate soon but less vigorously than the OECD average. These favourable conditions partly explain why current public-spending on pensions and health care are relatively small in relation to GDP (Figure 1.10). In addition, the level of the state pension is comparatively modest, and, as such, future fiscal commitments on this front do not look burdensome (see Chapter 4). More uncertain are the implications of ageing for public spending on health care. Transfers from general tax revenue play a big role in funding the insurance-based system (see Box 1.6), and ageing might see pressure to increase these, as developments in medical technologies are likely to continue generating demand for new treatments.

Chapter 2 of this *Survey* focuses on options for raising taxation and provides a broad overview of the challenges in spending. Avenues for deficit-reducing measures involving spending and taxation depend very much on sustainable structural reforms. Future *Surveys* will drill down into individual areas of spending and taxation in search of more options. The chapter also examines the fiscal rule used to set annual spending increases and other features of the budgeting process.

Figure 1.10. **Indicators of ageing-related spending**



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Services for the elderly and disabled.

Source: Central Bureau of Statistics; OECD, *Population Database* and OECD, *Social Expenditure Database*.

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High rates of poverty fuelled by low employment rates

Israel suffers from high levels of poverty for a developed economy. Relative poverty has long been above the OECD average and increased substantially in the early 2000s. For instance, based on one of the OECD's standard measures based on half standardised median income (see Chapter 4), by 2005 19.9% of Israeli individuals were below the relative poverty threshold, more than in any OECD country (Figure 1.11, Panel A). This includes countries such as Mexico and Turkey, which are at stages of economic development that lend themselves to wide distributions of income. Since then the poverty rate has levelled

Box 1.6. **Key features of the health care system**

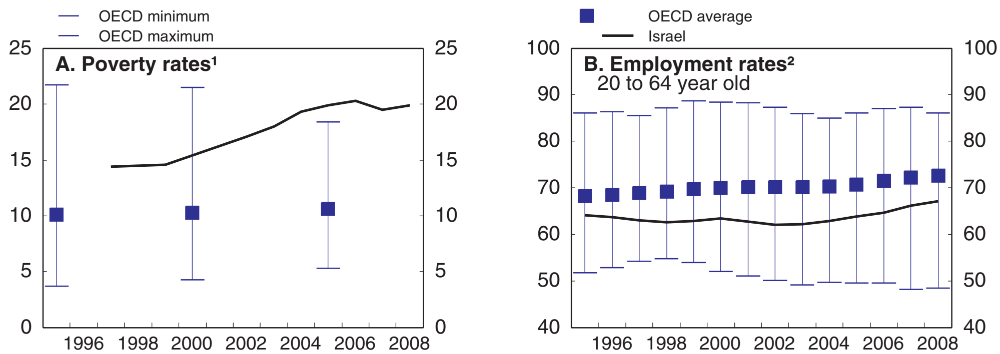
Following major reform in 1995, health care operates under a "health management organisation (HMO)" system in which individuals are universally covered by a basic insurance plan (with statutory insurance contributions for those in employment) and choose between competing HMOs (or "health funds").* There are four funds: Clalit Health Services, Maccabi Healthcare Services, Meuhedet and Leumit Health Fund. They contract out health-care services to providers, which comprise a mix of private and publicly run institutions. The statutory contributions are deducted from wages and paid into the National Insurance Institute's (NII) accounts. Unlike most other NII insurance contributions, they are not put into a central fungible account but are passed directly on to the HMOs. These contribution flows are augmented by state transfers from general government revenue to fund the provision of the basic insurance package.

There is a second layer in the system comprising regulated complementary insurance in which individuals pay extra contributions for an augmented package. Around 80% of households take out complementary insurance, and around 20% are signed up for purely private health insurance too (Bank of Israel, 2008). As in health-care systems elsewhere, the health services and pharmaceutical drugs covered by the basic insurance package are often a source of policy debate. In Israel's case this also includes discussion about the division between basic and complementary coverage.

* For a general description of the healthcare system see Rosen (2003) and, for discussion of complementary insurance, Bank of Israel (2008).

out at around 20%; in 2008 it was 20.3%. The poverty problem is fuelled by a relatively low rate of employment, though the upturn in economic activity from 2004 to 2008 did see the gap with the OECD average narrow (Figure 1.11, Panel B).

Figure 1.11. **Poverty and employment rates in Israel and the OECD**



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. The poverty rate used here represents the share of individuals with "equivalised" disposable income less than 50% of the median for the entire population where equivalisation is based on the OECD method of weighting household members according to the square root of household size (see Chapter 4). The values for 1998, 2000 and 2001 are interpolated. The reference years for the OECD poverty rates vary somewhat by country; the data points shown refer to the "mid 1990s", "around 2000" and the "mid-2000s".
2. Luxembourg excluded.

Source: National Institute of Israel; OECD, *Social and Welfare Database*; OECD, *Labour Force Statistics Database*.

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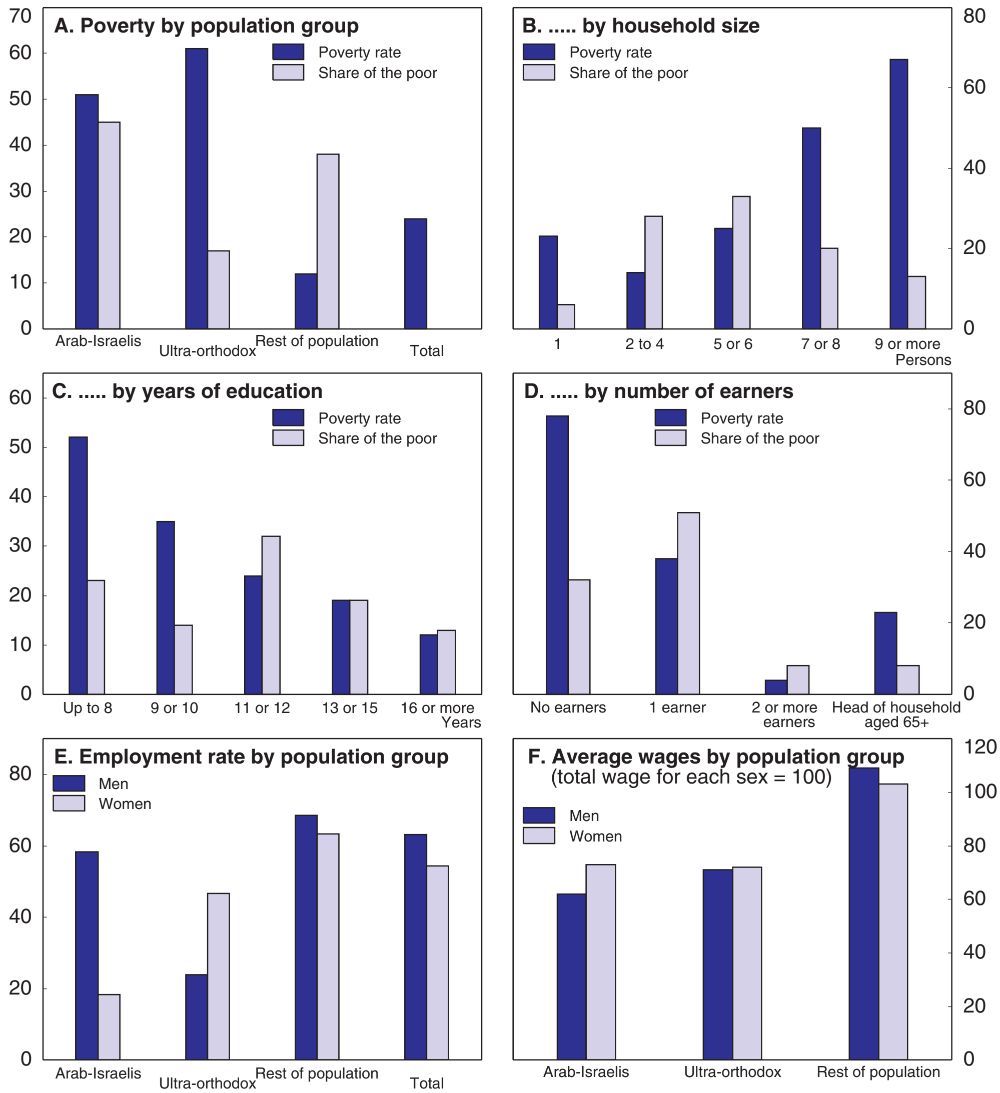
Poverty and low labour-force attachment are concentrated in two groups: the Arab-Israelis and Ultra-orthodox Jews. Around 50% of Arab-Israelis fall below the poverty threshold (as calculated by the National Insurance Institute) and account for 45% of the poor population (Figure 1.12).[11] The relative poverty rate among the Ultra-orthodox is even higher according to this measure, around 60%, though the smaller size of this community means they account for only around 15% of the poor. Finding solutions to the problems underlying these poverty rates is of paramount importance because the share of these communities in the population is increasing. The Arab-Israeli and Ultra-orthodox make up about 28% of the total population but, for example, now account for 46% of children starting primary school.[12]

Figure 1.12. **Poverty and labour market indicators across different groups**

2007/08



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Bank of Israel (2009), *Annual Report 2008*.

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Low levels of education, weak local job markets and poor transport infrastructure are widely believed to be key contributors to the persistently high rate of poverty among Arab-Israelis. Employment among men is concentrated in physically demanding jobs, notably in construction. This leads to a sharp tailing off in the employment rates among older cohorts. An OECD review of labour-market and social policies (OECD, 2010a) shows the employment rate among this group falls from around 60% for 50-54 year-olds to 35% for 55 to 59 year-olds. Cultural traditions concerning women's role in society, including the degree to which they can mix with those outside family circles, limit employment. Even the highest employment rates in the age profile reach only 30% (among 30-34 year olds). In addition, econometric analysis of gaps in wages and employment outcomes between Arab-Israelis and the rest of the population point to discrimination in the labour market, which are limiting employment opportunities (OECD, 2010a). There has been some good news in the recent outcomes for Arab-Israelis. According to the National Insurance Institute, the rate of relative poverty among Arab-Israelis based on the OECD measure fell in both 2007 and 2008, which is encouraging.

The Ultra-orthodox Jewish community in Israel has established a number of rights and privileges. Most notably, schools are not subject to state supervision and do not have to closely follow national curricula or examination processes. Special deferment rules mean that men in full-time religious study are not subject to military conscription.[13] This is one reason why male labour-market participation among the Haredi community in Israel is seemingly lower than that in other parts of the world (Berman, 2000 and OECD, 2010a). Haredi women are often encouraged to work, but cultural norms on mixing with the wider community apply. In combination with high birth rates this means that, though much higher than their male counterparts, female employment rates are lower than in mainstream society. Available relative poverty rates among the Ultra-orthodox do not show signs of recent improvement. According to figures published by the Bank of Israel the rate of poverty dropped quite significantly in 2006 from a peak value in 2005 but increased thereafter (Bank of Israel, 2009).

Education issues are not confined to the Arab-Israelis and Ultra-orthodox. In-depth analysis of educational outcomes and policies in Chapter 3 finds that mainstream secondary-school students, as well as those in minorities, perform poorly in international tests of core skills compared with OECD countries. This is particularly worrying, implying that Israel's otherwise impressive statistics on educational outcomes, notably the high share of the population with tertiary qualifications, belie some fundamental problems in the quality of education. Hence, Chapter 3 focuses particularly on what improvements should be made to primary and secondary education.

While educational reforms are typically slow to take full effect, social and labour-market policies can have more immediate impact on employment and poverty rates, and these are examined in Chapter 4. One challenge is to ensure that policies properly target the low end of the income distribution. Another is to ensure that they bring sustainable solutions, which primarily means encouraging more members of poor households to enter the labour market. This involves tricky trade-offs. Pushing welfare payments down for those that do not work raises work incentives, but not all households are likely to respond, and the remainder are left worse off. Raising in-work incomes for low-wage jobs avoids this but can be expensive. Also, this reduces incentives to move up the earnings distribution because of high marginal effective rates of taxation; for instance, "phase-out" mechanisms applied to earned-income tax credits have this effect.

A mixed report card for the business environment

In broad terms, policies have for some time been favourable towards business and have focussed on trying to enhance international competitiveness. This is understandable, as there are few natural advantages to draw investors in and anchor them down. Mineral deposits and carbon-based energy resources are limited. Indeed, the country arguably has some outright disadvantages as far as some investors are concerned: it is further from major markets than many competing business locations, and regional politics probably puts some off (though Israel also undoubtedly attracts a degree of patronage from its Jewish diaspora). Furthermore, the high-tech sector, which has been a significant source of growth, is particularly mobile.

Much improvement has been made on trade policy, which in the 1970s and 1980s was strongly protectionist, with import tariffs and other barriers to trade featuring prominently. Most of these were removed some time ago, although significant tariffs remain on agricultural products. Purchase taxes on white goods and cars (these types of goods are almost exclusively imported) that are in addition to VAT survived somewhat longer, doubly serving as revenue raisers and as a broad encouragement to favour domestic goods and services. A large number of these taxes were removed in 2007, although high purchase taxes on vehicles remain, albeit with an environmental twist.

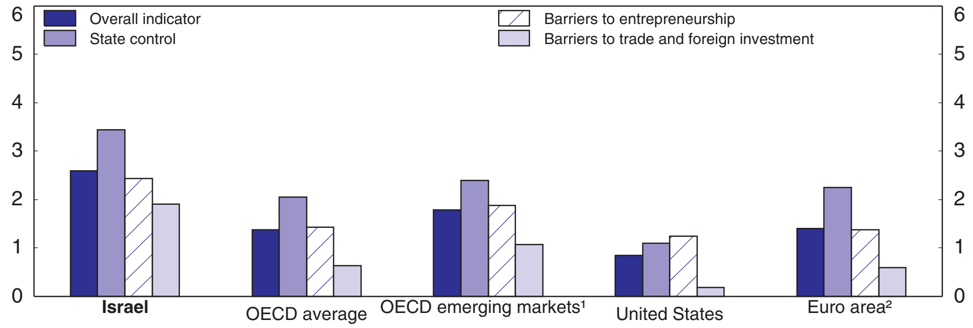
The macroeconomic backdrop for businesses remains somewhat patchy. Bright spots include the establishment of a low-inflation environment and the trend reduction in the "size" of government in recent decades. Furthermore, the decline in the share of government revenue in GDP has included cuts in the tax burdens that most affect enterprises. For example, schedules of cuts to corporate and personal income tax rates have been underway since 2003 with the latest due to end in 2016. This said, the relatively poor progress in bringing down the burden of public debt may have meant a higher cost of credit to businesses than if public borrowing requirements had been smaller. Also, the apparent flaws in the education system and untapped resources in the labour market as evidenced by low employment rates suggest room for improving the skill base available to businesses.

Furthermore, indicators suggest other weaknesses in the environment for business. Provisional results of the OECD's Product Market Regulation (PMR) index suggest that regulatory barriers and other channels of state influence on business activity remain high relative to OECD countries. Indeed, as shown in Figure 1.13, these initial results show Israel has a higher (worse) score than any OECD country. This suggests that in broad terms there is work to be done in cutting red tape and reforming other dimensions of the interface and linkages between the state and the business sector. Although policies have moved a long way from the hands-on corporatist management of the economy of the past, settings at least in some domains remain less than ideal. Chapter 5 examines these issues more deeply.

Regulation and state interests are clearly only one segment of the wide range of structural factors affecting the business environment. Chapter 5 also reviews thematic support programmes (investment incentives, innovation policy and programmes for small and medium-sized enterprises and targeted support for agriculture). And it reports on general competition legislation and examines the state of play in reform of the energy and telecommunications sectors. The chapter also takes a first look at transport policy, where rapid growth in population and economic activity has presented significant difficulties.

Figure 1.13. **The overall PMR indicator and main sub-indicators**

2008



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Czech Republic, Hungary, Korea, Mexico, Poland, Slovak Republic, Turkey.
2. Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain.

Source: OECD, *PMR Database*.

StatLink http://dx.doi.org/10.1787/774543568378

Problems facing environment policy and water management

The broad environmental challenges

Rapid population growth and economic expansion as well as limited land area have generated significant environmental concerns as to air pollution and waste treatment (Tal, 2002). Activity levels in all the main sources of air pollution, *i.e.* transportation, energy production and industry, have increased substantially in recent decades. Recent measures to tackle this problem have included a countrywide air pollution monitoring system and new legislation, the Clean Air Law, enacted in 2008, that will come into force in 2011. The Law provides a framework for the treatment and prevention of air pollution by setting responsibilities and imposing obligations on the key actors (government, local authorities and the industrial sector) for setting emission standards and regular revision of quality standards for air pollutants.

Economic instruments to curtail air pollution and improve related environmental conditions (notably, greenhouse gas emissions and traffic congestion) are being used quite extensively (Table 1.2). The most recent measure is a revised system of purchase taxes on vehicles introduced in July 2009 that endeavours to link this tax to environmental externalities through changes to the rates and rebates based on environmental criteria (see Chapter 2). Various other schemes are being devised to cut back on vehicle emissions and congestion, including: mandatory maximum emission standards for vehicles; restricting the entry of polluting vehicles in the Tel Aviv area; rules on the type of cars purchased in government procurement contracts; and economic incentives for promoting alternative fuels. Also, the Bank of Israel's latest *Annual Report* (Bank of Israel, 2009) discusses the taxation of parking as means of reducing commuting by car and argues that current company-car legislation encourages excessive use.

Municipal waste has been increasing in recent years. Most of the country's waste (nearly 80%) is disposed of in 15 landfills, but their capacity will soon be exhausted. The authorities aim to reach a 50% recovery rate for municipal solid waste within ten years; it is currently about 20%. Efforts are focusing on introducing alternatives to landfill: source reduction, reuse, recycling, biogas production by anaerobic digestion, composting, and as fuel in energy generation. The most recent addition to the arsenal of economic instruments used in this area was a levy on landfill operators (Table 1.2).

To date, participation in international environment fora has been largely *via* the framework of the United Nations Environment Programme. Israel ratified the Kyoto Protocol in 2004, but it is not subject to any binding limitation on its greenhouse gas (GHG) emissions, since it was classified as a developing country. However, the follow-up to the Kyoto Protocol in 2012 is likely to result in Israel adopting targets to reduce its GHGs. As part of the OECD accession process, Israel is being assessed in relation to a number of OECD "instruments" regarding environment policies.

Table 1.2. **Selected economic instruments in environmental and water policy**

Scheme	Key features
Air pollution, GHG reduction and congestion	
Alteration of purchase taxes on vehicles (2009)	In July 2009 the purchase taxes were altered in a way that, in principle, ties up with the environmental externalities of different vehicle types.
Premium tariffs for solar energy production (2008)	A fixed feed-in tariff of NIS 2.01 per kilowatt-hour is available to domestic and commercial producers of electricity. The tariff applies up to 15 kilowatt systems in households and 50 kilowatt systems in businesses.
Waste	
Fee on the manufacturers and importers of disposable beverage containers (1999)	A 0.25% fee on disposable beverage container sales is paid into a fund that is partly used for various environmental activities, including clean-up campaigns and educational programmes.
Deposit/refund on drinks containers (2001)	Refunds are paid to the public for depositing containers larger than 100 millilitres and smaller than 1.5 litres.
Landfill levy (2007)	Requires landfill operators to pay a per tonne levy on waste sent to landfill.
Water	
Metered water charges for domestic and commercial users in a "block tariff" (late 1980s)	Domestic users pay according to a stepped tariff schedule comprising three different rates. Agricultural producers pay under a separate block-rate system, while industrial users pay a fixed price according to permitted quotas. The charges are paid to local authorities.
Consumer wastewater tariffs	These are correlated to water consumption and are included in households' water bills.
Fines on municipalities	Municipalities are subject to fines if "unbilled" water quantities exceed 12% of the water consumed by the local authority.
Differential levies on groundwater extraction (2000)	The levies are differentiated according to several criteria, including hydrology and water quality, water quantity and location.

Challenges in managing water resources

The climate and hydrology of the country present major challenges in the management of water resources. In recent years, scarcity has been exacerbated, not only by growing demand, but also by periodic droughts, which have caused over-pumping of natural water reservoirs. And, global climate change is likely to increase pressure on the water system. The national fresh water supply and distribution network is operated by a state-owned company, Merkerot, while local distribution and wastewater treatment is run by companies owned by local authorities. A centralised body, the Water Authority, was established in 2007; policy responsibilities for water management had previously been divided among several government ministries. Importantly, this has resulted in centralised tariff-setting under the Authority. Also, there is a longer-term plan for consolidation of the local water companies into larger regional operators. Another focus of policy is on alternative water sources, notably desalinated seawater and recycled sewage water. Two desalination plants are currently operating, and a third is expected to be operational by the end of2009. Efficient use of water is broadly encouraged through metered water charges on households and businesses. The tariffs were increased substantially in July 2009 on a temporary basis (the "drought tax"). A number of other mechanisms to limit use are in operation (Table 1.2).

Water technologies are advanced, particularly in agriculture (OECD, 2010b). For example, production methods and crops have been altered to permit the use of treated sewage and saline water. Indeed, as mentioned earlier in this chapter, water management has developed into an area of international expertise. For instance, it is estimated that there are over 100 companies involved in the field of irrigation and filtration equipment; in 2007, the exports of these technologies amounted to USD 2.2 billion.

Yet, there are issues in water pricing. Although the water rates charged to farmers have increased, they are nevertheless below those for other consumers and below the opportunity cost of producing fresh water. However, according to a recent agreement these gaps are being narrowed (see Chapter 5). This prompts broader issues of whether there is room for improving the delivery structures, as well as price mechanisms and other economic incentives in water management. These issues will be tackled in future OECD reviews.

Box 1.7. **Key points on economic development and policy challenges**

Key features of the economy

- Huge macroeconomic problems of hyperinflation and public debt developed in the 1970s and 1980s, prompting a sea change in macroeconomic and structural policies in the mid-1980s.
- Average real GDP growth since then has been impressive, despite a number of shocks. That said, strong population growth means that outcomes in terms of per capita performance have been less impressive.
- Israel's history and geopolitical position contribute to an unusual configuration of trade, investment and transfers with other countries; large resources devoted to defence; and a diverse society.

The recent downturn

- Difficulties in the financial markets were severe, but not critical. Lack of a house-price bubble helped, and this was aided by conservative banking. The greatest problems were encountered in the market for corporate bonds.
- The monetary policy response to the crisis was in general well measured, and the fiscal response has been limited to selective measures that appropriately do not add up to a significant stimulus.
- As elsewhere, the downturn is proving to be somewhat milder than many initially feared, and growth projections have been revised up.
- Various reforms to financial regulation and oversight in light of the crisis are being discussed. At a minimum, oversight of those sectors currently supervised under the Ministry of Finance should be moved to a more independent body.

Box 1.7. **Key points on economic development and policy challenges** *(cont.)*

Long-term economic challenges

- Fiscal challenges dominate the macroeconomic policy agenda. Debt is uncomfortably high, but the room for economies in spending looks limited, and concerns for competitiveness restrict the room for manoeuvre on taxation.
- Poverty and weak labour-force attachment among the Arab-Israeli and Ultra-orthodox Jewish communities are a growing socio-economic challenge.
- Education attainment in the working-age population is impressive, but the results of PISA point to weaknesses in core skills that are not confined to specific groups in society.

Environmental challenges

- Rapid population growth and economic development have prompted a strong focus on policies to reduce pollution and traffic congestion and improve waste management.
- Limited water resources have generated considerable expertise in water technologies. Efforts to promote efficient water use include metered water charges and a system of levies on extraction.

Notes

1. Demographic factors may be affecting Israel's performance relative to others beyond the immediate arithmetical effects of differences in the growth rate between the total population and that in the working-age population (*i.e.* dependency-ratio effects). Israel's dependency ratio is high compared with most OECD countries because of the relatively large population of children. If, as some argue (for instance Bloom *et al.*, 2000), there are additional impacts of this on growth capacity, then this might be affecting Israel's relative performance. Interestingly, most of the top five countries identified in Figure 1.3 have had particularly favourable demographics, none have high dependency ratios, and most have falling dependency over the period in question. The decline in Ireland was particularly large, presumably through a mixture of past declines in the birth rate, immigration (including "return" migration) and a lack of substantial pick-up in old-age population growth.
2. This classification is based on the level of technology of the goods produced, which does not necessarily reflect the sophistication of production processes. The high-tech sector comprises the production of office and computing equipment, various electronic goods, aircraft and pharmaceuticals. The low-tech sector notably includes textiles.
3. The Jewish National Fund was established in 1901 to buy and develop land for Jewish settlement in what was then Ottoman Palestine. It is a non-profit corporation owned by the World Zionist Organisation. The Fund leases its land under contracts that are similar to those for State land.
4. The ILA imposes only small charges on the leases, which are not significant in the economics of the property market.
5. US military aid to Israel is currently made under a ten-year arrangement that started in 2007. The initial value of aid was USD 2.55 billion per year with increases of USD 150 million each year (the average amount will work out at USD 3 billion per year, which is roughly equivalent to 1.5% of current GDP). The Israeli authorities are allowed to allocate about one-quarter of the aid to locally produced defence systems; the remainder has to be spent on US systems.
6. The population figure for the Haredi is an estimate. For religious reasons the community avoids being registered in censuses and does not generally participate in other official surveys. Social and economic characteristics are commonly estimated through household data that show the type of school last attended by the head of household (those indicating this was a *yeshiva* are counted as Ultra-orthodox). Some recent research (Gottlieb and Kushnir, 2009) indicates that this approach is underestimating the size of the Haredi community.
7. Notably, banks typically ask for deposits of at least 30% in the case of housing loans (this is in part connected to regulation). Weak growth in property prices over the past few years has also been attributed to an "overhang" of supply from a rapid pace of construction in the 1990s.

8. As has been the case for many OECD countries, the size of the fiscal response in part depends on the interpretation of "active" measures. Also, the values attached to "additional spending" depend on the reference point; in many areas of spending there is no obvious benchmark because spending increases under "normal" circumstances are not rule based.
9. There is also some concern with regard to the independence of the ISA, which has to operate (on certain issues) with the consent of the MoF and the Knesset Finance Committee. Some also claim that differences in the resources available for supervision across the three institutions are contributing to uneven levels of supervision, with the Bank's supervision being well funded relative to the other two institutions. Ben-Bassat (2007) suggests that depth and consistency in supervision would be helped by greater harmonisation in the regulations affecting products and services with similar characteristics, in particular mutual funds, provident funds and the new pension funds.
10. The Israeli economy appears to be rather flexible in the sense that adjustment to external and internal shocks is rather quick. Analysis using a Bayesian-estimated DSGE model finds the overall degree of price stickiness to be rather low for the Israeli economy, *i.e.* economic recovery is facilitated by fast price adjustment (Moeser, 2009).
11. The NII typically uses a different calculation method that implies higher poverty thresholds, especially for large families (see Chapter 4). In its recent publications, the NII has also been calculating poverty rates according to the OECD method.
12. According to the Central Bureau of Statistics, in the 2008-09 school year a total of 94 976 children started their Grade 1 primary education in Hebrew schools of which 24.6% were Ultra-orthodox pupils, while 37 783 started in the Arab stream (Central Bureau of Statistics, 2009, Tables 8.8 and 8.9). Thus, 17.5% of the *total* number were Ultra-orthodox and 28.4% Arab-Israeli.
13. Haredi men are absolved from military service as long as they remain in full-time religious study up to age 35 conditional on having had at least five children, and at 41 years otherwise. If at any point before this they leave full-time study, they are eligible for service. Haredi women also do not typically serve in the military, either because many start having a family at, or even before, the age of conscription or because of other exceptions in the conscription rules.

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Chapter 2

Assessing the macroeconomic policy framework

Israel's monetary policy framework is broadly sound. Inflation targeting was introduced in the early 1990s, and low single-digit inflation was established by the end of the decade. However, fast transmission from the exchange rate to inflation means the operational challenges differ somewhat from those in many OECD countries. Also, the Bank of Israel has been intervening heavily in the foreign-exchange market, marking a departure from standard practice in inflation targeting. Past progress in fiscal consolidation has been affected by several economic shocks, including the recent downturn. The government's strategy of lowering tax rates on corporate profits and on personal income is assessed. Also, various avenues for raising revenues on other fronts are suggested. Primary civilian spending is now relatively low in international comparison, the room for savings has narrowed, and many of the necessary future structural reforms probably require initial fiscal outlays. In budgeting, which is strongly controlled by the Ministry of Finance, there is room for various process improvements.

Macroeconomic policy has steered the economy from crisis conditions in the mid-1980s to monetary- and fiscal-policy settings that today are comparable with those in OECD economies. Substantial reductions in the magnitudes of public spending and debt, as well as taxation, in relation to GDP have been made over this time. Yet, as underscored in Chapter 1, significant challenges remain. Monetary policy has followed an inflation-targeting approach since the early 1990s and has been largely successful in bringing price increases down to average OECD rates (and often below of late), although the framework has yet to be voted into law. However, a controversial policy of exchange-rate intervention that began in spring 2008 marked a departure from standard practice in this field of policy. In fiscal policy, the debt-to-GDP ratio remains uncomfortably high, and the current downturn will see it increase slightly. Furthermore, the options for reducing it over the longer term involve a difficult trade-off between the benefits of lower debt in terms of a reduced interest burden, the medium-term growth benefits of structural reforms that frequently require at least initial increases in spending and the returns to efficiency and competitiveness from reducing the tax burden. This chapter first examines the framework of monetary policy and then considers the policy options on the revenue front, the challenges in public spending and the avenues for improving budgeting processes. Recommendations are summarised in a concluding box (Box 2.6).

A broadly sound monetary policy framework

An early mover on implementing inflation targeting

Israel introduced an inflation-targeting (IT) framework in 1992, the third country in the world to do so following New Zealand (1990) and Canada (1991) (Box 2.1). The framework is flexible in that it pays primary attention to inflation but also factors growth and employment into interest-rate decisions. Initially, the IT regime was not a "textbook" model; a dual-target regime operated until 1997, comprising an inflation target and an exchange-rate band.[1] Essentially it marked an evolution from the policy introduced by the Stabilisation Programme (see Chapter 1). The new regime was successful in further lowering inflation and led to completion of the disinflation process by the end of the 1990s. Inflation is now well within the range of most OECD economies (Figure 2.1). Nevertheless, since Israel is a very open economy, it is likely that the decrease in domestic inflation was partly helped by the worldwide trend of falling inflation in the last two decades.

A late mover on modernising bank legislation

Despite being operational for more than 15 years, the IT regime has yet to be enshrined in legislation. Thus, from a legal point of view, price stability is not yet established as the primary objective of monetary policy. Indeed the current legislation, which dates back to 1954, still cites the exchange rate as an objective of monetary policy, which potentially adds undesirable leverage to pressure groups seeking intervention (see below). The only revision has been to the "Non-Printing Law", which was amended as

Box 2.1. **Inflation targeting in Israel**[1]

In Israel's inflation-targeting (IT) framework the target is determined by the government (on the advice of the Bank of Israel). During the disinflation in the 1990s, the inflation target was variously defined as a point and as a range. Since 2003 the inflation-target range has been 1-3%, broadly similar to ranges in most developed economies.

The target is set in terms of the general consumer price index without any exclusions. Currently there is no precisely defined time horizon for reaching the target; the current draft legislation for the Bank aims to rectify this (see main text). Communication with markets and the public at large is conducted through quarterly inflation reports and other regular studies on economic developments. For example, the inflation reports include an in-depth discussion on why the inflation target has been or has not been achieved. Since 2006 the Bank has also published the minutes of the meetings that precede the monthly interest-rate decisions.

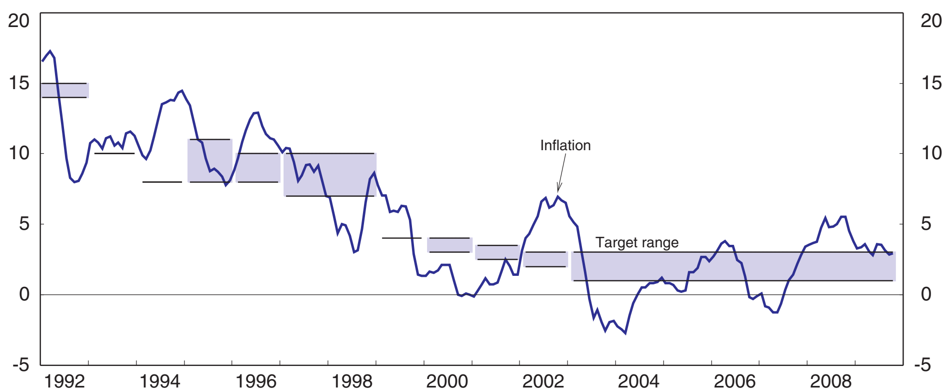
Technically, the central bank sets the level of short-term interest rates on its loans to the banks and the deposits from them, and thus, *via* the financial markets, affects the money supply. Liquidity is provided *via* monetary auctions, in which the banks bid for fixed maturities (a day or a week). Liquidity in the banking system is further managed through an overnight loan-deposit window. Liquidity injections or withdrawals with the financial sector at large are made using auctions of repurchase agreements and of special short-term securities (Makam) issued by the Bank of Israel.[2] Commercial banks are required to deposit 6% of the public's domestic-currency cash deposits and 3% of deposits with maturity of one week to one year with the Bank of Israel. Foreign-exchange deposits are subject to the same reserve requirements.

The Bank often attaches considerable weight to a measure of inflation expectations of market participants based on Israel's well-developed indexed bond market; the market is deep and dates back to the high-inflation period. One-year expectations are computed based on the difference between the yield to maturity on non-indexed bonds one year from maturity and that on the equivalent indexed bonds (Elkayam and Ilek, 2007). Recently, the Bank of Israel has put more weight on inflation forecasts derived from its internal DSGE model (Argov *et al.*, 2007).

1. Binyamini *et al.* (2008) and Fischer (2006) provide overviews of inflation targeting in Israel.
2. Makam were initially introduced in 1987. Today, they are the main tool of monetary policy to absorb or inject liquidity into the financial markets.

Figure 2.1. **Consumer-price inflation and inflation targets**

Year-on-year percentage change



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Central Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/774550281664

part of the 1985 Stabilisation Programme (see Chapter 1) to stop the practice of financing the government debt *via* the central bank.

The role of the governor also differs from practice common in most OECD economies. While in most central banks interest-rate decisions are made by a monetary committee, in Israel (as in New Zealand) the governor has the sole responsibility for setting the interest rate. In addition, the legislation specifies that the governor acts as economic advisor to the government, and the Bank has taken a very public approach to this role. Its Annual Reports analyse and comment on fiscal and structural policy far more deeply than is typical in the equivalent central-bank publications elsewhere. By contrast, an official advisory role for the governor has become less common in OECD economies.

Various proposals to replace the current legislation have been put forward over the years, and it is welcome that the latest proposal looks set to make it into the statute books. As early as 1998, an attempt to remove the disparity between *de jure* and *de facto* independence was made by the Levin Committee through recommendations for a new law.[2] Since then, the Bank of Israel and the Ministry of Finance have worked on various formulations. As of December 2009 both parties had reached agreement on a draft, which was then approved by the government and then submitted to parliament for discussion. The draft sets price stability as the primary objective of monetary policy and defines a precise two-year policy horizon.[3] This precision regarding the horizon should not be interpreted too strictly in operational decisions, given the volatility of Israel's inflation outcomes. The draft also proposes a monetary committee with vote-based decisions on monetary policy settings and an administrative board of directors to manage the Bank. In the past, agreement has often foundered on disagreement over the degree of independence that the Bank should have in staff remuneration and its role in financial supervision. But these issues have reportedly been resolved in the latest round of discussions. Under the present proposal, the advisory capacity of the Bank would remain. Albeit somewhat unusual, this arrangement appears to work well in the Israeli context. Nevertheless, maintaining an official advisory role to government in parallel with inflation targeting is risky, and success depends heavily on the Bank retaining integrity, including an apolitical stance, in its analysis.

Receding operational challenges from dollar indexation

Although the IT regime has been broadly successful, *ex post*, inflation has often fallen outside the target range. In fact, over the past decade, the inflation targets were over- or undershot three quarters of the time. Indeed, inflation volatility has remained relatively high compared with OECD countries, despite the substantial reduction in its level. Between 1999 and 2008 the standard deviation of quarterly CPI inflation was 2.5 percentage points, a similar level to that in several small open OECD economies; for the majority of OECD countries, however, the standard deviation lies between 0.5 and 1.5 percentage points. Domestic shocks from the geopolitical situation and external shocks partly account for the missed targets and much of the volatility in inflation.

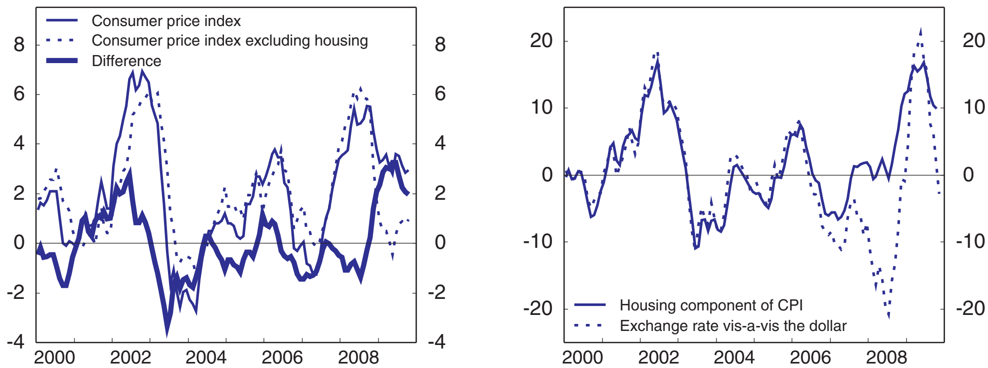
However, indexation to the US dollar, which emerged in the period of high inflation, has also played a role in inflation outcomes by linking exchange-rate movements directly to prices. Indexation has taken two forms:

- Some private-sector goods and services are typically priced in US dollars. Most prominently, the vast majority of housing rental contracts were, until recently, priced this way (Eckstein and Soffer, 2008). Given the weight of housing in the consumer price index (CPI) (around 21%), this "dollar pricing" has had a profound effect on inflation outcomes (Figure 2.2). Dollar pricing has also been common in construction, professional services (for example, lawyers' and accountants' fees), catering, leisure activities and travel tickets.

- There are also remnants of once extensive price regulations. Some of these comprise formulae linking prices to the dollar; notably, electricity and fuel prices are set by this means. As a broad principle, such regulations on pricing should be reduced to a minimum, though abolishing some might be feasible only in conjunction with other structural reforms.

Figure 2.2. **The housing component of inflation and changes in the exchange rate**

Year-on-year percentage changes



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Central Bureau of Statistics and Bank of Israel.

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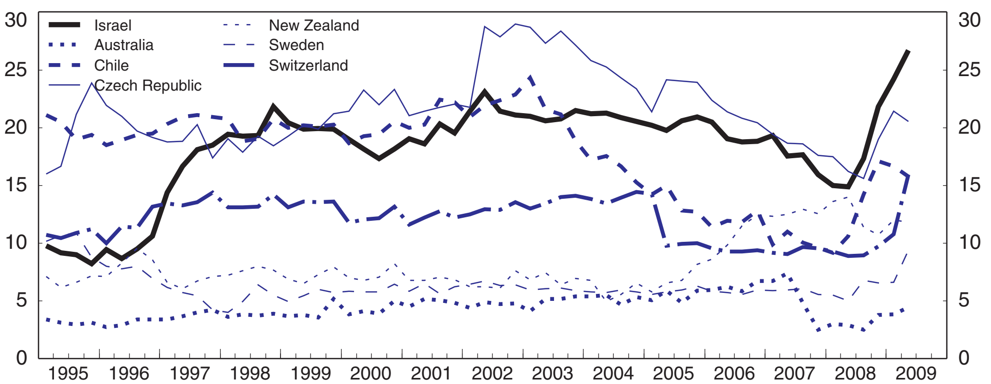
This strong immediate transmission from exchange-rate movements to prices has weakened somewhat because dollar pricing in the rental market has diminished considerably. Sharp appreciation of the shekel against the dollar between mid-2007 and spring 2008 prompted a large shift towards shekel-denominated rental leases. As of mid-2009, the share of dollar-denominated leases was around 15%, compared with around 85% in early 2007. Thus far, this appears to be a permanent shift in behaviour, and similar processes may well be underway in other markets. Changes in rental prices practically govern the housing component of the CPI because they are also used to estimate the price of owner-occupied housing services.[4] When the rental market was predominantly denominated in dollars, the connection between exchange-rate movements and the housing component of inflation was incredibly strong, but it has clearly lessened since (Figure 2.2). Recent analysis by the Bank of Israel confirms this but also underscores that the exchange rate nevertheless remains the dominant influence on the housing component of the CPI.[5]

Assessing the recent foreign-exchange intervention

In March 2008, the central bank began intervening in the foreign exchange market – for the first time since 1997 – stating that its goal was to increase international reserves up to 100% of short-term debt, as prescribed by the "Greenspan-Guidotti Rule".[6] At the time, foreign reserves (USD 29.4 billion) stood at 81% of external short-term debt. There was an initial unannounced intervention, which was followed by announcement of a schedule of foreign-currency purchases. At first, the bank purchased the equivalent of USD 25 million per day with a view to raising reserves to a value of USD 35-40 billion. In July 2008 the daily purchase was increased to USD 100 million, and in November the reserve target was raised to USD 40-44 billion. By March 2009, foreign exchange reserves had increased to USD 40.6 billion, nearly 100% of external short-term debt; and, relative to GDP, reserves had reached a very high level compared with other small open economies and with historical Israeli values (Figure 2.3).[7] Nevertheless, the Bank announced that it would continue the intervention, and its press releases increasingly referred to concerns about the level of the exchange rate, rather than reserve levels. Regular intervention was finally stopped in August 2009, but a week prior to this the Bank announced a new policy of *discretionary* intervention. The Bank does reveal how much it purchases in monthly data on foreign-exchange reserves, and these confirm that intervention has continued. Markets now consider the Bank to have a "dirty float" policy on the exchange rate and speculate as to what its intervention price is. For instance, some observers believe this to be around 3.8 shekels to the US dollar.

Figure 2.3. **Trends in foreign reserves minus gold**

As a percentage of GDP



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: IMF, *International Financial Statistics*.

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This build-up of international reserves usefully attenuated external vulnerabilities when concerns about the downturn were at their greatest.[8] Some OECD countries (*e.g.* Switzerland) have been following a similar strategy. Reserves have been increased at a time when most useful, and the intervention will have tempered any upward pressure on the exchange rate, thus helping maintain external demand. Moreover, since interest rates (and the spreads between them) are currently unusually low, the fiscal costs of intervention have been contained.[9]

Nevertheless, a "clean float" should be re-adopted as soon as possible. With the pick-up in economic activity, continued discretionary interventions could bring undesirable inflationary pressures that work in opposition to any monetary tightening, a process that has begun in recent months. There are several other arguments against sustained intervention. *First*, if the intervention aims to provide a floor (or ceiling) to the currency, this can easily be thwarted by global markets. *Second*, intervention damages transparency and credibility in monetary policy and exposes the central bank to pressure from business-sector lobby groups. Systematic purchases of foreign currency excessively distort the economy towards the production of tradable goods and services. And it can prompt international criticism (even retaliation) because of its "beggar thy neighbour" implications (though this is admittedly less likely for small economies). *Third*, intervention can become expensive. Costs arising from the interest differential between the borrowing rate and the rate of return on the foreign-currency assets purchased can become significant. Also, interventions are hard to disguise in the marketplace so that the monetary authorities can end up paying over the odds for currency; and, there is a risk of incurring capital losses on the additional reserves if at some point the shekel appreciates.

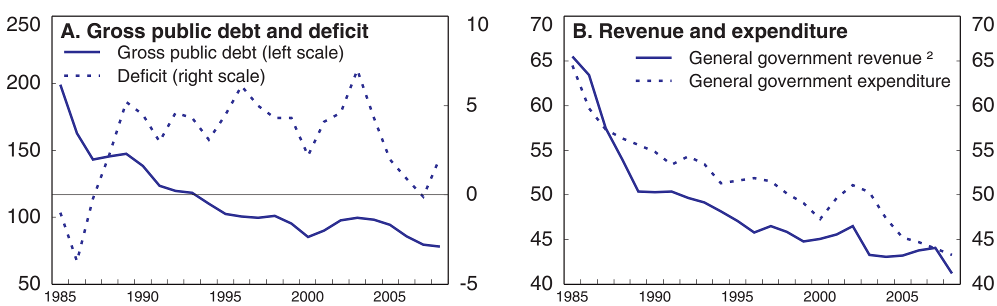
Fiscal outcomes and policy settings

Slower progress in fiscal consolidation in recent years

Much of today's public debt burden has its origins in the "lost decade", when expansionary fiscal policy pushed debt to almost 300% of GDP and public spending to around 70% of GDP by the mid-1980s. The 1985 Stabilisation Programme (see Chapter 1) marked a turning point, with measures to combat both inflation and fiscal profligacy. In the initial years following the Programme the deficit was reduced substantially, and debt and public spending were brought to manageable, though far from ideal, levels (Figure 2.4). Since the initial success of the Programme, progress on fiscal consolidation has slowed (Fischer and Flug, 2007). The broad strategy has remained largely unchanged, namely an over-arching goal of "smaller government" through privatisation, savings in public spending, lower tax burdens and debt reduction. Israel's wide fluctuations in GDP growth, and hence revenues, have brought contrasting periods of fiscal largesse and thrift that have influenced fiscal priorities and progress in consolidation. There have also been significant shocks on the spending side.

Figure 2.4. **Long-term fiscal trends**[1]

As a percentage of GDP



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Commonly used national definitions of the government's deficit do not take account of the implied indexing costs from indexed government bonds. The ratio of debt-to-GDP is the same in the national and the internationally comparable definitions.
2. Including Bank of Israel profits. For 1995, including an expenditure of 1.5% of GDP due to the State Health Law.

Source: Bank of Israel (2009), *Annual Report 2008*, Statistical Appendix.

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The 1990s began with a major shock to fiscal balances from the costs of providing immediate welfare and other support for the massive wave of immigration from the former Soviet Union. This halted the decline in the ratio of public spending to GDP and increased the budget deficit substantially. An economic slowdown saw the deficit peak again in 1996. This prompted a period of reinforced fiscal discipline, which, combined with improving economic conditions, saw spending as a share of GDP fall by several percentage points between 1996 (52%) and 2000 (48%). Over the decade as a whole, the level of public debt as a share of GDP fell substantially, reaching 85% in 2000. Receipts from the privatisation of public companies and robust nominal GDP growth more than offset the impact of persistent deficits and hence growth in outstanding debt.

The outbreak of the Intifada in 2000 and the bursting of the dot.com bubble in 2001 pushed up budget deficits and public debt levels once more. Events during this twin shock illustrate the potential fragility of Israel's fiscal position. In 2001 the general-government deficit rose sharply, triggered by falling tax revenues and a fiscal expansion. Failure to reduce the deficit significantly in 2002, together with the continuing Intifada, led to a ratings downgrade on Israel's sovereign debt, pressure on the exchange rate and concerns about financial stability. As a result, government borrowing costs rose dramatically, and in 2003 the general-government deficit rose to 6.8% of GDP (including Bank of Israel profits, see Figure 2.4 and Box 2.2) and debt back to 100% of GDP. As a result, the authorities were forced into a programme of severe fiscal consolidation – often referred to as the Netanyahu Reforms.[10] Indeed, the fiscal crisis was so great as to prompt the United States to provide additional aid and debt guarantees to help markets to regain confidence in Israel's sovereign debt.

In contrast, the economic boom between 2004 and 2008 resulted in such rapid growth in tax revenues that the authorities could accommodate a programme of cuts in tax rates and some slackening of the reins on public spending and yet still deliver deficit reductions. Spending increases were particularly notable in the public-sector wage bill, transfer payments and defence expenditure.[11] Furthermore, the combination of strong growth and reduced deficits made a significant dent in the debt-to-GDP ratio; by 2008 it had fallen to 78%. Up until autumn 2008 when the global financial turmoil became a crisis, the previous government's broad objective of reaching a debt ratio of 60% by the mid-2010s looked entirely feasible.

Efforts to limit the deficit increase in the 2009-10 budget

Economic developments since 2008 have forced a re-think about achievable fiscal goals. A substantial fall off in revenues (see Chapter 1) made a large increase in the deficit inevitable. Fiscal planning was complicated by the fact that no budget was initially approved for 2009. When the new government came into office in late March 2009, it sensibly decided to formulate a combined budget for both 2009 and 2010 (Box 2.3). Accordingly, a budget was approved by the Knesset in July, which aimed to contain the deficits for 2009 and 2010 to within 6% and 5.5% of GDP, respectively. Informally, policymakers now typically discuss strategies for reaching a debt-to-GDP ratio of 60% by 2020.

Spending allocations made in the 2009-10 budget include prior commitments on public-sector wages, notably in connection with a reform in primary and secondary education (the New Horizon Programme; see Chapter 3) and expenses incurred during the military operation in the Gaza Strip that began at the end of 2008. Also, as described in

Box 2.2. **Coverage and international comparability issues in government accounts**

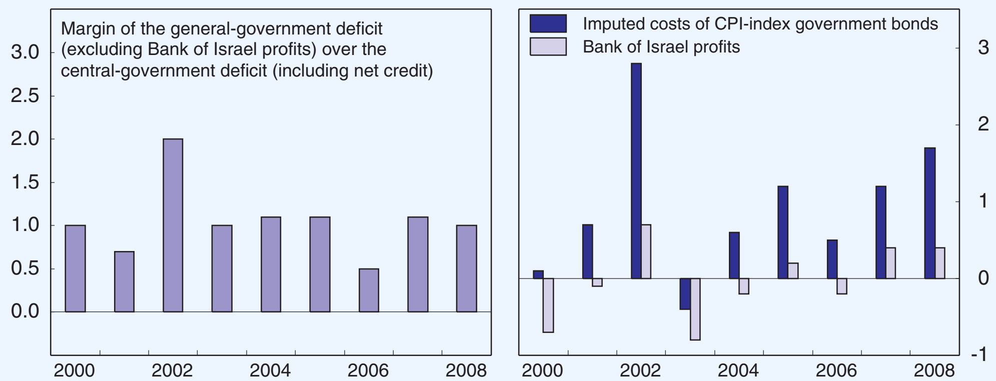
The central-government account is cash-based and is the focus of the annual budgeting round. Hence, the deficit goals and the spending rule refer to this account. Specifically the deficit goals are expressed in terms of balances excluding net credit. The general-government accounts are produced by the Central Bureau of Statistics (CBS) based on the international System of National Accounts (SNA) standards and are therefore accrual-based accounts incorporating budgets outside central government. In Israel's case these additional budgets include those of local authorities, the National Insurance Institute, health funds and state-run universities and colleges, plus what are called the "National Institutions" (the Jewish Agency, the Jewish National Fund and the World Zionist Organisation) (Bank of Israel, 2009). The general-government deficit has typically been around 1 percentage point higher than that for the central-government in recent years (see Figure 2.5 below).

The CBS's general-government account is not ideal for analytical purposes and international comparison for two reasons. *First*, the profits of the Bank of Israel are included. This item fluctuates and mainly reflects changes in the inflation rate, the exchange rate and global interest rates. Also, the profit is not actually transferred to the government; and elsewhere it is customary to only include transferred profits, even though this technically does not follow accrual accounting principles. (Bank of Israel, 2009). This *Survey* refers, where possible to figures that make this adjustment. Hence, for example the general-government deficit for 2008 is given as 2.4% and not 2% as reported in CBS data. However, Figure 2.4 is an exception because long time series that exclude Bank of Israel profits are not available.

Second, an additional adjustment for indexing costs on government debt ought ideally to be made for the accounts to be internationally comparable. Contrary to standard practice under accrual accounting, the CBS general-government account does not include the implied indexing costs of bonds whose returns are linked to the consumer-price index. These costs are not trivial. According to estimates by the Bank of Israel, they have varied between 2.8 and –0.4% of GDP since 2000 (see Figure 2.5 below) and for instance would imply a deficit of 4.1% of GDP in 2008. The omission of indexing costs in total expenditure, however, does not affect public debt because these are incorporated *via* revaluation of the debt components. Thus, the ratio of gross public debt to GDP is internationally comparable.

Figure 2.5. **Technical items in government accounts**

As a percentage of GDP



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Bank of Israel (2009), *Annual Report 2008*.

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Box 2.3. **The 2009-10 "two year" budget**

The collapse of the previous government's mandate in September 2008 meant that a budget for 2009 was never approved by the outgoing Knesset. As a result, budgeting during the first months of 2009 was based on legislation specifying that in such circumstances spending has to proceed on a monthly basis and cannot exceed one twelfth of the previous year's budget allocation, plus an indexation adjustment. When applied, the rule can limit spending quite severely. Oddly, this spending limit includes interest payments and principal payment on debt, which makes little sense since the government has little control over such outlays over the shorter term – a change to this aspect of the legislation might be considered.

The new government was not operational until late March 2009, and it quickly decided to exceptionally develop a combined budget for both 2009 and 2010. This made practical sense in that running two budget processes in the remaining months of the year would have been cumbersome. A permanent shift to a two-year budget would probably not work well. While there are conceivably some advantages, there is an overriding difficulty that incumbent governments would pass only two budgets even if in office for the full four-year term (which has been rare in Israel), thus limiting room to implement reform.

Chapter 1, a number of measures have been taken in light of the economic downturn, though in aggregate they do not constitute a large fiscal stimulus, since the impact on the budget was minimal. Finally, an increase in universal child allowances was also scheduled in the budget, reflecting a promise made by the largest coalition party to minority coalition members.

On the revenue side, the government tempered corporate and personal-income tax cuts that were due to go ahead in 2010, incorporating the new rates into legislation that schedules further cuts from 2011 to 2016. This was combined with several revenue-increasing measures. Most notably:

- The budget included permanent increases in taxes on gasoline (by 12.5% to NIS 2.696 per litre) and tobacco (by 13% to NIS 1.25 per pack). A new schedule of purchase taxes on cars has also been introduced that increases the rates on many types of vehicles.
- There were temporary increases in the VAT rate (from 15.5 to 16.5%), in charges on water consumption (labelled as a "drought charge") and in the ceiling on contributions to national insurance. All of these are due to terminate at the end of 2010.

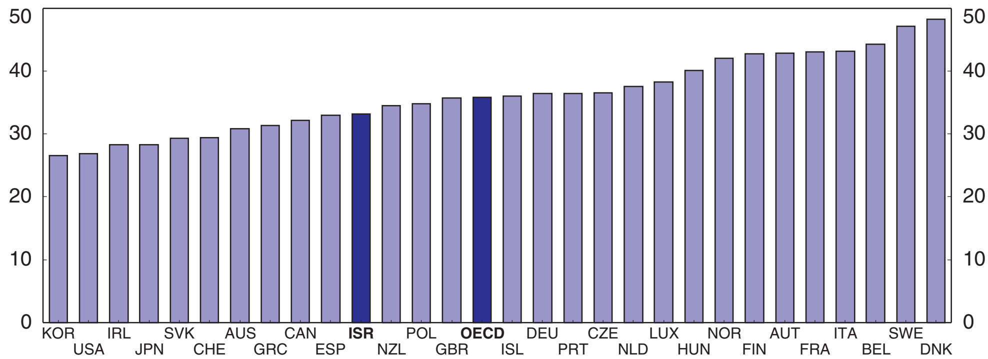
To its credit, the 2009-10 budget managed to keep (more or less) to the legislated spending rule (see below), and the brightening economic outlook suggests the deficits will be less than those estimated in the budget. Indeed, the debt-to-GDP ratio is projected to rise by only around four percentage points to 82% by 2011, a relatively small increase compared with those foreseen in many OECD countries. But the decision to go ahead with cuts in headline tax rates in 2010 and the heavy use of temporary tax measures were questionable; the latter in particular will make keeping to fiscal goals in 2011 difficult. The following section discusses the relative merits of tax cuts and suggests ways of sustainably increasing revenues by other means.

Assessment of revenue policies

Fiscal policy by successive governments since the 1980s has put a high priority on lowering the tax burden. In fact, Israel's tax share of GDP is now close to the OECD average (Figure 2.6). In terms of composition, the total revenue share from all forms of direct taxation (wages, non-wage incomes, profits, etc.) is also similar to the OECD average; in both cases it was around 37% in 2007, according to the sum of the sub-components shown in Figure 2.7.[12] However, social-insurance contributions account for a much lower share of revenues (in 2007, 15.6% compared with 25.9%). Thus, overall, Israel relies to a larger extent on VAT and other taxes on goods and services; in 2007 these totalled 45.4% of revenues, compared with 36.1% for the OECD average. Favouring indirect taxation is an understandable strategy, especially for small open economies, and the arguments below suggest this might be pursued a little further.

Figure 2.6. **Tax revenue and social security contributions as a share of GDP**

2008[1]



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Or latest available year.

Source: OECD, *Tax Revenue Statistics Database* and Central Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/774722151833

The returns and risks in lowering corporate and personal income tax rates

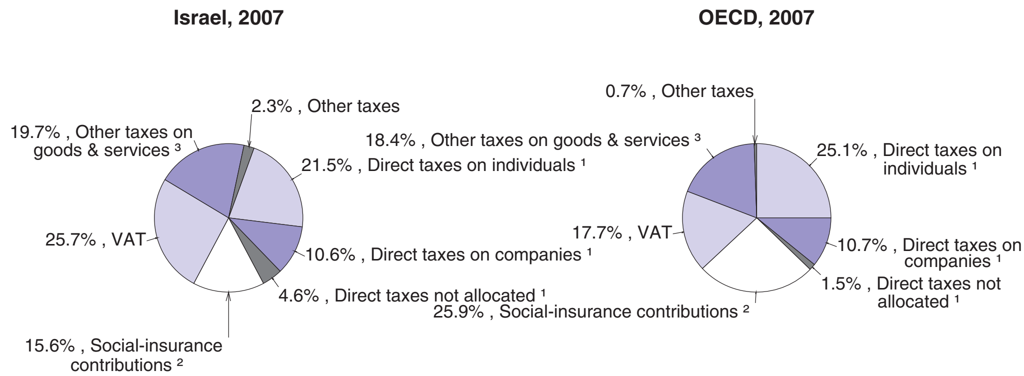
Commitment to cutting the headline corporate-income and personal-income tax rates has been a central theme of policy for some years. The latest round of cuts follows on a previous schedule that began in 2003:

- The corporate tax rate has been brought down from 36% in 2003 to 26% currently. The latest schedule cuts the rate by one percentage point each year to 2015 with a two percentage-point cut in 2016, which will bring the rate to 18%.
- Cuts in rates of personal taxation have focussed on reducing the middle and upper rates. In 2003 the six tax rates ranged from 10% to 50% and by 2009 from 10% to 46%. According to the latest schedule of cuts the range will be 10% to 39% by 2016.[13]

Corporate- and personal-income taxes are undoubtedly influential in governing firms' investment decisions, including those of international businesses, and affect the location decisions of the internationally mobile segments of the labour force. Although the headline corporate tax rate is now close to the OECD average, it is clearly a good deal higher than in many countries: for example, several east European countries and Ireland have headline

Figure 2.7. **Structure of tax and social insurance revenues**

As a percentage of total taxation



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Both pie charts are based on the OECD's tax classification. For Israel, available data published by the Central Bureau of Statistics have been used to approximate this. The OECD shares are unweighted averages of the shares of member countries.

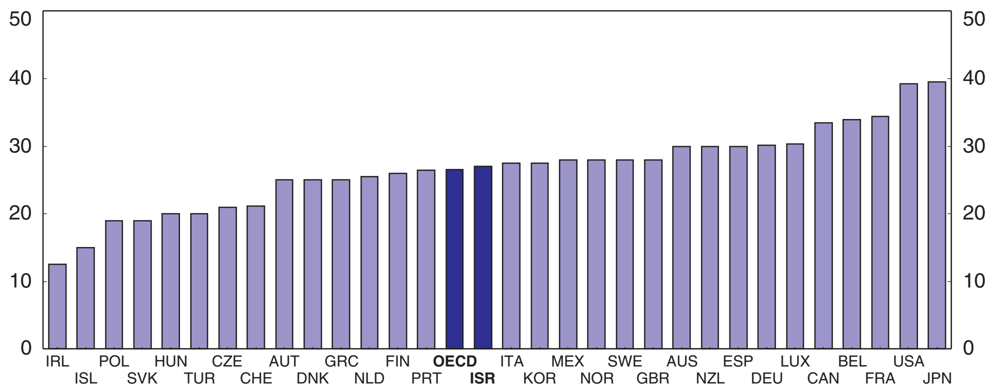
1. Direct taxation includes taxes on wage income, self-employed income, profits, dividends, etc. The share of direct taxation attributed to individuals in the Israeli data includes only that on wages and the income of the self employed.
2. The share of Social-insurance contributions in revenues also includes payroll taxes. These exist in a relatively few OECD countries and typically account for only a small share of revenues.
3. The category "Other taxes on goods and services", for instance, includes sales taxes and customs and excise duties.

Source: Central Bureau of Statistics and OECD, *Tax Revenue Statistic Database*.

StatLink http://dx.doi.org/10.1787/774730444325

Figure 2.8. **Corporate-income tax rate in international comparison**

2008



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Bank of Israel (2009), Statistical Annex of the Bank of Israel *Annual Report* (2008) and OECD, *Tax Database*.

StatLink http://dx.doi.org/10.1787/774765518341

rates below 20% (Figure 2.8). Once the latest round of cuts is implemented, Israel's corporate tax rate will almost certainly be "competitive".

Although such tax cuts have beneficial effects, they need to be put into context, and a degree of caution is required in pursuing them. *First*, tax issues are not the only driver of investment and location decisions. For example, the quality of transport networks and other infrastructure as well of housing, health and education can make a difference, especially if these have a bearing on the living standards of senior staff.

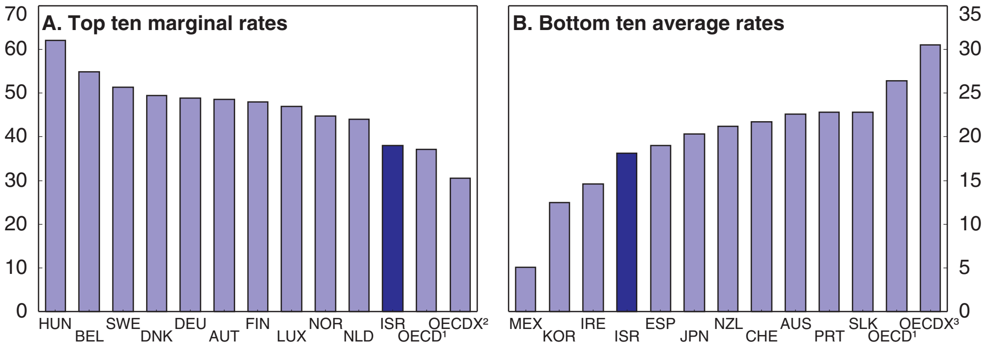
Second, even within taxation the headline rate is only part of the story. In corporate taxation, various factors such as allowances, capital depreciation rules and so on mean the effective rate is typically much lower than the headline rate. In fact, some experts claim Israel's effective rate is already competitive in international comparison.[14] As regards effective rates of personal taxation, a system of wasteable (*i.e.* non-refundable) credits lowers average tax rates substantially, and an earned-income tax credit is now operating in some areas of the country (Table 2.1). In addition, social contributions are smaller than in many OECD countries. In sum, although the marginal rates of taxation appear somewhat dissuasive (Figure 2.9, Panel A), the *average* effective tax rate is quite low in international comparison once social contributions are included (Figure 2.9, Panel B). According to OECD calculations, for a single person earning the average wage the rate is 19% which is 7 percentage points below the OECD average. Reflecting Israel's relatively progressive schedule, this gap is wider if earnings are below the average. Strong progressivity also means the gap narrows for earnings above the average. However, according to calculations made by the Bank of Israel, the average effective tax rate compares favourably with the OECD average up to quite high levels of earnings and even at extremely high earnings is only slightly above it.[15]

Table 2.1. **Key features of taxation for individuals and corporations**

Personal income tax	Personal-income tax rates are fairly progressive. In 2009 these range between 10 and 46%. Couples are taxed separately. "Wasteable" credits are higher for women, and child credits can only be claimed by women. A "non-wasteable" tax credit (the earned-income tax credit) for low earnings has been introduced in certain areas of the country (see Chapter 4). Payments into the "advanced training funds" (at 7.5% of gross earnings with a cap of NIS 196 000) are tax exempt. There are tax breaks on contribution, accumulation and payout phases of pension-type products (see Chapter 4).
Employees' social contributions	Contributions are progressive; there are two rates of 3.5% and 12% of gross earnings, the latter applying on earnings above 60% of average gross earnings. There are several itemised components, including health coverage. Contribution ceilings apply at relatively high income levels. The above does not include mandatory contributions to second-pillar pensions (which are in the process of becoming compulsory for most workers; see Chapter 4).
Capital gains and other capital-income tax	Gains on the sale of shares and dividend income are taxed at 20% for individuals, unless the individuals are significant shareholders – then the tax rate is 25%. For companies, the tax rate for capital gains is 25%. The profit from the sale of housing can be tax-exempt, subject to certain conditions.
Corporate tax	The current corporate tax rate is 26% and is scheduled to fall to 25% in January 2010. The most notable allowances against corporate income are for spending on research and development (fully deductible, on condition that the deduction is not more than 40% of taxable income). There are some sectoral allowances as well, for example on oil exploration and the entertainment industry. There are also wide exemptions for national priority zones, typically defined according to the geographical location of the investment and encouraging investments in the periphery (see Chapter 5).
Employers' social contributions	The same two-rate system as for employees applies with rates of 4.14% and 5.68% on gross earnings.
VAT	The VAT rate has been temporarily (until the end of 2010) increased from 15.5% to 16.5%. Various items are exempt: exports, purchases and services in the tourist town of Eilat, hotel accommodation and various services to tourists, air freight or sea freight to and from Israel, sale of unprocessed fruit and vegetables and renting premises for residential purposes.
Other indirect taxes	Additional purchase taxes are levied on cars, alcohol, cigarettes and luxury goods.
Other local taxes	Local authorities impose taxes on residential and business properties, which vary widely depending on the region and type of property involved. Taxes are collected according to the area (in square metres) of the house or business.

Figure 2.9. **International comparison of effective marginal and average tax rates, 2008**

Single person who earns the average wage, including income tax and social security contribution



1. Unweighted average.
2. OECD average excluding top 10.
3. OECD average excluding bottom 10.

Source: OECD, *Taxing Wages Database.*

StatLink http://dx.doi.org/10.1787/774771311363

Third, cuts in headline rates generally reduce tax revenues, at least in the short run. International evidence suggests cuts in headline rates are not typically self financing through "Laffer curve" effects.[16] Hence, cuts in headline rates have an opportunity cost: deficits could be smaller or spending higher. Furthermore, the immediate negative impact on revenue is reasonably certain, while the magnitude and timing of positive second-round effects in terms of revenue and economic growth are much less so. Thus, even though the latest round of tax cuts is somewhat milder than that originally envisaged, the decision to pass such legislation at a time of extreme economic uncertainty and rising government deficits was somewhat surprising. Although the improved economic prospects of recent months have lessened the downside risks of the cuts, they should nevertheless be adjusted accordingly if progress in deficit and debt reduction is weak or if other priorities should take precedence. In the discussion on business support in Chapter 5 it is suggested that, similar to some other countries, some streamlining of tax breaks and subsidies for businesses could help fund cuts in the headline rate and make it easier to benchmark Israeli as a place to invest.

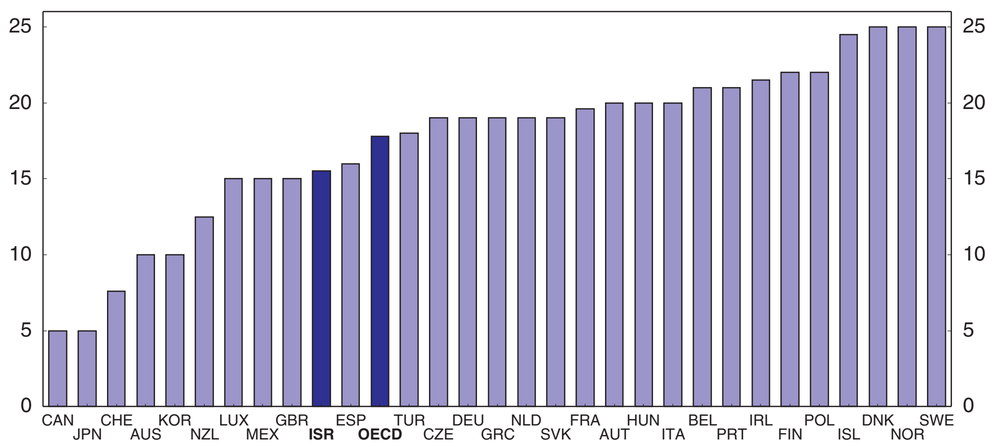
Revenue-raising options in indirect taxation

Though indirect taxation already plays a substantial role in revenues, there is room for a degree of expansion. The temporary increase in the rate of VAT to 16.5% could be made permanent, and even increased a little further, as a relatively non-distortionary way of easing budgetary pressures (OECD, 2008). A fairly large number of OECD countries impose standard VAT rates substantially higher than this, suggesting that there is leeway for further rises in the Israeli rate (Figure 2.10), especially as a large number of additional purchase taxes on "white goods" (household appliances) were removed in 2007.[17] This said, unlike many other countries, Israel has no "preferential" VAT rates and few exemptions in its VAT base, and this needs to be taken into account in establishing how far the rate could be increased.[18] Any increase in the rate should certainly not involve sacrifices in coverage. Indeed, the authorities should revisit outstanding exemptions, notably those for the tourist resort of Eilat and on some tourist services countrywide as well as those on fruit and vegetables. Proposals to remove these were made in the initial rounds of the 2009-10 budget negotiations, but were unfortunately not included in the final budget.

At the same time, the continued imposition of high purchase taxes on cars should be reconsidered, even though these now have an environmental twist. In July 2009 the purchase tax on new cars (which is in addition to VAT) was increased from 75% to 90%, which is very high in international comparison (Reich, 2007). The rate on hybrid cars remains at 30%, while a rate of 10% on electric vehicles has been introduced. The taxes are softened by rebates of up to NIS 15 000, depending on the vehicle's emission characteristics. Despite the tax's new environmental component, the case for such heavy taxation of car purchase is rather weak. Such taxes are attractive revenue-raisers, and justifying them can entail a generous interpretation of their environmental returns.[19] Unless transport alternatives are easily available, high taxes are unlikely to induce many to abandon car ownership altogether. And they probably encourage many to replace cars less frequently, slowing the introduction of newer, more environmentally friendly, models. Furthermore, in broad terms it makes more sense to target car use, for instance through more recourse to gasoline taxes, road tolls, congestion charges and parking fees. In late 2009 there were welcome signs of a shift in stance on the car purchase tax with the approval of proposals by the Ministry of Finance that include lowering the standard rate from 90% to 83%.[20]

Figure 2.10. **Standard rates of VAT in international comparison**

1 January 2009



Source: Bank of Israel (2009), Statistical Annex of the Bank of Israel *Annual Report* (2008) and OECD, *Tax Database*.

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The benefits of a general review on tax expenditures

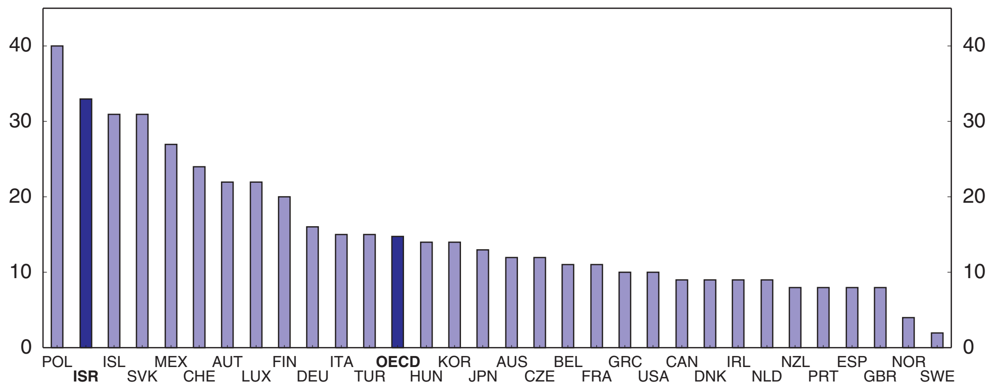
A review of tax exemptions (and other tax expenditures) with a view to streamlining should be made so as to broaden and secure the tax base. Exemptions often accumulate in a somewhat haphazard way over time, each one prompted by specific economic or political considerations. Their continued existence does not always make sense, either because of changes in the economic environment, or because, in combination with other exemptions, they create excessive complexity or distortions. The following features came to light in preparing this *Survey*, and there are probably more:

- Tax support for the "advanced training funds" (Kranot Hishtalmut), which encourage medium-term saving, makes little sense, especially as, despite the name, the savings can be used for a wide variety of purposes (*e.g.* car purchase). Attempts have been made to remove this exemption in the past but have so far failed.
- Following the agreement on mandatory second-pillar pension savings, the impact of tax incentives *via* credits on contributions is at least partially redundant (see Chapter 4).
- Tax advantages often form part of targeted support mechanisms for business. As mentioned above some reduction in these could, for example, usefully help fund cuts in regular corporate taxation.

Simplifying tax procedures

Finally, there appears to be room for simplifying tax procedures, and this should be exploited. For instance, a statistic compiled by PricewaterhouseCoopers (2008) shows that the number of tax payments is very high in Israel (Figure 2.11). Albeit measuring only a single dimension of red tape relating to taxation, the measure is probably indicative of broader complexities. Out of the 33 tax payments, only two are in the field of corporate-income taxation. However, paying corporate-income taxes appears anyway to be a lengthy procedure: Israel ranks poorly in terms of "time to comply". Labour-income taxes amount to 12 payments and other taxes to 19 payments. Current attempts to simplify tax procedures are welcome; an online income tax reporting system is in effect, and one for VAT receipts is planned for 2010-12.

Figure 2.11. **Number of tax payments in international comparison**[1]



1. The tax payments indicator reflects the total number of taxes and contributions paid, the method of payment, the frequency of payment and the number of agencies involved for a standardised business during its second year of its operation.

Source: The World Bank, PricewaterhouseCoopers, *Paying Taxes 2009*.

StatLink http://dx.doi.org/10.1787/774834155516

An overview of the challenges in public spending

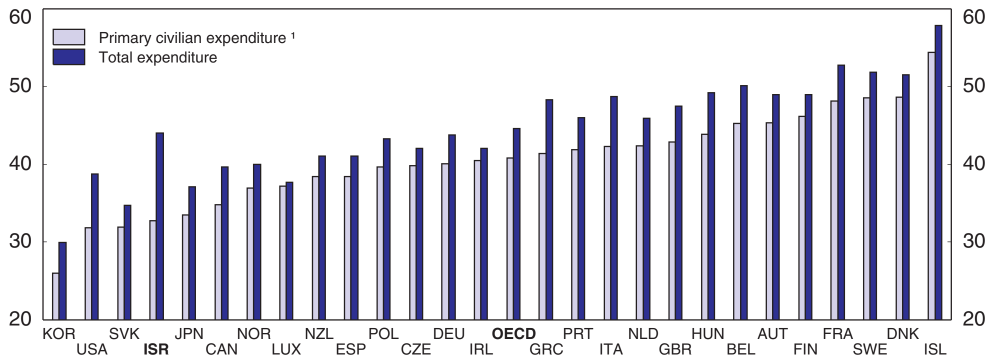
Interest payments and commitments on defence spending mean there is a sharp contrast between total government spending and that available for civilian public services and transfers. Since the mid-1980s, general government expenditure as a share of GDP has fallen substantially; for example, it was around 70% of GDP in 1985, but 44% of GDP in 2008

– close to the OECD average (Figure 2.12).[21] However, in the latest available internationally comparable breakdown of public spending, defence accounted for 17% of total spending, which is similar to that on education and higher than that on health (Figure 2.13). Combined with interest payments on public debt, this implies that primary civilian spending is low compared with OECD countries. As of 2008 it was 33% of GDP, which at that time was lower than the vast majority of OECD countries (Figure 2.12). Following the recent downturn, Israel's relative position in international comparison is probably even lower than shown in the chart because, unlike many OECD countries, the policy response to the crisis has not comprised a substantial stimulus in public spending.

The long-term sustainability of public finances is helped by the prospect of a relatively small additional fiscal burden from population ageing. As pointed out in Chapter 1, demographics are favourable and state pension payouts modest. However, aggregate fiscal

Figure 2.12. **Primary civilian and overall government expenditure**

As a percentage of GDP, 2008



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

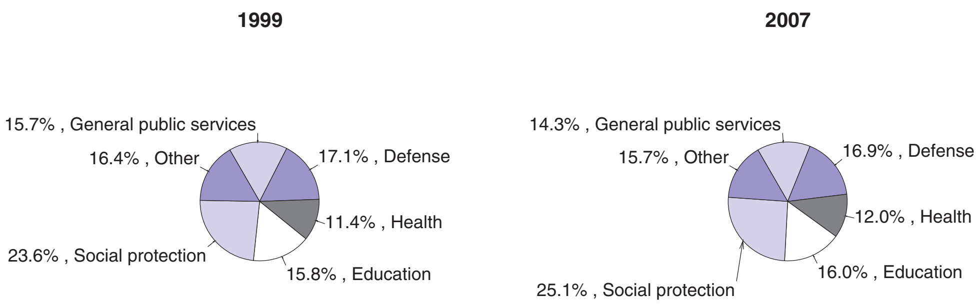
1. Excluding defence and interest payments. Calculation of the primary civilian spending uses an estimate of defence spending for that year.

Source: OECD, *Economic Outlook 86 Database*.

StatLink http://dx.doi.org/10.1787/774844713203

Figure 2.13. **Government expenditure by functions**

As a percentage of total expenditure



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank. .

Source: OECD, *Annual National Accounts Database*.

StatLink http://dx.doi.org/10.1787/774868114802

planning needs to accommodate the costs of sound structural reform rather more than in the past. There is little doubt that the drive towards lowering the share of public spending in GDP has begun to excessively compromise infrastructure development, the quality of public services and efforts to tackle relatively high rates of poverty. Indeed, policies to alleviate key structural problems generally involve some "up-front" budgetary costs (albeit with rewards in fiscal savings over the longer term), such as the deal struck with one of the teaching unions (New Horizon) (see Chapter 3), the Lights to Employment (or "Wisconsin") programme and the new earned-income tax credit (see Chapter 4).

Innovative approaches to public financing and services should continue to be pursued. Strategies to economise on public spending that are familiar to many OECD countries are already being used quite extensively. Efficiency gains in public administration are being sought through e-government. Income tax declarations and social-security applications can now be made on line, and the public employment service is posting job vacancies on the Internet, for example. Compared with other countries, progress on this front has been reasonably good; Israel ranks 17th out of 70 countries in the United Nations e-government Readiness Index (UN e-government Survey, 2008). In pensions policy, the government's backing of a recent agreement between unions and employers making second-pillar pension saving compulsory reflects a strategy of trying to limit the fiscal burden of population ageing (see Chapter 4). Also, public-private partnerships are being used in some areas, notably for road construction and maintenance. The evident willingness to try new approaches to limit public spending can only be applauded; but innovative mechanisms do require close monitoring and adjustment.

Inefficiencies should be rooted out and dealt with. There is no doubt room for further efficiency gains and cutbacks in public services and transfers, though much of the low-hanging fruit has probably been picked in past economy drives. All avenues should be explored, not simply opportunities for slicing spending but also improvements to operational systems. As of late 2009, the Ministry of Finance was reportedly exploring possibilities for economies in several areas, including staffing levels in government ministries. Also, in the course of research for this *Survey* remuneration and promotion mechanisms in the civil service and in much of the wider public sector also emerged as an area that could benefit from reform. Throughout the public sector, systems of allowances are an important component of pay but are often so complex that they obscure the full value of remuneration. In many areas, despite efforts at reform, wage setting and promotion mechanisms remain excessively centralised and too strongly based on seniority. This is illustrated in the discussion on education in Chapter 3, where progress towards greater flexibility in the teaching profession remains partial and a recent attempt to gain more flexibility in salaries at tertiary institutions by the Shochat Committee failed.

Overall, these considerations underscore the importance of making aggregate public-spending and budgetary allocations tie up closely with feasible savings and appropriately prioritised structural reforms. There are indications that such coherence is weak in Israel. There is unusual stability in the composition of expenditure; it has hardly changed since the late 1990s (Figure 2.13). This suggests a tendency to spread fiscal tightening (or loosening) evenly across ministries. While this may be politically expedient, it is likely to be sub-optimal economically because the marginal costs (or benefits) of changes in the budget undoubtedly differ across the different areas of spending and taxation. As in other countries, there is also an issue of prioritisation between wage and non-wage costs. Cutting jobs in the public sector can be politically difficult, even where the room for cuts is readily apparent. As a result, there is heavy reliance on periodic wage freezes, which make immediate savings but typically involve payback in the future. Such "cycles" in public-sector pay then profoundly influence the pace of other expenditure, such as infrastructure development (see Chapter 5).

Political realities mean the "across-the-board" approach to public spending is to some extent unavoidable. But it can be ameliorated by expert input and opinion. There are some mechanisms in place already. Notably, the Bank of Israel comments on a range of public-spending issues, as does the State Comptroller's office. A budgeting system that sets appropriate aggregate outlays and encourages economically sensible structural spending plans can also play a key role.

Avenues for structural improvement in the budget process

Reform of the budget process in the mid-1980s magnified the Ministry of Finance's ability to steer aggregate public spending and heightened its overall influence in policymaking. The Ministry's strong powers are in particular attributable to:

- *A primary role in the central-government budgeting process*. The Ministry, along with the Prime Minister's office, plays a dominant role in defining government positions and in budget preparation. Specifically, the Ministry sets the nominal expenditure envelope at the beginning of the annual budgeting process based on a ceiling for real growth in spending (see below).
- *Tightly defined and controlled budgets for spending ministries*. In fact, the chief accountant's position in each line ministry is staffed by the Ministry of Finance. In addition, there are around 9 000 budget lines, and re-allocation of resources among them, even within a ministry, has to be approved by the Ministry of Finance (Ben-Bassat and Dahan, 2007). Also, the Ministry is able to control spending during the fiscal year by accelerating or holding back the approval process. If approval for reallocation is made towards the end of the budget year, ministries do not always have sufficient time to spend the released resources. This has contributed to "overbudgeting" (or "underspending") in recent years.
- *Limited non-central budgets*. The only significant accounts outside the umbrella of central government are the local-authority accounts, which are subject to strict rules on deficits (Box 2.4).

Strong "top down" fiscal guidance through deficit targets and a spending rule

Reducing the debt-to-GDP ratio to 60% has been only a discretionary government objective. Reference to this figure started in the early 2000s, and an aim of keeping the deficit below 3% of GDP is also sometimes quoted alongside it. Both figures are clearly an implicit reference to the Maastricht convergence criteria.[22] More concrete top/down spending discipline is exercised by multi-year targets on the central-government deficit and, more significantly, by a legislated ceiling on real expenditure growth in the central-government budget. According to the Ministry of Finance, under the assumption of 3.5% real growth starting in 2011, given the current fiscal rules the public debt-to-GDP ratio will converge to 60% by 2019.

The deficit targets originate from the 1992 Deficit Reduction Law that was prompted by the strong fiscal pressures from immigration described above (Brender, 2007). The original law required that the targeted budget deficit, as a percentage of GDP, decrease each year during the period 1993 through 1997 and was quite effective. Although the law has

Box 2.4. **Local authority financing**

There are 229 municipalities in Israel comprising 73 cities, 107 local councils, 47 regional councils and 2 industrial local authorities. Local authorities' responsibilities include: upper-secondary schools, local health care, water and waste management, road maintenance, parks and recreation, and emergency services. Legislation, national regulation and the earmarking of transfers mean that for some services local authorities have only limited discretionary powers.

The Ministry of the Interior is the primary government institution in charge of relations with the local authorities. In co-operation with the Ministry of Finance, the Ministry approves the local authorities' budget and audits their accounts. Authorities that fail to meet certain budgetary performance criteria are put under administration (the "fiscal recuperation" programme) and are, in effect, run by a state accountant. There are currently 30 local authorities – mostly municipalities with predominantly Arab populations – in this position.

Local authorities derive their income from two sources: own revenue (65%) and intergovernmental transfers (35%) in the form of grants from line ministries (24%) and from the Ministry of the Interior (11%). Property taxes and fees are the main sources of locally generated income. Transfers include earmarked transfers and general grants made by the Ministry of Interior and other line ministries. Most of the earmarked transfers originate from the Ministry of Welfare and the Ministry of Education and account for about half of the budget of local authorities. In addition, the Ministry of Interior provides three types of general grants to local authorities: balancing grants, development grants and fiscal recuperation grants. Balancing grants are a fiscal equalisation tool aimed at enabling every local authority to provide basic services, whereas development grants are meant for specific local projects. Fiscal recuperation grants are given to local authorities that have accumulated deficits exceeding 17.5% of the budget and are engaged in the fiscal recuperation programme. Municipalities can borrow for investment (this is typically for infrastructure), but total outstanding loans are not allowed to exceed 75% of own revenue (including grants) in any fiscal year.

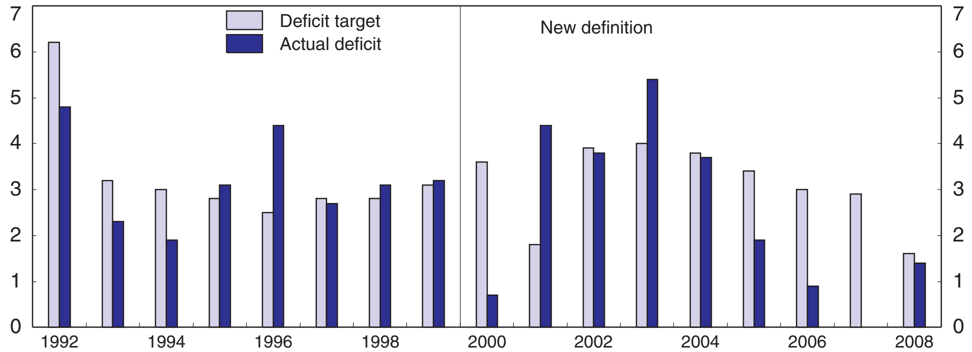
Since 2001, local authorities that fulfil certain performance standards related to fiscal stability have been granted more independence from central authorities. These standards are evaluated based on a series of indicators. In particular, they have been exempted from obtaining Ministry of the Interior approval with respect to wages, hiring, bank loans, enactment of municipal by-laws and other regular operations. By 2008, 62 local authorities had been granted this status.

been updated, the mechanism has become a somewhat less powerful disciplining device. New governments revise the targets when coming into office and publish them as part of their overall policy programme but can, and often do, revise them later. In fact, all of the multi-year deficit target plans adopted by the Knesset have been replaced before reaching the end of the planning horizon, and four out of five revisions have loosened the targets (Figure 2.14).

In comparison, the ceiling on real growth in budgeted central-government spending is quite stringent. It was legislated in 2004 and initially set at 1.0% and then increased to 1.7% from 2006 onwards. The latter figure was apparently chosen because it roughly equals expected population growth, thus implying the rule maintains a constant real level of public spending per capita. Importantly, the ceiling is used to set the envelope for total

Figure 2.14. **Actual budget deficit and deficit target of the central government**[1]

Per cent of GDP



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Excluding net credit.

Source: Stanley Fischer and Karnit Flug (2007), *The Role of Rules in Fiscal Consolidation: Fiscal Rules in Israel since the 1990s.*

StatLink http://dx.doi.org/10.1787/774876554786

spending early on in the annual budgeting process, making it a fairly powerful tool for maintaining fiscal discipline.

Prima facie, the spending rule is simple and apparently allows little room for discretion – but this is not so in practice. *First*, "one-off" spending items (referred to as "boxes" by budgeting experts) have sometimes been excluded from the ceiling calculation. Because these items are still included in public spending, the increase in *total* real spending can be different from the limit. For instance in 2009 new "boxes" mean that the budgeted real spending is estimated to be 3% while the removal of these items in 2011 is expected to imply a real increase of just 0.4%. *Second*, calculation of the *nominal* spending envelope (which is obviously necessary for budgeting purposes) is complex. It is based on a formula that uses the Ministry of Finance's consumer-price inflation projections and includes a correction mechanism (Box 2.5). Of particular note:

- The efficacy of the correction mechanism depends heavily on the underlying statistical properties of the Ministry of Finance's inflation projections. If they are accurate, then it implies the price index implied by the formula does not stray far from the actual CPI. If not, then the correction is just adding undesirable noise. Parenthetically, it is unlikely that this issue can ever be properly gauged. Because the projections are made only annually, there is not enough data being generated to evaluate their contemporaneous quality using formal statistical methods.
- Cost increases in public spending (*i.e.* the deflators on spending) are unlikely to coincide with CPI growth, and so the true "real" increase in public spending will generally differ from the rule. For instance, if the CPI-deflated public-sector wage bill is set to increase by more than 1.7%, then other spending is relatively squeezed and *vice versa*.
- The Ministry has room for manoeuvre: for example, it appears to have departed from strict application of the formula on a discretionary basis in 2008.

The case for changing the spending rule

The combined system of deficit targets and the expenditure rule is outwardly simple, which helps communicate the importance of fiscal consolidation to the public and

Box 2.5. **The calculation of the budgeted spending increases from the real spending ceiling**

Conversion from real expenditure growth ceiling (currently 1.7%) into a nominal increase (which is of course needed for budgeting) includes a correction mechanism as follows:

$$E(t + 1) = 1.7 + CPI\ (t + 1, t) + [CPI\ (t, t) - CPI\ (t, t - 1)],$$

where $E(t + 1)$ is the percentage nominal spending increase in the next budget year, and $CPI\ (x, y)$ is the projection of annual consumer price inflation index for year x made by the Ministry of Finance in year y.

The correction mechanism is the third component of the equation. It is the difference between the Ministry's latest projection for the current year's inflation and what it had projected in the previous year. The mechanism implicitly assumes that the latest inflation projection for the current year is better than that made one year earlier, and that it reasonably accurately predicts the outcome.

The Ministry appears to have some leeway for discretion in addition to the "boxes" described in the main text. By way of an example, for the draft 2009 budget (that did not eventually get passed by the Knesset) the Ministry's 2008 forecast projected CPI growth at 3.9 and 1.8% for 2008 and 2009, respectively, while its 2007 forecast had projected inflation for 2008 at 2.2%. According to the formula this implied a nominal increase for 2009 of 1.7 + 1.8 + (3.9 – 2.2) = 5.2%. However, the Ministry actually proposed a nominal increase of 3.4 on the basis of a one-off adjustment in expenditures (worth 1.4 percentage points) and used a figure of 2.6% instead of 2.2% for the 2007 forecast of the CPI increase in 2008.

facilitates political debate. Also, it is appropriately stricter on the spending side and somewhat tolerant of missed deficit targets. This allows revenues to act as an automatic stabiliser in the event of downturns, as well as upturns – as exemplified by the current recession.

Nevertheless, changes to the spending rule of a least a technical nature will be needed at some point. In its current form the rule is unsustainable in the longer term. Because the ceiling roughly equals population growth (*i.e.* 1.7%), this means the share of spending in GDP will be driven down through trend growth in real GDP per capita. A long-term growth rate of, say, 2.5% in real GDP per capita (not implausible for Israel) implies eroding the share of spending in GDP by approximately 0.8 percentage points per year.

Arguably, the alteration of spending rule should not be limited to parametric changes. Under the present rule, the complexities and discretionary leeway in its application undermine its outward simplicity; the lack of any cyclical adjustment is less than ideal; and it is not directly anchored to a long-term fiscal goal. Various formulations have been suggested that would vary the ceiling according to performance relative to a downward sloping debt-to-GDP path. The ceiling would be lowered if the debt-to-GDP ratio is above the target path and increased if below. Such mechanisms would certainly improve on the current rule but ought to include some form of cyclical adjustment. Otherwise the rule would imply pro-cyclical bias, *i.e.* fiscal contraction during downturns and *vice versa*.

Any new rule needs to be as simple as possible, credible and politically robust. As with all such mechanisms, significant complementary political commitment to consolidation is required for it to work. If this is not the case, there are usually technical ways around even tightly legislated mechanisms, and policymakers can anyway ultimately either ignore the rule or change it. Some countries (for example, Germany and Poland) have enshrined fiscal rules in their constitutions, which does make breaking the rules more difficult but is widely regarded as excessively rigid. The best way forward is therefore to ensure that any rule is fully endorsed by key players in the political system, in the hope that reputation effects will bolster commitment to implementation.

Other avenues for improving the budget process

The evidently strong "top/down" fiscal discipline could be usefully augmented by measures that encourage better "bottom/up" budgeting (principally by improving spending proposals made by line ministries) and increase transparency. In particular, the following might be considered:

- *Reduction in the number of budget lines*. The number of budget lines seems extraordinarily high (although it has decreased from over 13 000 to 9 000 in recent years), and it is likely that at least some reduction would not cause undue loss of control by the Ministry of Finance. It should be noted that according to the Ministry of Finance, it has only limited scope for cutting the number of budget lines and that the initiative for substantial cuts would have come from the line ministries themselves.
- *Strengthening the multi-year perspective in budgeting*. At present there are only light requirements for ministries to outline strategy and spending plans beyond the next budget year. Background information on long-term budgeting plans is sometimes provided in budget submissions but is not compulsory (Table 2.2). More demanding rules, for instance requiring ministries to justify their spending requests for the budget year in the context of a multi-year plan, could enrich budget discussions with the Ministry of Finance and improve the quality of public spending.
- *Increased transparency*. Much of the budget material currently submitted to the spending ministries and the Knesset is highly complex. Reduction in the number of budget lines would in itself help. Also, cuts in unnecessary detail and the provision of more summary information would help civil servants and politicians comprehend and debate the budget more effectively. According to the Ministry of Finance, some steps along these lines are being taken, notably with the introduction of explanatory documents to accompany each item of the budget, more detail on the budget publically available on the internet and greater consultation with the Knesset Finance Committee.
- *Introduction of a periodic obligatory report on the sustainability of public finances.* This would help to monitor progress on fiscal consolidation. For example, to ensure budgetary discipline member countries of the European Union submit an annual report. For Israel, such a report could be drafted by each government at the start of its term of office and describe the medium- to long-term budgetary strategy, preferably over a horizon of at least 20 years. The report could: *i*) describe and assess the impact of current policies on public finances; and *ii*) provide an analysis of how changes in the main economic assumptions would affect the long-term fiscal position.

The case for (and against) devolving power from the Ministry of Finance

In principle, a system that provides the line ministries with more budgetary powers would be better, not least because it may result in policies that more closely reflect the

Table 2.2. **The central government's budgeting process**

June	The annual budget process is initiated by the Budget Department of the Ministry of Finance, which co-ordinates budget discussions with other ministries. At this time, the Ministry publishes its annual economic projection that is used to calculate the nominal spending increase according to the real expenditure ceiling (see above).
September, October	Details of the budget are finalised within the government.
By the end of October	The budget bill, together with supporting information, must be submitted to the Knesset for its approval. When the government submits the annual budget to the Knesset, it is required by law to submit a three-year projected budget. However this is non-binding and therefore does not require Knesset approval.
No later than end of the calendar year	After discussions on the budget between the Finance Committee of the Knesset and by ministers and officials, the annual budget law is required to be approved by the Knesset.
31 December	Fiscal year ends.

priorities of individual ministers and therefore more closely echo the public's preferences. Technically, devolution of budgetary powers could be achieved by, for instance, by dramatic reduction in the number of budget lines, combined with relaxation of rules on re-allocation.

But there are valid counterarguments to such a proposal. *First*, there are practical reasons why devolution could not proceed quickly. The lack of executive power in line ministries has eroded in-house expertise, such that the Ministry of Finance can claim with some legitimacy that the other bodies lack the means for developing policy. Devolution of budgeting and policymaking powers might require significant re-structuring of the civil service with the transfer of substantial numbers of key Ministry of Finance staff to other ministries. *Second*, the Ministry's powers are arguably a necessary foil to the idiosyncrasies of Israel's democratic system. Minor coalition parties are often anyway relatively powerful because their Knesset seats are necessary to the government retaining office. Hence, if devolution of budgetary powers gave them more influence, this might even shift policy further away from that of majority public opinion, rather than closer to it.

A more devolved structure might be made more workable if a "fiscal council" were introduced. Several OECD countries have set up independent bodies charged with conducting surveillance on budgeting and fiscal policy. For example, in Sweden the fiscal council (Finanspolitiska rådet) is an independent agency with eight members appointed by the government for three years. The members of the council are mostly academic economists. The council typically reports to government once a year during the pre-budget discussions. It focuses on: *i*) consistency between government budget documents and long-term sustainability of public finances, the budget surplus target and the multi-annual expenditure ceiling; *ii*) alignment of policy objectives; *iii*) how well budget documents explain and justify the fiscal policy stance; and, *iv*) the quality of forecasts and the models used to generate them (*Report of the Fiscal Policy Council*, 2009). A judgement whether such a council is indeed appropriate in the Israeli context would necessarily have to include an assessment of how it could usefully dovetail with the existing bodies that monitor fiscal policy.

Box 2.6. **Summary of recommendations on macroeconomic policy frameworks**

Monetary policy

- The prospect of the latest draft legislation for the Bank of Israel making it into the statute books can only be welcomed.
- Foreign-exchange reserves are now more than adequate. A "clean float" as regards the exchange rate should be readopted as soon as possible.

Tax policy

- Although cuts in corporate- and personal income-tax rates have beneficial effects on business activity and labour supply, they need to be put into context, and a degree of caution is required in pursuing them.
- The temporary increase in the rate of VAT to 16.5% could be made permanent and even increased a little further. Abolition of VAT exemptions for the tourist resort of Eilat, fruit and vegetables and on some tourist services should be revisited.
- The continuation of high purchase taxes on cars lacks strong justification. Environmental taxation would be better targeted on car use (for instance, through more use of road pricing) rather than ownership.
- A review of tax exemptions (and other tax expenditures) with a view to cutbacks should be made so as to broaden and secure the tax base. For instance, tax support for the "advanced training funds" makes little sense.
- There appears to be room for simplifying tax procedures (the number of taxes due, in particular), and this should be exploited.

Public spending

- Aggregate fiscal planning needs to accommodate the costs of sound structural reform rather more than it has in the past.
- Innovative approaches to public financing and services, such as e-government and public-private partnerships, should continue to be pursued.
- Inefficiencies should be rooted out and dealt with; for instance, remuneration and pay scales in the public sector appear to be ripe for reform.

Budget processes

- At least technical changes to the spending rule will be needed at some point, and arguably it should anyway be replaced by a formulation anchored in a long-term debt-to-GDP goal with adjustment for the cycle.
- "Top/down" fiscal discipline should be augmented by a reduction in the number of budget lines, strengthened multi-year perspective in budgeting, increased transparency in the budget documents and an obligatory periodic report on the sustainability of public finances.
- A "fiscal council" along the lines of that, for example, operating Austria, Sweden, Canada and the Netherlands, might be considered; it could help devolve power from the Ministry of Finance.

Notes

1. The exchange-rate band was formally abolished in 2005.
2. The Levin Committee was appointed in 1998 to submit recommendations for a new Bank of Israel law. See Cukierman (2007) for a discussion about *de jure*, *de facto* and desired independence of the Bank of Israel.
3. An unofficial translation of the latest draft Bank of Israel law can be found at the Bank's website. Policy objectives in the draft law are defined as follows: *i*) to maintain price stability as its primary objective; to support other objectives of the Government's economic policy, especially growth and employment, provided that, in the Committee's opinion, this support shall not impair achieving price stability over the course of time; *ii*) to support the stability of the financial system and its orderly activity. The price stability range shall be determined by the Government in consultation with the Governor. The draft legislation precisely defines "price stability over course of time" as "a situation in which, on the basis of the monetary policy established by the Committee, it is expected by the Committee that within no more than two years, the inflation rate will be within the price stability range".
4. The housing component of the CPI comprises services for owner-occupied housing (77%), rent (19.5%) and other housing expenditure (3.5%). Since 1999 the services for owner-occupied housing have been measured through the data on new and renewed rental contracts.
5. A press release by the Bank of Israel on 4 October 2009 shows that the coefficient on a simple regression between percentage changes in the dollar exchange rate and the housing component of the CPI index has fallen considerably, although correlation remains high, indicating that the exchange rate nevertheless still explains much of the variation in the housing component. The Bank also finds a fall in pass-through is confirmed in more sophisticated econometric analysis. See Bank of Israel website.
6. The "Greenspan-Guidotti Rule" states that reserves should ideally fully cover total short-term external debt. It is premised on the idea that reserves help countries deal with a sudden stop in short-term external financing (Jeanne and Rancièr, 2006).
7. Changes in foreign currency reserves not only reflect intervention (Neely, 2000). *First*, the dollar value of foreign exchange reserves is subject to changes in valuation from: *i*) changes in the value of non-dollar foreign currency holdings due to exchange-rate movements against the dollar; *ii*) interest income, or coupon payments; and *iii*) changes in the value of the underlying asset. *Second*, reserves often are used for transactions other than intervention. Ordinary government purchases from abroad, or government payment of debt denominated in a foreign currency, can change reserves, but are not intervention.
8. Obstfeld *et al.* (2009) show that the size of international reserves is linked to a central bank's desire to prevent a bank run combined with capital flight. In this context, they argue, it is important for the banks to consider not only external competitiveness and trade or short-term debt as motivations for reserve holdings, but also the size of the banking system (M2). The authors claim that a country's reserve holdings (relative to short-term debt and M2) before the current economic crisis can predict exchange-rate movements of both emerging and advanced countries in 2008. They find that currencies of countries with large reserve holdings did not depreciate and in some cases even appreciated. On the other hand, those with insufficient reserves were likely to have depreciated.
9. OECD estimates find the implied annual carrying costs of foreign-exchange reserves to have been, on average, 0.3% of GDP during March 2008 and August 2009 (calculated as the spread between domestic and the US one-year Treasury bonds multiplied by the reserve-to-GDP ratio). During the early 1990s, when interest rate spreads were relatively high for emerging economies, costs of intervention amounted to up to 0.5% of GDP (Khan and Reinhardt, 1994). In recent years, narrowing interest spreads have lowered the costs of intervention (Mohanty and Turner, 2006).
10. The severe fiscal and financial situation was worsened by the difficulty of assessing the duration of the Intifada. Eckstein and Tsiddon (2004) describe the significant decrease in consumption, investment and per capita output during this time.
11. Fiscal policy is characterised by pro-cyclicality (Strawczynski and Zeira, 2007). A simple rule of thumb is that each percentage point increase in business-sector product has led to an upturn of slightly less than half a per cent in public expenditure. Moreover, statutory tax rates were also adjusted pro-cyclically, with rates being reduced during high-growth periods.
12. The sub-components of direct taxation shown in Figure 2.7 are not fully comparable because the available Israeli data do not completely conform to the OECD tax classification used for the figure.

Importantly, for Israel the sub-component of taxation on individuals includes only taxes on wage income and the incomes of the self employed. Hence, other taxes collected from individuals (*e.g.* dividend tax) are included in the "not allocated" category, which is therefore relatively large (4.6% of revenues for Israel, compared with 1.5% for the OECD average).

13. In 2003, the six personal-income tax rates were: 10%, 18%, 26%, 27%, 45% and 50%. In 2009, they were 10%, 15%, 23%, 30%, 34% and 46%. According to the schedule outlined by the government, tax rates in 2016 will be 10%, 14%, 18%, 24%, 27% and 39%.

14. There are no widely recognised international comparisons of effective tax rates on business similar to those calculated for households using micro-simulations. Business taxation is typically more complex, and it is harder to define representative scenarios than is the case for households.

15. According to Bank of Israel (2009, p. 256) the average effective tax rate for a single person earning *ten times* the value of GDP per capita is 42.5% in Israel compared an OECD average of 41.5%.

16. The Laffer curve describes a theoretical relationship between the optimal tax level and the maximum tax revenue, that proposes an inverted U-shape relationship between tax rates and tax revenues. If the tax rate is on the right side of the peak in the Laffer curve, this implies lowering taxes will increase tax revenue. For example, Trabandt and Uhlig (2006) show that both the United States and the EU15 area are located on the left side of their labour and capital tax Laffer curves, but the EU15 economies are closer to the peak of the Laffer curve. Hence, they find that tax cuts in the EU15 area are much more self-financing than in the United States.

17. The removal of purchase taxes on white goods did not have an obvious impact on revenues. Indeed, according to figures from the Central Bureau of Statistics, total revenue from purchase taxes increased by 7.3% in 2007 and 10.7% in 2008.

18. Calculations of the VAT revenue ratio (VRR) confirm that Israel's VAT has a broad base and high compliance. The VRR is defined as the ratio between the actual VAT revenue collected and the revenue that would theoretically be raised if VAT was applied at the standard rate to all final consumption. For Israel the ratio is 0.7 which is relatively high, the OECD average is 0.6 (OECD, 2008).

19. Some claim that a substantial share of car taxes is borne by the distributors. If this is indeed the case, it suggests that competition at the retail level may be rather weak. Under the standard model of competitive markets the distributors would not absorb any of the tax because costs are already driven to a minimum efficient level.

20. However, the Ministry of Finance's proposals also include abolition of a tax break on cars with electronic stability systems, which would, to some extent, offset the cut in the purchase tax. The Ministry's proposals also included alteration in the tax treatment of company cars. In late–November 2009, the Ministry's proposals were approved by the Knesset Finance Committee.

21. See Strawczynski and Zeira (1999) on the process of reducing the relative size of government in Israel.

22. Successive governments have endorsed the guidelines of the Maastricht criteria as principles for monetary and fiscal policy in Israel (Barkai and Liviatan, 2007).

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Chapter 3

How to move ahead in education reform

Israel's education system is complicated by multiple streams at the primary and secondary levels and by military conscription. Population growth and economic expansion have brought a massive increase in demand for all levels of education. Educational attainment statistics are impressive, but results show high-school students have poor basic skills. Reform efforts to tackle this are underway, including increased teachers' pay in combination with more contact hours and increasing the length of compulsory education. As in other socio-economic spheres, there are significant gaps between Arab-Israelis and the rest of the population. Also, the Ultra-orthodox community's independent education system presents specific concerns and challenges. In tertiary education, progress has been hindered by the collapse of a reform package that envisaged increased state funding combined with increased student tuition fees, expansion of government-backed student loans and a range of other structural reforms.

Israel's education system has undergone massive expansion due to population growth, lengthening compulsory education and increasing demand for tertiary education. In some ways it has coped well. Already high average levels of educational attainment have been increased further and remain comparable with the best-performing OECD countries. However, participation and attainment in education among Arab-Israelis is low, and Ultra-orthodox education is unconventional, which, as Chapter 1 points out, is contributing to high levels of relative poverty. Furthermore, international surveys reveal a general problem of weak core skills among secondary-school students, with negative implications for employers and tertiary institutions. This chapter investigates these problems and the policy response to them. It covers primary education upwards; pre-primary education is discussed briefly in the context of family policy in Chapter 4. Recommendations are summarised in a concluding box (Box 3.4).

A complex education system

The routes from the crèche to the workplace are complicated, echoing Israel's short but complex history and the diverse backgrounds of its population (see Chapter 1):

- Primary and secondary education comprises four main streams: three for the Hebrew-speaking community and one for the vast majority of Arabic speakers (there is a relatively minor fifth stream for the small Druze minority). The Hebrew-speaking streams comprise State, State-religious and Ultra-orthodox schools. All streams are supervised and fully funded by the state, except the Ultra-orthodox stream, which is independent and receives partial state funding. Private mainstream schooling occupies a relatively small share of the market.
- Military conscription (typically three years for men and two for women) intervenes in the transition from school to work or to tertiary education. It is not universal: Arab-Israelis are exempt, and the Ultra-orthodox stream is effectively exempt. One consequence of conscription is that a market for post-conscription education has developed in which individuals re-take secondary-school courses and prepare for tertiary entrance exams. The impact of conscription on individuals' education and careers, and on the human capital of the economy as a whole, is clearly complex. Conscription delays entry into higher education and the labour market, shortening active contribution to the civilian economy. However, some skills acquired during military service do have market value for civilian life. For example, it is often argued that many high-tech start-up companies are based on know-how acquired during military service.
- Tertiary education comprises several universities and numerous colleges. Policy purposefully maintains a distinction between the university and college sectors; for instance, the state funding formulae differ. For both sectors, tuition fees for state-funded courses are regulated, uniform and fairly modest. Non-funded courses with unregulated (and much higher) fees have grown in number, although they still account for only a relatively small share of tertiary education.

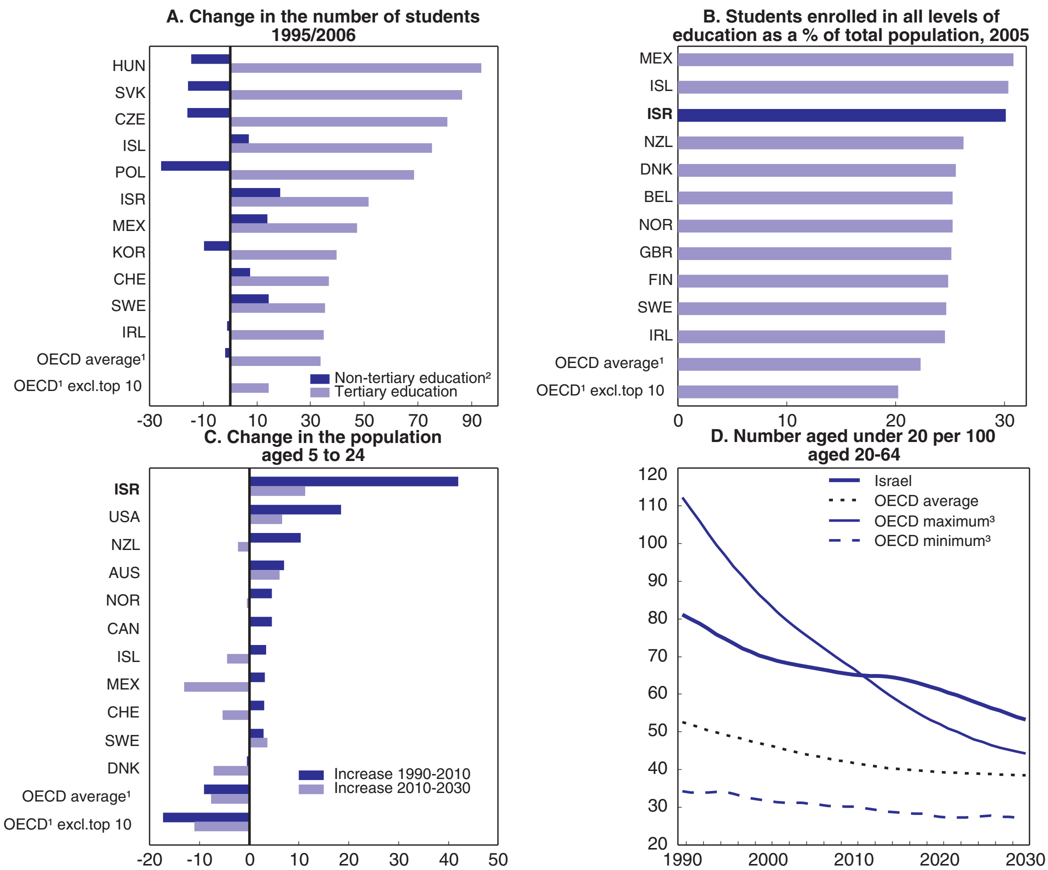
Strong demand and continuing expansion

There has been rapid expansion in the number of students at all levels of education and a high level of overall "demand" for education compared with OECD countries. Between 1995 and 2006, the percentage increase in student numbers at all levels was well above the OECD average (Figure 3.1, Panel A). And, the share of students enrolled in all levels of education in relation to the total population is very high compared with most OECD countries (Figure 3.1, Panel B).

Figure 3.1. **International comparison of student numbers and youth demographics**

Comparison of Israel with top ten OECD countries[1] (except Panel D)

Per cent



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Unweighted average, excluding Luxembourg and Turkey. For Panel A, data available for only 23 OECD countries.
2. Primary, secondary and post-secondary education.
3. Maximum and minimum for each year, irrespective of country.

Source: United Nations, *World Population Prospects: The 2008 revision*, medium-variant population projections and OECD (2009), *Education at a Glance.*

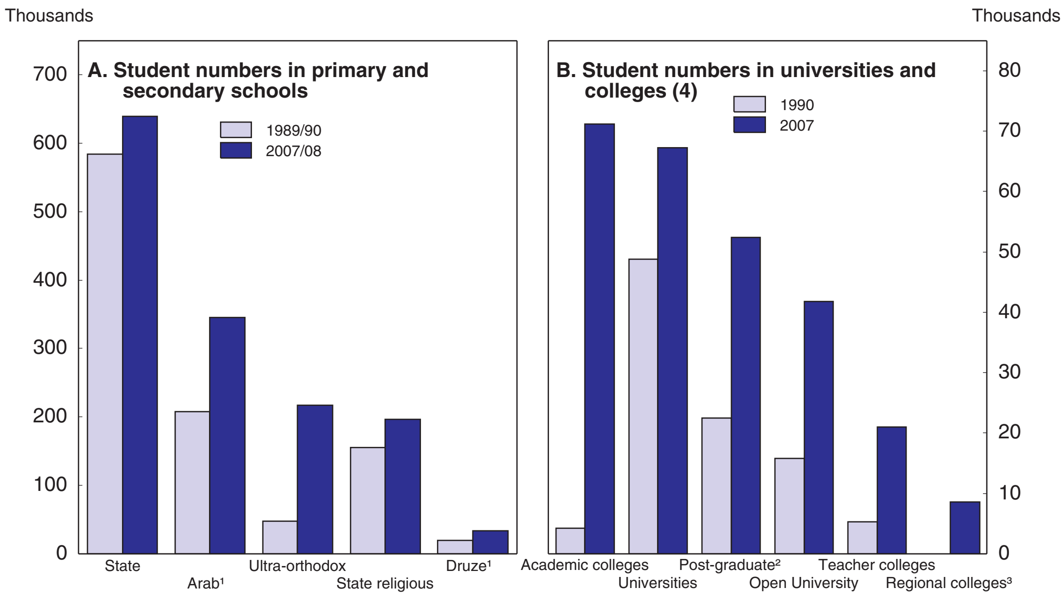
StatLink http://dx.doi.org/10.1787/775020286242

Demographics are playing a significant role in pushing up the demand for education. For example, in the past 20 years the population of those aged 5 to 24 years has increased by about 40%, which is substantially more than in any OECD country, where, typically, youth populations have been shrinking (Figure 3.1, Panel C). However, the demographic pressures on the education system are set to ease. According to United Nations projections the population aged under 20 will rise by a little over 10% in the coming 20 years. Also, viewed in the context of the youth dependency ratio, the demographic burden has been declining for some time, although it is set to remain well above the OECD average for the foreseeable future (Figure 3.1, Panel D).

In addition, the education system has long since been coping with significant compositional change. Much of the increase in the number of primary and secondary students has been in the Arab and Ultra-orthodox streams (Figure 3.2). Most remarkable is the rise in Ultra-orthodox education; roughly one quarter of Hebrew-speaking children (or a little under one-fifth of the total population) now start primary school in this stream. In tertiary education, much of the response to the increasing demand for first-degree courses has been through increasing undergraduate numbers in the Open University and in academic colleges (see later sections for further explanation). Student numbers in post-graduate education have also increased substantially (Figure 3.2).

In international comparison, Israel devotes a relatively high share of GDP to education, which is sometimes lauded but is deceptive because of student numbers. Public and private expenditure on educational institutions is around 8% of GDP, compared with an OECD average of about 6% (Figure 3.3). However, if this measure is divided by the share of the students in the total population to give expenditure per student relative to GDP per capita, then Israel is slightly below the OECD average of around 25%.[1] This clearly needs to be taken into account in assessing the depth of human capital investment and in debates about funding education.

Figure 3.2. **Compositional change in compulsory and tertiary education**



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

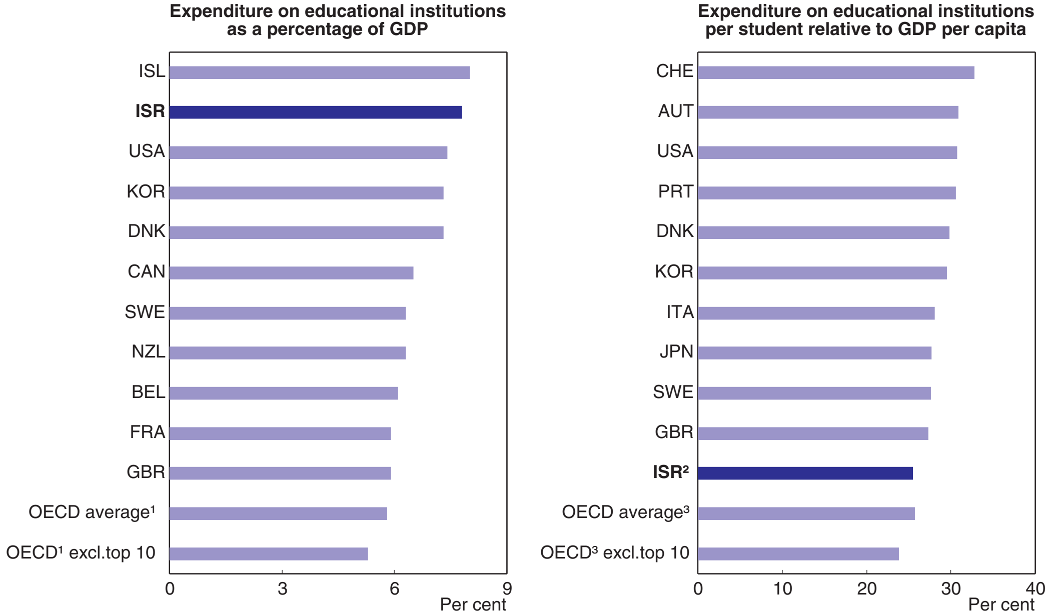
1. Data for 1989-90 approximated by OECD using 2007-08 figure and total growth in Arab/Druze population 1990 to 2007.
2. All institutions.
3. Most are affiliated to universities.
4. The figures for each type of institution comprise undergraduate student numbers. A large majority of post-graduates are in the university sector. The year indicates the calendar year in which the academic year began.

Source: Central Bureau of Statistics and the Council for Higher Education.

StatLink http://dx.doi.org/10.1787/775058457357

Figure 3.3. **International comparison of spending on education**

Comparison of Israel with top ten OECD countries, 2006



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

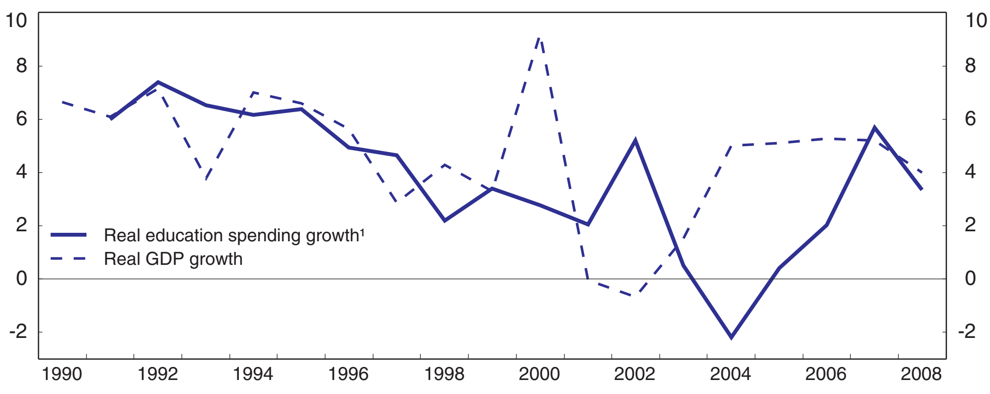
1. Excluding Luxembourg. Greece and Turkey.
2. Israel has the 15th rank.
3. Excluding Canada, Luxembourg, Greece and Turkey.

Source: OECD (2009), *Education at a Glance.*

StatLink http://dx.doi.org/10.1787/775076132687

Figure 3.4. **Trend in spending on education**

Per cent



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. To calculate real spending growth in education, the Central Bureau of Statistics uses a combination of deflators for each level of education.

Source: Central Bureau of Statistics, *Statistical Abstract of Israel* 2009 and OECD, *OECD Economic Outlook 86 Database.*

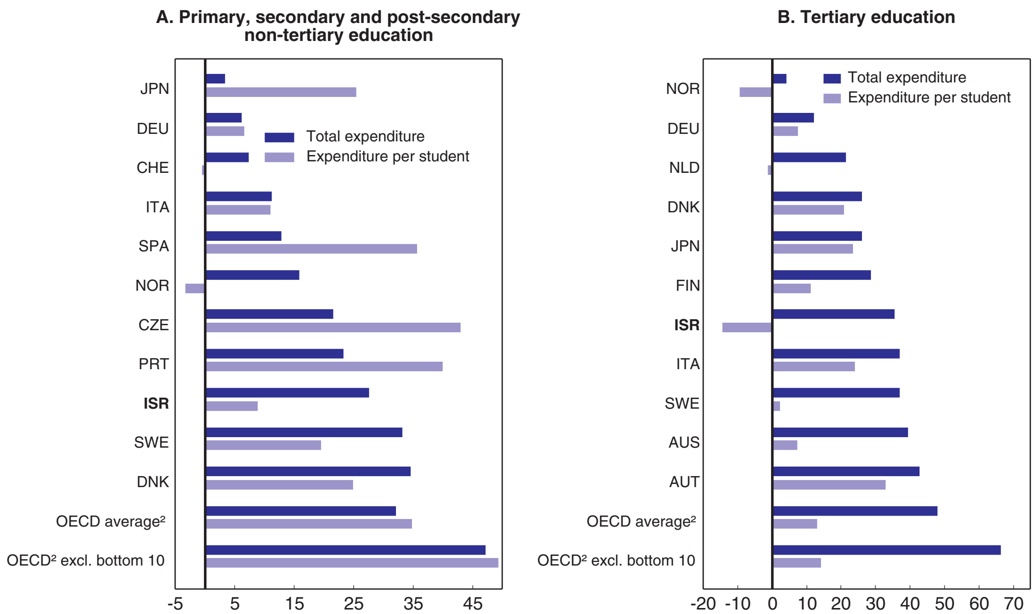
StatLink http://dx.doi.org/10.1787/775107854173

Furthermore, increases in education spending have been relatively modest compared with OECD countries. Over time, annual increases have often reflected increases in GDP (Figure 3.4). Thus, spending as a share of GDP has remained relatively stable, fluctuating between 8 and 9%. This said, in the early 2000s real growth in spending on education was muted as part of wider efforts to limit public spending (see Chapter 2). This contributed to Israel having a relatively low spending increase compared with OECD countries, and especially a low increase in expenditures per student. Indeed, real spending per student in tertiary education fell by close to 15% between 1995 and 2006 (Figure 3.5). Recent educational reforms have sought to reverse this trend (see subsequent sections).

Figure 3.5. **International comparison of changes in spending on education**

Comparison of Israel with bottom ten OECD countries

Percentage change 1995 to 2006, constant prices[1]



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. GDP deflator, 2000 = 100.
2. Data available for only 21 OECD countries.

Source: OECD (2009), *Education at a Glance*.

StatLink http://dx.doi.org/10.1787/775117080771

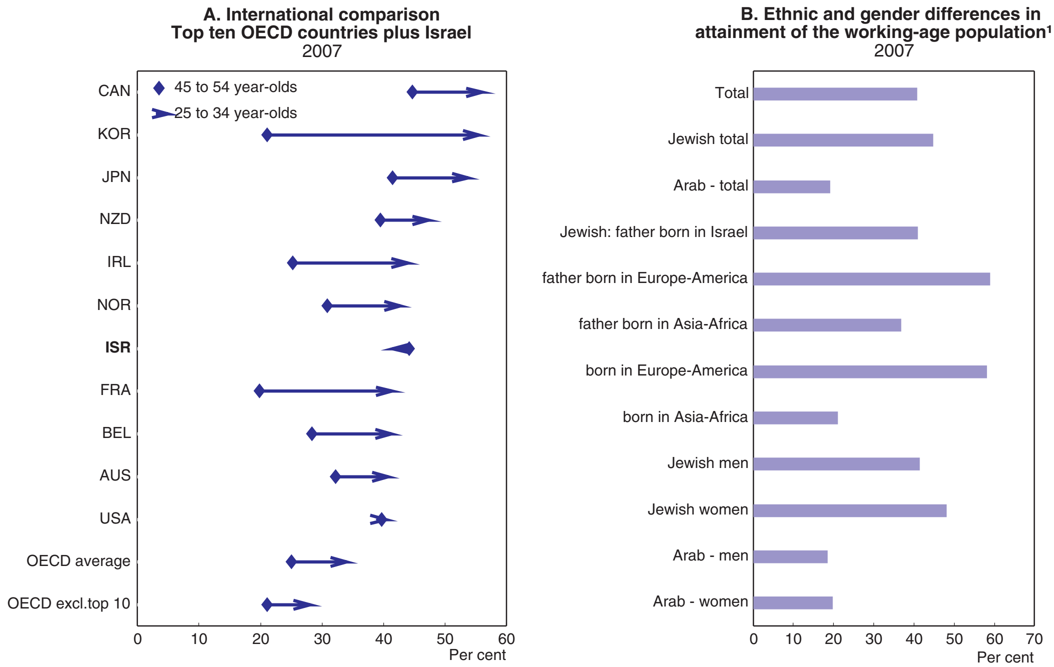
High average educational attainment but large differences within society

Educational attainment of the working-age population is impressive. According to the latest available comparisons, 42% of 25-34 year-olds have either tertiary type A or B qualifications compared with an OECD average of 34% (Figure 3.6, Panel A).[2] Furthermore, high attainment is firmly established in the population as a whole. In many OECD countries attainment is lower in older cohorts, reflecting low secondary-school graduation rates and small tertiary sectors in the past. In contrast, attainment among older cohorts in Israel is relatively high. For example, over 40% of 45 to 54 year-olds have attained a tertiary-level qualification.

However, differences in educational attainment across different segments of society are large. Only about 20% of the Arab population aged 15 and over has attained tertiary education, compared with 45% in the Jewish population (Figure 3.6, Panel B). Within the Jewish population, those of African-Asian origin have much lower attainment than those

Figure 3.6. **Tertiary education attainment**

Percentage of the population that has attained tertiary education



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Population aged 15 and over.

Source: OECD (2009), *Education at a Glance* and Central Bureau of Statistics, *Statistical Abstract of Israel* 2008.

StatLink http://dx.doi.org/10.1787/775200566076

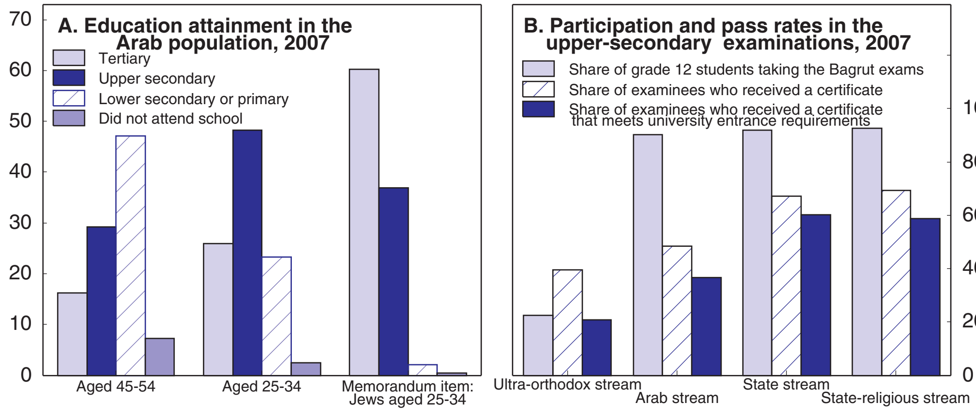
of American-European origin. Despite the diversity of Israel's waves of immigration, this does not appear to be a large influence on the overall attainment figures. Tertiary attainment in the Jewish population as a whole and in the subset of those born in Israel is roughly the same (Figure 3.6, Panel B). Similar to many OECD countries, tertiary educational attainment is now more prevalent among women.

Educational attainment among the Arab-Israeli population is rising, but even among young cohorts the gap with the Jewish population remains substantial. Older cohorts of Arab-Israelis typically left the education system relatively early. For instance, nearly half of those currently aged 45-54 finished education at the end of lower-secondary school (Figure 3.7, Panel A). Among younger cohorts, there has been significant improvement with a large majority continuing beyond compulsory education. Nevertheless, pass rates among those who take the end-of-school exam (Bagrut) remain comparatively low. In 2007 the pass rates was 48% in the Arab stream, compared to 67% in the State stream (Figure 3.7, Panel B).[3] Consequently, far fewer young people attend tertiary education compared with the Jewish population; tertiary attainment among 25-34 year-old Arabs is only 26%, less than half the rate of the corresponding Jewish population.

That said, there are important distinctions in participation and attainment within the Arab-Israeli community, reflecting wider socio-economic differences (see Chapter 4). Analysis of student performance in upper-secondary education by Zussman and Tsur (2008) underscores the fact that students from a Bedouin background have particularly weak outcomes. Those for the Druze and Christian communities are stronger

Figure 3.7. **Attainment indicators for the Arab and Ultra-orthodox education streams**

Percentage



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Central Bureau of Statistics, *Statistical Abstract of Israel 2009*.

StatLink http://dx.doi.org/10.1787/775211176478

than the Muslim majority, having pass rates comparable to those in mainstream Jewish education.

Persistently poor educational outcomes among Arab-Israelis are being driven in particular by the following:

- The low socio-economic status of many families and communities is feeding through to student performance by several channels. Low parental achievement can reduce the educational aspirations of children, and limited labour-market prospects probably dissuade students from significant effort at school. Also, local authorities in Arab-Israeli communities often have weak finances (see Chapter 2) and cannot afford additional investments in educational infrastructure, which are quite common in more affluent jurisdictions.
- The remote location of some communities (particularly the Bedouin) means students can be put off attending because they live a substantial distance from their school. Also, the distance of the schools themselves from the main urban centres amplifies problems in attracting and retaining staff.
- Arab-speaking students face a heavy workload in language skills. Spoken and written Arabic differ markedly, making it tough to acquire reading and writing skills. Also, a significant amount of time is absorbed learning Hebrew, a high level of proficiency in which is essential for those aspiring to tertiary education in Israel. All tertiary institutions except some teacher-training colleges teach in Hebrew.

As regards the Ultra-orthodox community, the primary concern is not one of participation in education, *per se*, but rather the focus of learning. Only about 20% of the Grade 12 students sit the final-year Bagrut examinations, compared with over 90% in mainstream Jewish education (Figure 3.7, Panel B). Furthermore, pass rates are mediocre: overall, only a very small share of Grade 12 students in this stream become eligible to apply to university. However, for girls these statistics do not tell the full story. Although each year only about 2 400 Ultra-orthodox girls take the Bagrut exams, a further 4 500 participate in an alternate system of secular-type exams administered by the Henrietta Szold Institute. As a result, in total, over 95% of girls take some form of final examination. But this is not the case for boys for whom low participation in Bagrut indeed reflects a very limited focus on mainstream education.

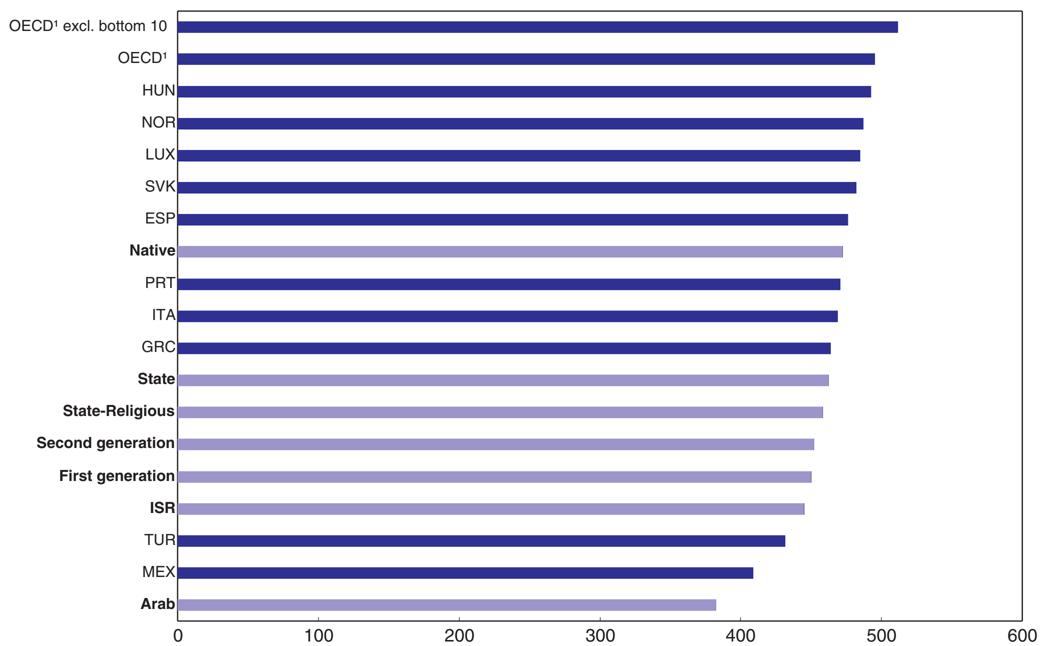
Relatively weak core skills

Israeli secondary-school students as a whole have performed poorly in all international tests of core skills in recent decades. In the 2006 Programme for International Student Assessment (PISA) exercise, Israel's score across the maths, reading and science tests was lower than all OECD countries except Mexico and Turkey, and substantially below the OECD average (Figure 3.8). Similar results have emerged from most other international tests. Scores in PISA and in Trends in International Mathematics and Science (TIMSS) have consistently ranged between 85 and 90% of the OECD average in recent years.[4] Some hold that schooling has deteriorated significantly compared with previous decades. However there is no concrete evidence of this. In tests conducted in the early 1960s, test scores were some way above the OECD average, but participation in these tests was concentrated among students with strong family backgrounds, and for this reason the results are not considered internationally comparable.

Crucially, this is a generalised problem; the poor international ranking in PISA holds across all streams of supervised education. To be sure, students in the State and State-religious streams perform substantially better than their Arab-Israeli counterparts, but

Figure 3.8. **Average of PISA scores across mathematics, reading and science**

Comparison of Israel with bottom ten OECD countries, 2006



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Unweighted average.

Source: OECD, *PISA 2006 Database*.

StatLink http://dx.doi.org/10.1787/775243173411

even their scores are well below the OECD average (Figure 3.8). Note that due to only partial participation in PISA by the Ultra-orthodox schools, there is no comparable figure for thisstream (see below). The significance of immigration in Israel's Jewish population has some bearing on the PISA results. For example, the average score for third- and higher-generation students in the State and State-religious streams is somewhat higher than the nationwide average, but is nevertheless the sixth lowest score in comparison with OECD countries (Figure 3.8). The equivalent scores for first- and second-generation students are close to the nationwide average.[5]

The PISA results illustrate a number of other points. *First*, the weak performance is not confined to a specific aspect of core learning; average scores in all three areas tested in PISA (reading, mathematics and science) rank roughly the same. *Second*, as might be expected given the country's socio-economic diversity, the dispersion of scores is wider than in many OECD countries. The variance in student scores in science is some 40% greater than the average OECD-country variance. About one-third of the total variation is attributable to between-school differences in performance, the remainder to within-school variation. *Finally*, controlling for socio-economic status across countries worsens Israel's relative position – primarily because the scores for Turkey and Mexico are pulled up while Israel's falls slightly. This broadly suggests that Israel's poor overall performance in PISA is largely linked to issues in the education system itself and not due to other drivers of educational attainment.

The weak international test scores are worrying. Such concerns could be allayed if students' core skills were deepening relatively quickly, compared with other countries in the final years of secondary schooling or during military conscription. But this seems unlikely. Hence, on average, Israeli school leavers are almost certainly entering the labour market or tertiary education with weaker basic skills compared to their contemporaries in nearly all OECD countries.

Developments in primary and secondary education policy

Policymaking in primary and secondary education is fundamentally split between the supervised and unsupervised sectors. In the supervised sector (*i.e.* covering the State, State-religious, Arab and the relatively small Druze streams), the Ministry of Education and other arms of government have considerable powers to influence and monitor the type and quality of learning through resource allocation, regulations and guidelines. For the Ultra-orthodox stream government policymakers are not without influence but, by definition, do not have the conventional means of implementing reform.

Key features of mainstream education

Primary and lower-secondary schooling is directly administered by central government, while, with the exception of a relatively small sector for vocational training (see below), most upper-secondary schooling is under the authority of local government. This is opposite to arrangements in many OECD countries, and its roots probably lie in a desire to weld national cohesion and ensure compulsory schooling in primary and lower-secondary schools during the early days of statehood. Aside from the strong segmentation, schooling in other respects is similar to many systems elsewhere (Table 3.1). Allocation to schools is primarily based on catchment areas at lower levels and then parental choice in upper-secondary education, and there are mandatory core curricula and national testing at various ages (Box 3.1). Teachers are required to have degree-level teaching degrees and are

Table 3.1. **Key features of the supervised education streams**

Basic structure	Compulsory kindergarten education is provided free for one year prior to entering Grade 1. Prior to this, pre-primary education is optional. In total children usually attend for two years. Free pre-primary education is being extended beyond one year on a gradual basis, with priority given to disadvantaged socio-economic groups.
	Education is in three principal phases: primary (Grades 1-6), lower secondary (Grades 7-9) and upper secondary (Grades 10-12). Some lower-secondary and upper- secondary schools are combined. An increase from 10 to 12 years of compulsory education is being phased in.
	There are relatively few private schools in the supervised sector.
	Vocational training schools (administered by the Ministry of Industry, Trade and Labor) provide an alternative track to mainstream upper-secondary education.
School allocation	Catchment-area allocation is used for primary and lower-secondary schools. Allocation for upper-secondary schools is based purely on parental choice.
Curricula	There are mandatory core curricula for each stream with common elements.
	All streams include mathematics, reading/literature and English language.
	Arab schooling includes compulsory Hebrew-language classes.
	The State-religious schools typically devote about half the school day to religious study.
Examination system	National testing at Grades 2, 5 and 8 (the Meitzav exams) and a matriculation process (Bagrut) during Grades 10 to 12.
School administration and funding	Legally, primary and lower-secondary education is run directly by central government. Secondary education is the responsibility of local authorities, but central government has effective control, through funding, regulation and guidelines. School principals have sole responsibility and authority regarding pedagogical issues and limited powers in hiring and firing staff. In general, there are no school boards.
	State-budget transfers are supposed to cover all costs, *i.e.* there are no mandatory local-government contributions. However, local authorities can, and often do, top up school funding (particularly for infrastructure, such as sports facilities).
Fees	Schools can, and typically do, charge fees for certain extra-curricular activities.
Teachers	All teachers are required to have a teaching degree from one of the approved teaching colleges. There are two main teaching unions, the High School Teachers' Organisation and the Israeli Teachers Union.

strongly unionised, and school principals have sole responsibility in pedagogic matters but limited powers in hiring and firing staff.

These supervised, fully state-funded schools provide the vast majority of mainstream education. Independent private mainstream schooling is limited; there are only an estimated 30 000 students compared with a total of about 1.1 million students in the supervised streams in primary and secondary education.[6] Nevertheless, officials in the Ministry of Education are concerned about the degree of state support for this sector (the schools receive partial state funding along similar lines to the Ultra-orthodox schools, see below) as this is helping private schools draw the best teachers and students away from state schools in some areas of the country.

Vocational training is partly catered for through separate tracks in regular upper-secondary education (see Box 3.1). Indeed, about one third of students are in schools that run vocational variants of the Bagrut examination. These schools are often run by non-profit organisations but nevertheless fall under State supervision and are under the immediate responsibility of local authorities. In addition, there are vocational schools under the authority of the Ministry of Industry, Trade and Labor that teach "traditional" trades, such as vehicle maintenance and construction, for the equivalent of Grades 9 to 12. The sector is relatively small, with approximately 13 500 students (in around 70 institutions). This is equivalent to only 3% of the total number of Grade 9 to 12 students.[7] However, military service is playing a role in developing vocational skills, as for many conscripts it includes learning general skills in engineering and trades.

Box 3.1. **The Meitzav and Bagrut examination systems**

Meitzav exams are conducted in the second year of primary school (Grade 2, *i.e.* typically age 7/8), the final year of primary school (Grade 5, *i.e.* around age 10/11) and the second year of lower-secondary school (Grade 8, *i.e.* typically age 13/14). The exam at Grade 2 tests only Hebrew or Arabic skills (as appropriate), while the subsequent tests also cover mathematics, English, and science and technology. Since 2007 the frequency of external examination has been reduced in light of concerns about undesirable behavioural reactions, such as excessive teaching to the test itself. Participation is now on a rotating basis; schools run common external tests for two of the subjects every two years and use internal tests in the interim.

The Bagrut applies to upper-secondary students (*i.e.* Grades 10 to 12) and comprises unit-based courses that culminate in final examinations in Grade 12. Matriculation for a certificate requires passing exams in several core subjects (including maths, native language skills and English) plus two elective subjects. The courses are ascribed a unit value, which reflects class time spent and the level of difficulty, and a minimum number of units is required for a Bagrut certificate. Students follow either "general", "vocational" or "agricultural" tracks; the latter two include more practical course options but nevertheless can fulfil university or college entrance requirements.

Universities and colleges typically make additional requirements on the content of the Bagrut certificate. For example, the universities require the Bagrut certificate to include passes at a minimum level in maths, English and in one of the elective subjects. Both universities and colleges calculate a single score from the student's exam results, which are one of the factors used to allocate places to applying students. Tertiary institutions also require applicants to take general tests (the Psychometric Test), which are akin to the "GMAT" examination in the United States. There are two test systems, one run by the universities and another by the colleges.

Those that do not pass the Bagrut receive a certificate for having reached Grade 12, which is itself a recognised qualification for some parts of the labour market.

Classes are, on average, relatively large compared with OECD countries, especially in the Arab stream. Primary-school classes average 25 students in the Hebrew streams and 29 students in the Arab stream, compared with an average of 21 students among OECD countries (Figure 3.9). With averages at these levels there is probably a good proportion of classes with well above 30 students per class in the Jewish streams and more than 35 students in the Arab stream.

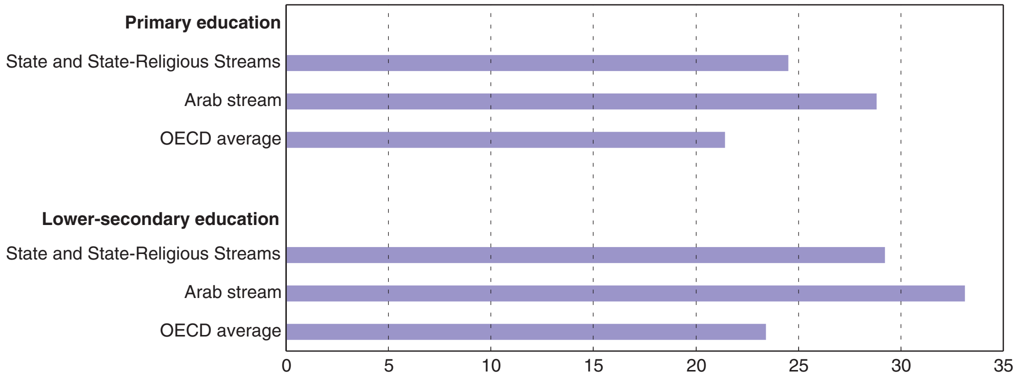
The New Horizon programme and other reforms

Policymakers have for some years recognised that core skills are a problem in primary and secondary education. In the early 2000s there were some bold policy experiments, and a national task force on education (the Dovrat Committee) proposed various reforms, and current policies echo a number of its recommendations.[8] The most prominent focus of current policy is "New Horizon", a programme endeavouring to advance reform on several fronts. This is discussed in more detail below. However, other important programmes are underway, notably:

- Increase in compulsory education by two years to Grade 12 (*i.e.* typically age 17 or 18). This has considerable budgetary implications, as the increases in student numbers

Figure 3.9. **Average class size in primary and lower-secondary education**

Average pupils per class[1]



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. OECD average is for public education in 2007, the Israeli figures are for the 2008-09 school year.

Source: : OECD (2009), *Education at a Glance* and Central Bureau of Statistics, *Statistical Abstract of Israel 2009*.

StatLink http://dx.doi.org/10.1787/775248605112

trigger additional state transfers to schools. For this reason it is being applied progressively over a five-year period with earlier implementation in deprived areas. In the first year the increase in compulsory education became operational in 30 municipalities, and countrywide implementation is scheduled for the 2012-13 school year.

- Reduction in the maximum class size to 32 students at all levels of compulsory education and to 20 in the first two primary-school grades. Full implementation is aimed for in the 2010-11 school year and will imply that at least for the first two grades the average class size will be at or below the norm in OECD countries.
- Introduction of socio-economic weighting in the budgeting allocation for primary education. Since the 2007-08 school year a socio-economic index has been used to determine some of the budget allocation for primary schools. The index (called the Strauss Index) factors in students' family income, parental education, immigrant status and a measure of distance from the main urban areas to set the funding for each school.[9] But universal minimum budgeting requirements are limiting application of the index such that it currently allocates only 5% of the primary-school budget (Bank of Israel, 2009).
- Reform of the Bagrut away from rote learning. In examinations, the proportion of straightforward factual regurgitation is being reduced, and, in continuous assessment, more weight is being given to projects requiring independent inquiry.

The new government is endeavouring to clarify objectives for state primary and secondary education. A position document by the Ministry of Education outlines a 15-point strategy that includes some admirably specific targets. These notably include goals on performance in international tests for coming years. For example, one goal is for Israel to rank 35th in mathematics and science, and 34th in languages in the 2012 PISA scores (current rankings are 40th and 39th respectively in a comparison including non-OECD participants in PISA).

Key elements of the New Horizon programme

In 2007 New Horizon was launched in primary and lower-secondary schools following an agreement struck between the education authorities and the Israeli Teachers Union. The core of the programme lengthens teachers' workweek to accommodate small-group teaching in exchange for more generous compensation.

- *Classes and teaching hours*. Teachers' working time is being increased from 30 to 36 hours per week. This includes five hours of small-group teaching in primary schools and four hours in lower-secondary schools. Guidelines on the small-group teaching suggest schools allocate 60% of time to improving general achievement levels and 10% to gifted students – the remaining 30% to be allocated as the schools see fit.
- *Teachers' pay*. The pay scales are being raised substantially but also flattened (*i.e.* automatic seniority increments are smaller), and some supplements to basic pay have been removed. The increases in teachers' pay are, *prima facie*, substantial, particularly for junior staff. For example, the starting salary for new teachers nearly doubles, while for veteran teachers pay increases by about one quarter. The process of promotion up the pay-scale ladder is also being altered. Evaluation will generally take place every three years and will depend on successful completion of 60 hours compulsory training per year and, at senior levels, on additional assessment processes. The reform agreement explicitly excluded any formal grading of teachers performance in the training sessions, except in mathematics.
- *Principals' pay and responsibilities*. A separate, and substantially more generous, pay scale is being introduced. Principals have been given greater powers over which teachers are hired, the granting of tenure and promotion. They can now also initiate procedures for firing teachers. A special training college for principals has also been established.

The small-group teaching approach of New Horizon is one of several reform models to have been tried (see Table 3.2). Notably, in the early 2000s three pilot schemes aimed at boosting the performance of weaker students from Grade 10 to 12 (*i.e.* typically age 16 to 18). One programme gave cash awards to students, another provided cash incentives to teachers, and a third provided targeted instruction in small study groups. The first two programmes were terminated; the latter survived and currently operates in around 300 schools. Follow-up research has found, in broad terms, positive effects on student performance, particularly from the two programmes using individualised rewards.[10]

New Horizon's pay reforms are intended to tackle what many see as a crisis in morale among teachers and problems in attracting quality entrants to the profession. Teachers' pay has indeed been relatively low in international comparison. For instance, according to the OECD's *Education at a Glance*, the pay of teachers with 15 years experience in Israel was equivalent to 62% of GDP per capita in 2007, while for most OECD countries the equivalent figure lay between 100 and 150% of GDP per capita (OECD, 2009). However, as elsewhere in the public sector, there are a number of supplements to basic pay. For teachers these are worth around 15-25% of the gross wage and imply that Israeli wages are in fact closer to the norm.[11] International comparison based on New Horizon's pay scales would probably bring wages to the bottom end of the typical range of most OECD countries.

Remuneration is only part of the morale and recruitment problem. Volansky (2010) cites several additional factors, including harsh criticism of teachers in the press and increased questioning of teachers' authority by parents and pupils. While New Horizon

Table 3.2. **Past pilot programmes to boost student and schools' performance**

Programme	Detail
Salary hikes for teachers and principals in deprived areas (Individual Compensation Contracts Programme)	Staff in schools selected from "national priority areas" were given 50% pay increases for up to two years, the main goal being to attract better-quality teachers and managers to schools in peripheral areas.
Teacher incentives based on overall school performance ("Teacher Incentive Intervention"), 1995-99	Financial rewards to teachers based on the average performance of the school in matriculation exams. The rewards were distributed equally to teachers within each school.
School incentives programme (The "School Resources" programme), 1994-97	Additional resources to schools (additional teaching time and resources for teacher training) on the basis of applications judged by a ministerial steering committee.
Student incentives ("Achievement Awards" programme), 2001	Grade 10 to 12 students in a sample of poorly performing schools were given cash rewards for taking and passing exams. The programme was supposed to last three years but was suspended after one year due to adverse publicity.
Teacher incentives based on individual performance, 2001	Individual cash awards to teachers based on students' actual performance compared to that predicted by regression analysis that controlled for socio-economic background, an indicator of proficiency and a fixed school-level effect.
Small-group teaching ("Bagrut 2001" programme)	Under-performing students were given individualised instruction in small study groups.

Source: Ministry of Education.

will not immediately lessen such problems, it most likely will do in the long run by improving the performance of current teachers and raising the quality of new entrants. Morale, recruitment and retention are also problematic in quite a number of OECD countries. A review of the teaching profession in 25 countries conducted in the early 2000s recorded widespread concerns about maintaining an adequate supply of teachers and the image and status of teaching (OECD, 2005). The review underscores that the causes are complex and that effective solutions often require pay increases but also that these need to be part of a wider package of reform. A deal struck in Scotland between the authorities and the teaching unions (the 2001 Teaching Agreement) has some similarity with New Horizon. It also combined substantial pay increases with other reforms, including increased training commitments, and these are thought to have played a key role in a subsequent increase in teacher-training enrolment (OECD, 2007b).

The New Horizon programme was made compulsory for all primary and lower secondary schools for the first time in the 2009-10 school year; for the previous two years participation was based on a majority decision by teachers within each school. Official assessment of New Horizon is being conducted by the National Authority for Measurement and Evaluation in Education (RAMA) using performance data, questionnaires and in-school observers.

The authorities are looking to achieve similar reform in upper-secondary education and as of late 2009 had recommenced negotiations with the relevant teaching union (the High School Teachers' Organisation). Previous talks did not get far; the union claimed that the New Horizon deal was not attractive to its members because of the increased hours and loss of some pay supplements. As a result, small-group teaching programmes in upper-secondary schools have to date been limited to those schools where the initiatives of the early 2000s have survived and to a system of five-week summer semester classes held at dedicated study centres.

Targeted programmes focus on Arab-Israeli education

As in education systems elsewhere, a range of targeted programmes are in place to address various concerns. A substantial share of the resources targets the Arab, Druze and Bedouin populations. The latest in a series of five-year programmes targeting these groups began in 2008 (Table 3.3). In broad terms, it supports extra hours of study, rent assistance for teachers and resources for teaching equipment, such as computer labs. Investment in building new classrooms is a particular focus of current policy, as this is commonly a constraint in efforts to reduce class sizes in Arab-Israeli education. In a five-year programme running from 2007 to 2011 to build 8 000 new classrooms, 3 120 (*i.e* 39%) are designated for the Arab sector. In addition, various specific initiatives are underway to strengthen Arabic language skills, and a system of support teams for schools in need of special attention is being continued.[12] There is also a range of programmes in addition to those targeting the Arab sector. Some tackle issues that are common to education systems in many countries, such as the education of physically and mentally challenged students. Israel's menu of programmes, in addition, has a focus on gifted students.

Table 3.3. **Selected targeted programmes in compulsory education**

Programme	Detail
Five-year Plan for the Arab, Druze and Bedouin schools	Starting in 2008 this is the latest in a series of five-year programmes of support for Arab and other minorities. The programme provides additional resources for teaching and infrastructure as well as for reform to curricula and instruction. The budget is around NIS 20 million per year.
Programmes for talented students	There are several programmes for "gifted" and "high-achieving" students that provide various forms of special tuition. Figures for the 2007-08 school year indicate that around 2.5% of students (*i.e.* about 25 000) participate in the programmes. The budget is roughly NIS 8.25 million per year.
Integration programme	Support for the education of pupils with special needs in regular schools using specialised staff and equipment. The programme is funded by a 5.4% contribution from each school's state-budget transfer.
Educational and Therapeutic Intervention for Pupils with Learning Difficulties and Disabilities	Development of early identification mechanisms and operation of special programmes for pupils with learning difficulties and disabilities.
Life Skills	Promotion of emotional, social and moral development. The programme is running in about 800 schools and is initially scheduled to run until 2011.

Assessment of recent policies on mainstream education

New Horizon is a step in the right direction and should be fully implemented. Indeed, the upper-secondary education union should be encouraged to strike a similar deal. The resumption of talks with the union in late 2009 indicates positive developments on this front. Nevertheless, realising the full potential of the New Horizon and any similar reform for the upper-secondary sector will almost certainly require some fine-tuning. One risk from New Horizon is that the mechanism to enhance teacher skills through increasing training and linking it to promotion may fail. Principals may universally approve promotion because of concerns of discord with, and among, staff. Teachers' motivation for learning and applying new skills might then be weakened. In this regard, New Horizon's exclusion of tests for teachers (except in mathematics) in the new training system may prove to be a serious weakness, because these would provide concrete input to help principals make and justify promotion decisions.

As regards other recent reforms: extension of compulsory education and the caps on class size should be implemented as planned. Efforts to shift away from rote learning are welcome, though continued pressure for change will probably be needed for a substantial shift in learning. But the limited application of the Strauss index means that there is little account taken of socio-economic issues in resourcing, and this needs to be rectified.

Other general reforms should be considered. In particular:

- *Further measures to reduce dominance of teaching as a lifetime career.* A small-scale programme to bring professionals from other sectors into teaching has been underway since 2008, and there are other programmes to attract young teachers to the profession (see Box 3.2). These promising approaches should be exploited further as a means of widening the pool of potential teachers and increasing flexibility for adjustments in the size and specialisations of the teaching profession.
- *An individual bonus for teachers linked to student performance.* The trials conducted in the early 2000s found this an effective way of raising student matriculation pass rates. Introduction of such a scheme on a permanent basis, possibly focussed on schools in deprived areas, could usefully compliment other reforms.
- *Further reform of the Bagrut system.* In light of the large share of students aiming to go on to tertiary education, the Bagrut curricula and examination results ought to do most of the work in providing information to colleges and universities for student selection. Yet the importance attached to further testing by tertiary providers implies there is room for improvement on this front. At the same time, the extension of compulsory education means Bagrut also needs to provide relevant curricula and meaningful certification to those students who do not have the capacity or inclination for tertiary study. Fulfilling such wide-ranging goals is tough, but it is likely that the existing system can be improved.

Box 3.2. **The "Academics for Teaching" initiative**

The Academics for Teaching programme began in the 2008-09 school year bringing graduate employees without teaching degrees into the teaching profession. Applicants teach in their subject area and are required to have a minimum five years' work experience. The participants undergo an intensive teacher-training programme over two semesters (with no tuition fees and a monthly allowance of NIS 2 000 per month). They then teach on a full-time basis. Participants are committed to teach for three years and, in addition to a regular teacher's salary, are paid NIS 6 000 each quarter for elementary and middle school teaching and NIS 9 000 for high school teaching. Following the three-year term, they can enrol in a master's degree course (in any subject, with fees paid by the Ministry of Education), in return for a subsequent two-year commitment. Those who leave the programme before completing either the three- or two-year teaching commitments must pay back the fees covered by the Ministry. In 2008-09, 100 graduates in English started the programme. For the 2009-10 school year, 500 graduates in mathematics and sciences were slated to enter the programme.

The Academics for Teaching programme is one of several measures aimed at attracting individuals to the teaching profession. These include efforts to: attract students with good grades into teaching (the Outstanding Achievers for Education programme); promote teaching as an interim career move following graduation (the Teach First programme); encourage those already working with youth in other contexts to become teachers (the Educational Pioneer programme); and, encourage English and science teachers to work in the periphery (the Atidim programme).

Decentralisation of the responsibility for primary and lower-secondary schooling to local government was raised by the Dovrat Committee's report and deserves further debate. In principle, legal devolution of responsibility for education, as long as it is accompanied by a meaningful devolution of policy powers, would help education reflect local preferences in education. But, given the socio-economic variation across municipalities, there would have to be significant checks against undesirable forms of diversity, such as widening gaps in school resources between Jewish and Arab streams. In any case, decentralisation of government responsibility might not be the appropriate tool. If the goal of devolution is confined to intensifying oversight of schools (rather than transferring substantial powers to determine curricula and examinations), then this could be achieved by other means; for example, with the introduction of school boards with parental participation, which at present do not feature in state supervised schools.

As regards targeted programmes, good evaluation mechanisms and policy commitment to react to both positive and negative outcomes are key. By design, the five-year plans for Arab, Druze and Bedouin undergo a degree of review upon renewal. However, other targeted programmes are typically not being subject to systematic appraisal. For instance, the programmes for gifted students have no evaluation schedules attached to them. This should be rectified with formal and independent assessment of programmes to provide guidance on how to proceed with further reform. In a welcome development, the Ministry of Education intends all new programmes to be appraised by the National Authority for Measurement and Evaluation in Education (RAMA).

And more strenuous affirmative action, in particular with regard to Arab students is needed. Targeted programmes are typically, at best, only part of the solution to problems. In particular, the wide gap in average class size between the Arab and Hebrew streams has persisted, despite programmes having been operational for some time. The system-wide reforms to education are intended to help raise participation and attainment in the Arabic-speaking communities too. In particular, the wider adoption of the Strauss Index in school funding should help considerably. Yet gaps in class size and other key dimensions of education are likely to remain and require further attention. Gauged against broad recommendations on equity in education made by OECD education experts (Field *et al.*, 2007), Israeli policy is generally "ticking the right boxes" but needs to upgrade its efforts in some areas. One recommendation in particular, the adoption of equity targets, would be one relatively simple way of helping to motivate and focus policy reform.

Difficult issues in Ultra-orthodox education

In the early 1950s, legislation was introduced that permitted the creation of "unsupervised" schools to accommodate the then small Ultra-orthodox Jewish community.[13] Haredi education certainly differs markedly from that in mainstream schools. For boys, religious study is paramount, and "secular" subjects (such as science, mathematics, English language) are covered lightly or not at all. Boys are often educated in boarding schools, and the majority continue full-time religious study as adults in *kolel* (Table 3.4). Girls' schools typically devote more time to secular subjects, tying in with a common arrangement among Ultra-orthodox families of women being the sole breadwinners (see Chapters 1 and 4). There are two main networks of schools, the Ma'ayan Torah Education System (founded by the political party Shas) and the Independent Education System (founded by the political party Agudat Yisrael). Schools are often partially funded

Table 3.4. **The structure of Ultra-orthodox education**

Education for boys (and men)	Education for girls
Kindergarten up to age 5	Kindergarten up to age 5
Primary education, age 6-12	Primary education, age 6-12
"Little *yeshiva*", age 13-16 (often in boarding schools)	Secondary school (*beit yaakovs*), age 13-17
"Higher *yeshiva*", age 17 until marriage (usually in boarding school)	
Kolel for married men	

by private contributions and typically receive at least one channel of central- or local-government funding.

Few Ultra-orthodox boys go into "secular" tertiary education, and tertiary participation among girls is well below that of the mainstream population, though it is increasing. Although a large share of girls take some form of final exam, relatively few enter tertiary education, and those that do typically attend teacher-training colleges.[14] However, over recent years special tracks for vocational training and special tertiary education institutions have been established for the Ultra-orthodox sector. The number of students attending the tertiary education institutions, public and private, has risen from 500 initially to 2 000 in the last few years (Mivhar and Hamichlala Leyerushala'im), with a further 1 300 students at the private Ultra-orthodox campuses (Ono and Lev).

Participation in the testing of student abilities and other information-gathering on inputs and outputs in education should be more strongly encouraged. At present, policymakers lack key statistical information on Ultra-orthodox education. Reflecting a wider reluctance among the community to participate in socio-economic surveys (see Chapter 1), details on curricula and comparable data on student performance are scant. Some of the schools participate in the Meitzav tests as part of conditions for the receipt of state funding (see below), but for unknown reasons only the results of tests conducted in the 2003-04 school year have been published. Also, the boys' schools sampled for PISA testing have so far refused to participate. Interestingly, the available evidence, albeit partial, suggests at least some schools are providing core skills. The average scores for the Grade 5 students in the 2003-04 Meitzav tests were higher than those for both the State and State-religious streams (though students were tested at the end of the school year, while mainstream others were tested at the beginning). Similarly, the PISA results for Haredi girls are reasonable. In the 2006 study, nine out of the eleven girls' schools sampled took part, producing 245 test results. The average scores were in line with those in the State and State-religious sectors.[15] Some claim that the intensive study of religious texts trains mental capacities that compensate for the absence or only light coverage of secular subjects. While this may well be true to a degree, how Haredi students truly compare with those in the supervised streams is essentially a mystery that can be reliably resolved only by comparable test results that properly represent the sector as a whole.

Public funding of Ultra-orthodox schools is complex. Similar to mainstream schools, the Ministry of Education provides grants for teaching services and infrastructure, as well as support for transport services for school children. Also, as in other streams of education, municipalities often provide additional funding. However, the Ultra-orthodox schools also receive funds from the Ministry of Religious Affairs, which in addition provides modest stipends for adult students. In the case of boarding schools, the Ministry of Social Affairs also provides some resources to schools (Shiffer, 1999).

Linkage between the provision of funds and curriculum coverage or other pedagogic criteria is weak, even in the case of grants for teaching services. In primary schools, a welcome reform (the "core curriculum scheme") saw the introduction of curricular obligations and requirements to participate in national testing (see Table 3.5).[16] However, the Ministry of Education employs only 13 inspectors for overseeing whether these conditions are met in the 600 or so Ultra-orthodox primary schools and relies heavily on self-reporting. In secondary schools, similar strengthening of official obligations was due to come into effect but was effectively cancelled in 2008 by legislation that exempted the Ultra-orthodox institutions (a special category of "culturally unique" schools has been created). As a result, secondary schools continue to receive 60% of the funds for recurrent spending that would be received by an equivalent mainstream school and are now officially absolved of any curricular or related requirements for their receipt. Pressures pushing for further support of Ultra-orthodox education continue. For instance in 2009 there was a failed attempt to pass legislation that would further bolster public funding by adding a requirement that local authorities top up the state funds provided to Ultra-orthodox schools.

Table 3.5. **State funding criteria for teaching grants to unsupervised primary schools**

Type of school	Key aspects of the legal obligations for the receipt of state funding	Per pupil funding as a share of equivalent state-school funding if the school does not have pre-selection	… if the school has pre-selection
Schools in the Ma'ayan Torah and Independent systems	Participation in the state's student registration system. Teaching of the full core curriculum of state education and participation in the Meitzav exams at the equivalent of Grades 5 and 8.	100	90
Other "recognised" schools	As above, except schools are bound to teach only 75% of the core curriculum.	75	65
"Exempt" schools	Schools are bound to teach 55% of the core curriculum.	55	55

Note: "Recognised" schools are under the authority of the Department for Non-Official Recognized Education; "Exempt" schools are not.

Government funding for Ultra-orthodox education should be made far more conditional on schools teaching core skills. Granted, cultural objectives appear to motivate some of the public funding for this sector (presumably reflecting societal preferences), but these should not displace the goal of ensuring school children learn core skills. As regards grants for teaching services, the enforcement of existing core-curricula conditions is seemingly the key problem in primary education, while legislation has gone in the wrong direction in secondary education. At both levels of education, the additional funds from the Ministry of Education and other bodies should also be infused with more conditionality on commitments to teaching core skills. Indeed, the authorities should consider going beyond the enforcement and strengthening of funding criteria and specify truly universal curricula requirements, *i.e.* basic minimum pedagogic standards on all schools whether in receipt of state funding or not.

In areas where schools prefer to remain fully independent (and unfunded), government support for out-of-school private-sector education and training could be considered. Reportedly, some Haredi children already attend afternoon or evening classes, for example to learn English or mathematics. State-support, for example, could be used to subsidise providers or to give vouchers to parents to help cover costs in various approved institutions.

Strengthening conditionality in funding is important, not only as a means of encouraging more attention to core skills in Ultra-orthodox education but also because current arrangements and practices set an undesirable precedent for independent education as a whole. Furthermore, ideally the conditions for state funding ought to be linked to a more comprehensive system of monitoring that considers educational outcomes as well as inputs.

Such measures need to be combined with welfare-to-work policies to adjust attitudes to employment and learning. For instance, the Light for Employment programme and the earned-income tax credit will probably have some impact on Haredi labour force participation and interest in secular learning when rolled out on a nationwide basis. As Chapter 4 points out, Ultra-orthodox communities outside Israel, such as those in Canada, the United Kingdom and the United States have comparable rates of labour force participation to the mainstream population, suggesting that a different balance between worship and work is possible for the Israeli community too. The present government is endeavouring to encourage this with a variety of initiatives, principally aimed at improving girls' employment prospects. A committee has been formed to assess the avenues for increasing the share of Ultra-orthodox girls completing Bagrut matriculation, for example some of the Szold Institute's exams may be recognised as equivalent to Bagrut. In addition, there are plans to expand the small sector of vocational and academic institutions (outside of teacher training) that largely cater for Haredi girls.

Slow progress in tertiary education reform

A dual system of universities and colleges

Higher education comprises seven relatively large "traditional" campus-based universities, one distance-learning university (which has a fairly high enrolment) and around 50 relatively small colleges, about half of which are teacher-training institutes (Table 3.6). Universities were first established in the 1920s, and the last was set up in the mid-1970s (Table 3.7). Then, a second phase of expansion began with legislation permitting teacher-training colleges to offer degrees. This was followed by a similar move for other colleges, which was accompanied by provisions allowing the establishment of fully private degree-level colleges (ten of these have so far been established). In addition, a number of foreign universities established campuses during the 1990s. As Figure 3.2 (above) shows, the colleges have absorbed the bulk of the increase in students doing degree-level courses.

Entrance to higher education is complex, depending not only on a score calculated from the Bagrut certificate but also on a separate aptitude test (the Psychometric Test) (see Box 3.1 above). A significant minority of students attend "pre-university" colleges to improve high-school grades and train for the Test. In 2006 around 11 000 individuals were enrolled in such courses; the vast majority were aged under 25. This is equivalent to around 10% of the population of Grade 12 students.[17]

Regulation of the tertiary sector is carried out by the Council for Higher Education (CHE). It is responsible for licensing institutions, accrediting courses and administering the state funding of providers, as well as long-term academic planning. The latter two functions are carried out by a subsidiary body, the Planning and Budget Committee (PBC).

Table 3.6. **Key features of tertiary education provision**

Feature	Detail
Type of providers	Seven campus universities, one distance-learning university, around 50 colleges providing degree-level courses. Around half the colleges are teacher-training institutes.
Length and type of courses	Undergraduate degree courses are typically three years in duration, with courses in some disciplines up to five years. Master's degrees are usually two years, and doctoral degrees are nominally three years but often take longer. Entry to doctoral-degree programmes usually requires a master's degree.
Quality control	All degree courses must be accredited by the Council for Higher Education (CHE).
	A quality control system has been running since 2003.
Central-government funding	Budget allocations for teaching are based on student numbers combined with caps on the number of students per institution and differential rates across subject fields. The formula for colleges differs from that applied to the universities. There are also allocations for research, based on a funding model that utilises performance indicators.
Student fees and other sources of revenue	Fixed and uniform fees for first-degree courses and similar for post-graduate studies.
Academic pay and conditions	Regulated universal basic pay scales and a rule-based system of additional benefits.
Government support for students	Implicit support *via* regulated tuition fees (fees in the open market, *i.e.* non-budgeted courses, are typically much higher).
	Two scholarship systems operate, one of which is targeted towards students from lower socio-economic backgrounds.

Table 3.7. **Key developments in tertiary education**

Period	Development
1920s-1960s	Foundation of the seven campus universities. The Technion and the Hebrew University of Jerusalem were founded in the 1920s. The remaining five institutions were established from the late 1940s to the 1960s (Bar-Ilan University, Tel-Aviv University, University of Haifa, Ben-Gurion University and the Weizmann Institute of Science).
	Establishment of the Council for Higher Education (1958).
1970 and 1980s	Establishment of the Open University (1974), and its accreditation (1980) as the eighth university and the first distance-learning institution.
	Teacher-training colleges permitted to award Bachelor of Education degrees, which raised the depth, length and formalisation of teacher training.
1990s	Legislation passed allowing degree-level courses in pre-existing state-supported colleges of higher education and allowing the establishment of fully private degree-level colleges.
	Extensions of foreign universities were established. Since 1998 these have been required to operate under the authority of the Council for Higher Education.
2000s	Substantial reduction in students' tuition fees (following recommendations of the Winograd Committee) and economies in central-government transfers to tertiary institutions (as part of widespread cutbacks in public spending) in early 2000s.
	In 2007 the Shochat Committee Report (Shochat, 2007) made recommendations for reform that would increase resources for teaching and research, partly through increased state-budget transfers but also through increasing own-revenues, notably by a hike in tuition fees. The report also recommended a range of other structural reforms.

Providers cannot teach degree-level courses without the approval of the CHE, even if fully privately funded. The Minister of Education chairs the CHE and authorises its membership, a majority of whom are representatives of tertiary providers. In overall terms, however, the Ministry of Education does not have significant expertise or influence in tertiary education policy. External quality assessment has been introduced only in recent years. In 2003 the CHE set up a system in which institutions provide self-evaluations that are cross-checked by an independent committee.

The failed 2008 reform programme (Shochat reform)

A substantive reform programme started in 2008 but ground to a halt before the end of that year. It involved a substantial hike in state-budget transfers to universities and colleges accompanied by structural reforms and measures to raise non-state revenues by the providers. The reform was based on recommendations by a special committee (the Shochat Committee) in 2007. The six-year resourcing plan outlined by the Committee included permanent increases in recurrent spending on teaching and research as well as a period of increased spending on infrastructure. According to the plan, around 60% of additional resource requirements would be funded by higher state-budget transfers and the remainder by increases in other revenues, most notably greater income from tuition fees.

The tuition-fee proposals suggested combining fee increases with new mechanisms to help defer payment until students join the workforce. The annual fee for first-year degree courses for 2009-10 is NIS 9 646 (equivalent to about USD 2 500, assuming an exchange rate of 3.8). Under the reform this would have increased by more than 50% to NIS 14 800 (*i.e.* about USD 3 900). The fee increases would be combined with a system of state-backed loans, in which students would have to pay only NIS 5 800 up front, the remainder being paid over a ten-year period after graduation. The proposal also included additional subsidised loans to help with living expenses, with repayments conditional on certain minimum income levels. Whether students saw these changes as an improvement on existing arrangements clearly depends on them valuing the new access to subsidised loans more than the increase in fees. The fact that many students are eligible for army discharge grants counts against this being the case (Box 3.3). The grants are sufficient to cover existing fee levels but probably not enough (in most cases) to cover those proposed.

The Committee made many recommendations on how the additional resources available to tertiary providers should be spent and on other issues. The main themes

Box 3.3. **Army discharge grants and student financing**

Discharge grants from military conscription complicate assessment of student financing and tuition fees. There are three types of grant:

- A conditional grant which can initially be used only to fund certain expenses, notably tuition fees, deposits on house purchase and wedding expenses. Any remaining balance of the grant is paid out in cash after five years. As of 2009, the maximum value of this grant is NIS 24 000.
- An unconditional grant based on the length of service. As of 2009 “combatants” receive NIS 235 for each month of service (up to a maximum of 32 months), “semi-combatants” receive NIS 196 and others receive NIS 157. Therefore, individuals with three years’ service would receive between about NIS 5 000 and NIS 7 000 from this grant.
- A special grant for working for a minimum of six months in certain sectors of the economy (*e.g.* tourism, construction) following discharge from the army. As of 2009 this grant is NIS 8 114.

Typically, the first two grants are sufficient to cover all tuition fees for a first degree, but this would not be the case had the Shochat Committee’s proposals for fee increases been implemented.

relevant to the education, as opposed to research, dimension of the tertiary sector are as follows:

- *Increasing distinction between universities and colleges.* For example, the report recommended limiting the number of new students going into the university sector and allowing the surplus to be absorbed by the colleges. It also underscored that colleges should focus on undergraduate teaching, with only limited capacities for research and high-level teaching. And, it recommended that there should be some mergers among colleges and that some resources should go into making those colleges located in remote areas more attractive.
- *Raising staff-student ratios but also cutting back some types of courses.* The report recommended hiring several hundred new staff to raise staff-student ratios. It also recommended shortening post-graduate studies by, for example, removing requirements for a research-based second degree as an entry to doctoral programmes. Also, the report recommended limiting the number of additional courses offered by state-funded providers in which student fees are unregulated (and relatively high) on the grounds that these are diverting resources excessively from academic teaching and research.
- *Enhancing performance-related pay and benefits for staff.* The report recommended various incentives for excellence in research and teaching in universities, a separate staff bonus system for other institutions and a special budget for encouraging poorly performing staff to take early retirement.

The recommendations were initially endorsed by the government, the CHE and providers. Accordingly, the Ministry of Finance began increasing state-budget transfers. However, the providers later backed down on their commitments, largely due to student and staff opposition to the fees and performance-related pay. Hence, the tuition-fee reform was not introduced at the beginning of the 2008-09 academic year, as envisaged and, no progress has been made in implementing any of the other reforms. This impasse also prompted a dispute between the Ministry of Finance and the tertiary institutions over the additional funds already provided.

Recommendations on reviving reform

The Shochat proposals headed in some good directions on tertiary-sector reform; hence, despite the setback, the authorities should endeavour to make progress on their implementation. Ideally, the reforms to fees and staff pay should be deeper than those in the original proposals, although the resistance to them suggests this might be difficult.

As regards tuition fees:

- Providers should be allowed greater leeway in setting fees so as to introduce variation across courses and institutions. Under the Shochat recommendations, tuition fees would remain uniform, despite the fact that the costs of providing courses and the long-run financial returns to students vary across subject areas and institutions. Other countries have successfully introduced loan-backed fee systems that give providers a degree of discretion in fixing fees. For example, in Australia institutions are free to set fees within bands set by the government that vary according to subject area.
- Under any system it is important to monitor access to tertiary education by disadvantaged groups and adjust targeted measures as appropriate. The low tertiary attainment among Arab-Israelis is all too apparent. More specific evidence shows that

the share of first-degree graduates from low-income households is disproportionately small, even accounting for differences in high-school exam grades.[18] Policy needs to counter this; financial constraints should not act as a barrier to higher education. Therefore, increases in tuition fees should be accompanied by the expansion of government support for student loans, as recommended by the Shochat Committee. Also, the authorities should reflect on the impact army discharge grants have on student financing, including whether there are appropriate parallel mechanisms for Arab-Israelis.

Similarly, staff pay and progression ought to be more transparent and flexible. The Shochat recommendations suggest some new financial rewards but do not call for altering the core of the salary system. In the current set-up, academic salaries are simultaneously rigid and complex. There are no differences in salary structures between disciplines, and increments are based on seniority. Pay supplements form an important part of total compensation but are complex and make the full value of compensation hard to compute (Table 3.8). The promotion system is also blamed by some as weakening the attractiveness of tertiary teaching and research and contributing to a "brain drain" to foreign universities. Ben-David (2007), for example, specifically criticises regulations that specify minimum periods between promotions for stifling progress through the ranks.

Table 3.8. **Supplements to basic pay for tertiary-level staff**

Supplement	Detail
A "mobility, clothing and telephones" allowance	Varies according to Grade (but not seniority). This allowance is equivalent to about 60% of the base salary of a full professor with 10 years' experience, for example.
"Criteria" and "devotion to full-time" supplements	These can each add roughly 13% to the base salary. The former is based on quantitative indicators of research output. The latter is received on condition of not receiving significant income from other sources (thus implying a 100% tax at the margin on alternative earnings for many).
"Convalescence payment"	A fixed amount with two levels, one for those with nine or more years' service and one for those with eight or less years' experience. The payment is equivalent to between 3 and 4% of base salary.
Research grant supplements	These are paid as a fixed percentage of the individual's basic pay, with the percentage linked to the size of the research grant.

Source: Ben-David (2007).

At the same time Shochat's theme of increasing the divide between universities and colleges contains some downside risks. A degree of specialisation between academic/research and more vocational roles in tertiary education is clearly desirable, and it makes sense to exploit existing distinctions to encourage this further. But sharpening the divide between universities and colleges could effectively protect poor-quality teaching and research in universities and failure to realise staff and student potential in colleges. The Shochat reforms did envisage some safeguards against this, including channels for students and staff to switch between colleges and universities; but these may have proved inadequate.

Finally, the framework for tertiary education policy should be reformed to give government greater steerage on reform. Line ministries, such as the Ministry of Education, play little role in developing policy for the tertiary sector either in terms of teaching or research, which is somewhat unusual compared with most OECD countries. In fact, any reform agenda the government may have on tertiary education appears to be pushed *via* the Ministry of Finance at present (see Chapter 2). Furthermore, according to some observers, the CHE is too closely aligned to the interests of the providers to guarantee a balanced perspective in policymaking.

Unusual components in lifelong learning

There is fairly substantial support for adult education – although much of it is somewhat atypical of "lifelong learning" elsewhere. A fairly large market of post-conscription education has developed in which individuals who have just completed military service re-take courses or complete new ones in academic or technical subjects.[19] Private fee-paying institutions cater partly for this market, but the state also provides support. Indeed, this features prominently in a list of "lifelong learning" frameworks provided by the Ministry of Education. Notably, the state funds schools (Mechinot), which help in completing or improving Bagrut certificates and provide coaching for the psychometric entrance exam. There are also programmes that cater for those still in military service. While understandable in some respects, there are downsides to this support. Opportunities for a "second bite at the cherry" are probably weakening the intensity of learning during compulsory education and serve to further widen the educational gap between Hebrew and Arab-Israeli education. The authorities need to ensure that equivalent post-school support is available for Arab students.

More conventional lifelong learning appears to be reasonably well provided for. There are state-sponsored centres for adults who wish to complete elementary or secondary education. As regards tertiary education, the distance-learning opportunity provided by the large Open University clearly lends itself to adult learning. And, according to information provided by the Ministry of Education, older adults are typically subject to lighter Bagrut and psychometric-exam requirements than regular school-leavers. Furthermore, all employees have rights to study leave, and in the public-sector the pay system rewards those completing academic degrees or courses.

Box 3.4. **Summary of recommendations on education policy**

Regular primary and secondary education (*i.e.* the supervised sector)

- Fully implement New Horizon; it is a step in the right direction. The stakeholders in upper-secondary education should be encouraged to strike a similar deal.
- As regards the other general reforms:
  - Continue implementing the extension of compulsory education and the caps on class size as planned.
  - Continue with efforts to shift away from rote learning.
  - Alter budgeting so that the Strauss index (or something similar) allocates most, or all, of education budgets.
- Consider the following additional general reforms:
  - Take further measures to reduce the dominance of teachers who teach as a lifetime career, along the lines of the recent "Academics for Teaching" programme and similar initiatives.
  - Introduce an individual a bonus for teachers linked to student performance, similar to that used in the one of the pilot projects in the early 2000s.

Box 3.4. Summary of recommendations on education policy *(cont.)*

- Pursue further reform of the Bagrut system, in particular so that it provides better information on student capabilities for entrance to tertiary education.

- Make more strenuous efforts in affirmative action, particularly as regards Arab-Israeli students:
  - Evaluate and, if necessary, reform the relevant targeted programmes.
  - Ensure general reforms also work towards reducing inequalities in education.
  - Adopt equity targets in key dimensions of inputs and outcomes in education.

Ultra-orthodox education

- Encourage the community to strengthen vocational skills as part of wider efforts to increase employment rates, particularly among men:
  - Existing curriculum requirements on grants for teaching services in primary education need to be more stringently enforced. Similar conditions should be applied to secondary schools and other sources of state funding, such as infrastructure grants. Consider introducing core curricula for all schools, *i.e.* universal curricula requirements.
  - In areas where schools choose not to accept the conditions for state funding consider subsidising optional out-of-school private-sector education and training.

Tertiary education

- Pursue the Shochat reforms. Indeed, go further on some fronts: give providers greater leeway in setting fees while ensuring access through student loans and grants. Make staff pay and progression more transparent and flexible.

Lifelong learning

- As regards special education support for conscripts, ensure that either the equivalent post-school support is also available for Arab-Israeli students.

Notes

1. Disaggregating this result by sector reveals that spending per student relative to GDP per capita in primary education is also close to the OECD average, but it is below the average for secondary education and above average in tertiary education. See OECD (2009), Table B1.4.
2. Tertiary type A and B programmes are defined under the International Classification of Education. Type A programmes are those with a minimum cumulative duration of three years' full-time equivalent and that are largely theory-based and designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements. Tertiary type B programmes are those with a minimum duration of two years full-time equivalent and a focus on practical, technical or occupational skills for direct entry into the labour market.
3. There are of course exceptions to the low pass rates in the Arab-Israeli stream. Press reports in August 2009 highlighted the case of the Arab-Israeli town of Fureidis, which had the third highest matriculation rate for the Bagrut exam across the country as a whole.
4. Israel has participated in PISA (2000 and 2006), TIMSS (1994, 1999 and 2003) and Progress in International Reading Literacy Study (PIRLS).
5. The similarity of the first- and second-generation students' PISA scores is thought to reflect particular characteristics of past waves of immigration and is being investigated by the Ministry of Education. Overall, the gap in PISA scores between immigrant students and "natives" is much smaller than in many other countries (OECD, 2007a).

6. The estimate for the number in private mainstream education was provided by the Ministry of Education. The estimate of the total number of students in the supervised streams is that projected for 2010 in the *Statistical Abstract of Israel* of the Central Bureau of Statistics, Tables 8.11 and 8.21.
7. Data on the vocational training schools can be found in the Central Bureau of Statistics, *Statistical Abstract of Israel*, 2009, Tables 8.33 and 8.34.
8. The Dovrat Committee delivered its final report in 2004. Its main recommendations included: universal pre-school education from age three and organisation of pre-schools into clusters with links to primary schools; lengthening of the school day for all students; and increased responsibilities combined with increased pay and qualification requirements for school principals.
9. Allocation based on socio-economic criteria was first introduced in 2003-04 (the Nurture Index). However, the Supreme Court ruled against it in 2006, because the formula gave more resources to Regions of National Priority, which the court judged as illegal, because their boundaries implied discrimination against the Arab-Israeli sector. See Bank of Israel (2009) for further details.
10. Detailed analysis of the trial reforms has been led by Victor Lavy (Hebrew University and University of London) typically using econometric analysis to assess their impact on student matriculation. The programmes rewarding teachers or students financially were found to be particularly effective (Lavy, 2002; Angrist and Lavy, 2004; Lavy, 2004), had a bigger impact than the small group teaching trial (Lavy and Schlosser, 2005) and were more cost effective than increasing resources to schools (Lavy, 2002). The latest research Lavy (2008) examines the impact of increasing principals' pay in the Individual Compensation Contracts programme. Although individualised incentives appeared to work well, the trials also demonstrated that some find individual incentive programmes unpalatable. Notably, the programme giving cash rewards to students was terminated early due to adverse publicity.
11. The main allowances are for "teacher coordination" (10% of gross wage), "level coordination" (5 to 7%) and a "mother's bonus" (10%).
12. Initiatives to improve native language skills among Arab students comprise new syllabuses in kindergarten and primary school, a new assessment tool for Grade 1 students and additional teaching hours in Arabic language in Grades 3 and 7.
13. The 1953 Education Law defines two types of unsupervised schools, so called "recognised" schools, over which the Ministry of Education theoretically retains some authority, and "exempt" schools, which are not subject to the legislation.
14. According to the Ministry of Education, the market for Ultra-orthodox teacher training is saturated, and the prospects of graduates getting teaching positions are often low. Thus, in many cases the individual and societal returns from this additional education are probably not high.
15. In the 2006 PISA results, the average scores for the Ultra-orthodox girls were 481 points in the reading test (1.9% higher than the average for girls in State schools), 448 points in the science test (96% of the State stream score) and 457 points in the maths test (1.3% higher than the State stream score). According to the statisticians running the Israeli PISA tests, the results for the Ultra-orthodox girls are probably representative but should be treated with some caution, because the standard error is larger than for the much bigger samples of other streams.
16. The core curriculum scheme was developed in the early 2000s following the report of a commission on school budgeting (Maoz, 2007). It developed a universal core curriculum as a basic requirement for school funding and led to the funding structure shown in Table 3.5. The core curriculum comprises four compulsory and two recommended clusters of subjects. The compulsory clusters are: heritage and social studies; language and literature (including English); mathematics and science; and physical education. The recommended clusters include fine arts and "school culture".
17. Central Bureau of Statistics, *Statistical Abstract of Israel*, 2009, Tables 8.40 and 8.23.
18. Frish and Friedman (2008) find evidence that economic considerations have a substantial effect on the decision to enter tertiary education. Their study finds that among households with less than median income, just over 40% of high-school graduates complete first degrees. Making adjustments based on the graduation data of students from higher-earning families, the study estimates that in the absence of liquidity constraints this share would be close to 50%.
19. In addition, considerable resources per student are put into integration courses for new migrants (*ulpanim*), particularly comprising compulsory courses in Hebrew.

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Chapter 4

Policy options for reducing poverty and raising employment rates

Welfare-to-work measures are a central theme of Israel's labour and social policies to tackle relative poverty, which is concentrated among the Arab-Israeli and Ultra-orthodox (Haredi) communities. Policies include pilot programmes involving private-sector job placement (the "Wisconsin" programme) and an earned-income tax credit. Also, there is increased policy attention to help parents to combine work and family through improvements to daycare and early education. Microeconomic simulations of taxes and benefits suggest room for augmenting these policies with adjustments to benefits and tax expenditures. In the labour market, hiring and firing regulations are light, while the minimum-wage is relatively high in comparison with OECD countries, but it is not strongly enforced. Poverty among pensioners is set to fall in the future with the recent introduction of mandatory second-pillar pension saving. But this reform has also raised questions about the structure of tax breaks on pensions.

High poverty and low labour utilisation are central and linked challenges for Israel's social and labour-market policy. As illustrated in Chapter 1, rates of relative poverty in the rapidly growing Arab-Israeli and Ultra-orthodox (Haredi) communities are high and largely account for Israel's very poor ranking on poverty when compared with OECD countries. Low labour utilisation is contributing to the poverty problem, and raising it is an avenue for narrowing the gap in GDP per capita with more developed economies. This chapter focuses on conventional policy issues: taxes and benefits, benefit delivery systems (including employment services), childcare, labour regulation and pensions. Policy regarding non-Israeli workers is also discussed because of its implications for the low-wage job market. Though wide ranging, these topics clearly do not cover all factors affecting poverty and employment rates. In particular, discrimination in the labour market and policies to it tackle have been the subject of OECD review elsewhere (OECD, 2010). In addition, public transport is not discussed, though many believe low service levels in peripheral areas are limiting labour mobility (this issue is touched on in Chapter 5). Recommendations are summarised in a concluding box (Box 4.4).

Ministerial responsibilities and central themes of welfare policy

The Ministry of Industry, Trade and Labor and the Ministry of Social Affairs are key players in labour-market and social policymaking (see Table 4.1). The latter is responsible for the National Insurance Institute (NII), which administers the majority of insurance and welfare payouts. However, the Ministry of Finance's unusually elevated position *vis-à-vis* line ministries (see Chapter 2) means that it too is influential in reform initiatives and takes a stringent approach to their fiscal implications. Local government plays a relatively limited role in social and labour-market policy. As in many OECD countries, local government is responsible for providing certain in-kind social services and daycare for infants. However, it plays no role whatsoever in administering cash benefits.

Table 4.1. **The allocation of responsibilities in social and labour market policies among line ministries and other bodies**

Body	Responsibilities
Ministry of Industry, Trade and Labor	Labour inspectorate
	Active labour-market programmes (including the Light for Employment programme)
	Network of public employment offices (the Employment Service)
	Foreign and cross-border worker permits
Ministry of Social Affairs	In-kind social services
	Oversight of the National Insurance Institute (NII)
National Insurance Institute (NII)	Financial management of insurance contributions, outlays and balances.
	Disbursement of most cash benefits *via* a network of directly operated offices. The cash benefits covered include unemployment benefit, social assistance, disability benefit, child allowances, maternity leave and first-pillar pensions.
Ministry of Housing and Construction	Public housing, rent subsidies and mortgage assistance
Local authorities	Provision of in-kind social services
	Provision of daycare for infants

"Welfare to work" has been the central *leitmotif* of Israeli labour market and social policy for some years now, in line with thinking in OECD countries. This has included:

- *Use of contracted private-sector placement services* in which receipt of benefit is contingent on participation in full-time training (currently called the Light for Employment programme, widely known as the Wisconsin programme). These services have been operating in four areas of the country since 2005. Roll-out to the rest of the country is planned.
- *Sticks and carrots in benefit amounts and personal-income taxation for low-income households*. There were significant welfare cuts in the early 2000s. These were largely driven by specific budgetary problems at that time but also tied in with a philosophy that reducing benefits would increase labour-market participation. In terms of positive incentives, a pilot earned-income tax credit (EITC) was introduced in 2008 in the same areas of the country as the private-placement services. Country wide roll-out is planned here too.
- *Measures to induce more Israelis to enter low-wage sectors traditionally dominated by non-Israeli workers* (about three-quarters of which are now foreign workers from outside the Middle East and one-quarter are cross-border workers). Wage subsidies form one arm of this strategy, reduction in the supply of foreign workers the other.

Assessing the policy options regarding taxes and benefits

Key elements of taxes and benefits for those on low incomes

Tax and social-security deductions from gross pay for those on low incomes are modest, and the pilot EITC scheme means some low-income earners are net recipients, rather than payers, of income tax:

- Taxation on low-wage earners is light. The income tax schedule starts at 10%, which is in combination with "wasteable" tax credits (*i.e.* reductions in tax payable, but with no compensation if the credit is larger than the individual's tax bill). Indeed, low-income earners often pay no income tax at all. Unusually, female earners get more credit than men (the credit is 22% higher), and the credits for children (see Table 4.2) may be claimed only by women (except in the case of lone parents).
- Social-security contributions by employees are modest for low earners, with a rate of 3.5% applying to earnings up to 60% of the average wage. The rate is then 12%, and at high earnings levels an absolute contribution ceiling applies. The corresponding employers' contribution rates are 3.85 and 5.43%.
- The pilot EITC scheme targets families with children and those aged over 55 and principally aims to raise the incomes of working households vulnerable to poverty. There are two schedules, the more generous of which applies to those with three or more children. Both schedules start below the full-time minimum wage (thus making part-time earners eligible), reach a maximum value around the full-time minimum wage and are subsequently phased out. Applicants submit claims to the Tax Authority via the post office, and the payout is quarterly and based on declared income from earnings in the previous tax year.

Welfare and insurance benefits include means-tested social assistance, various insurance-based benefits (notably unemployment insurance and paid maternity leave),

Table 4.2. **Key unemployment and social benefits**

Item	Notable features	Indicative 2009 value, NIS per month
Memorandum item	Average gross monthly wage	NIS 3 850
	General cash support	
Unemployment insurance benefit	Payout is according to a schedule of declining rates from 80 to 45% of previous earnings (60 to 35% for those aged under 28). In addition, there are benefit ceilings. Maximum duration ranges from 50 to 175 days according to age and number of dependents. Subject to regular income tax, but a special low UI contribution rate is applied. Those taking up "unsuitable work" can receive UI as an in-work benefit.	
Income support	Eligibility is means tested and employment tested. Notably, in the means test, ownership of a car generally removes eligibility. Support increases with household size, but not beyond two children. Support can be given when the family has income from other sources (including earnings), subject to means testing. There are modest earnings disregards, and, with earnings above these levels, benefits are withdrawn at rates ranging from 62.5 to 70%.	NIS 2 574 for a couple with two or more children.
	Tax support	
Wasteable tax credits	Credit points system with a universal component, additional credit for women and a per-child credit, which is applied to the woman's earned income (and men if they are a lone parent). Women also receive an additional tax allowance. The credits mean that large numbers of earners, particularly women with children, do not pay personal income tax.	Each universal credit is worth NIS 189
Earned-income tax credit (EITC)	Applies to households with one or more children and those aged 55 and over. The credit is higher for those with three or more children.	Maximum credit for a family with one or two children NIS 290 (NIS 420 for three or more children)
	Programmes exclusively for families	
Paid maternity leave and birth grants	Conditional on NI contributions for 10 of the last 14 months (or 15 out of preceding 22 months) preceding due date. Those on Income Support would normally be eligible for the hospitalisation grants as they pay a health-care contribution. A maternity allowance pays 100% of previous earnings for up to 14 weeks. In addition, there are one-off birth grants, which decline with number of children, hospitalisation grants and benefit for precautionary rest taken during pregnancy. Leave (and payment) can be switched to the father for up to six weeks.	
Universal child allowances	More generous allowances can apply to children born before May 2003, depending on birth order. Benefits for the second to fourth child are being increased in series of hikes due to end in 2012. Those on Income Support receive additional allowances equal to 70% of regular child benefit for both the third and fourth children. The allowances are paid until the child reaches 18 years.	NIS 159 to 446 depending on birth order and age of child.
Study grants	Eligible groups notably include lone parents and families on Income Support with at least four children. Annual payments for when children are aged 6 to 14. The payment is lower for when children are 12-14 years.	NIS 64 or NIS 115 per child
Regulated and subsidised daycare and pre-school services	There are several systems of support [see main text].	NIS 716 (maximum possible subsidy)
Housing	Eligibility for public housing includes a requirement of three or more children, alongside a minimum number of "credit points" and income criteria. There is a system of rent assistance in which support increases with family size. Assistance also depends on the area of residence, and there is a wage ceiling for eligibility. The rates for recent immigrants differ.	NIS 1 170 per family

disability benefits and several family benefits (see Table 4.2). Notable features as regards low-income families are:

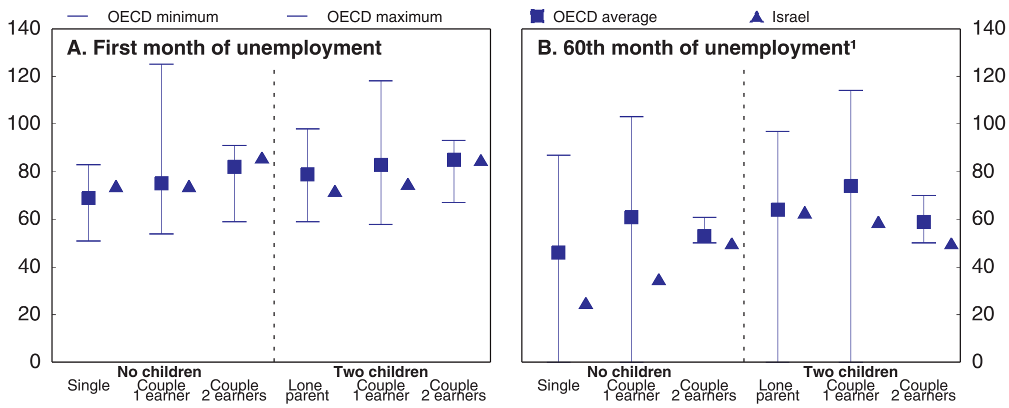
- Unemployment insurance benefit has a short duration. The monthly payout is linked to previous earnings according to two degressive scales (depending on age), and the maximum duration ranges from about 1½ to 6 months, depending on age and family situation. This benefit is therefore not a source of income for the long-term unemployed.
- The main welfare benefit (Income Support benefit) is not only means tested but also requires an employment test (this is discussed further below). It is possible to receive Income Support while earning. For example, a household with at least two children can earn up to NIS 4 673 per month and still receive some Income Support. Up to this ceiling a benefit withdrawal rate applies (62.5% in this instance), implying that, if receiving the full-time minimum wage (NIS 3 850 per month), the household is eligible for NIS 514 per month in Income Support.
- There are several channels of family support. Income Support increases only up to when a couple has two children. However, there are universal child allowances, which include increased amounts for families on welfare with three or more children. Also, there are annual "study grant" payments for families on welfare with four or more children. In addition, the housing support system includes special rules for families with three or more children.

The universal child allowances are often at the heart of debate on welfare benefit. For large families where parents are unemployed, or in low-wage jobs, these benefits form a large share of income and are therefore of particular interest to the Haredi and Arab-Israeli communities. Several changes have been made to the allowances in the 2000s. By 2003 substantial cuts had been made, and another reform in May of that year saw further change. Prior to May 2003 a single schedule applied in which the allowance for the fourth child (and subsequent children) was much higher than that those for the first three children. Then, as part of the wider welfare cuts a new single-rate allowance schedule was introduced at a level equal to that applying to the first two children. But the new schedule was applied only to those born after May 2003, which is particularly significant given the allowances are paid until children are 18 years old. No further changes to the schedule (aside from regular indexing increases) were made until 2009 when the new government began increasing the allowances for the second, third and fourth children (both for those born before 2003 and those born after). The first increases were made in July 2009, and the final one will be made in April 2012. However, even with these increases the child allowances will remain well below those provided at the beginning of the 2000s. For example, in 2000 a family with six children received NIS 3 031 per month in child allowances, while after April 2012 the total allowance will range between NIS 1 254 and NIS 1 868, depending on the number of children born before the May 2003 cut-off.

Microeconomic simulation of the finances of low-income households

International comparison of out-of-work and in-work net household incomes using micro-simulations shows Israel's system to be fairly close to the OECD average in the initial phase of unemployment but relatively less generous for long-term unemployment. Figure 4.1 shows the ratio of total net out-of-work household income to in-work income (*i.e.* the replacement rate) for six standard household types when potential earnings are two-thirds of average earnings. The ratios for Israel in the first month of unemployment are close to the OECD average for all household types (Panel A). In Israel, as in a large number of OECD countries, at this stage of unemployment, insurance-type benefit is key in bolstering the replacement rate. At the 60th month of unemployment, insurance benefit has invariably been exhausted and families rely more heavily on safety-net welfare support, where this is available (see footnote to Figure 4.1). In Israel's case the replacement rate in this scenario of long-term unemployment is substantially lower than the average OECD value for three of the household types at the 60th month of unemployment (Panel B).

Figure 4.1. **Replacement rates at two-thirds of average earnings in the standard OECD micro-simulations**



1. The microsimulations normally cover only benefits for which there is a general entitlement. For both Italy and Greece, where no broad social-assistance programmes exist, the simulations indicate that benefits are zero for some types of household at the 60th month of unemployment. Hence the minimum OECD replacement rates are zero in some cases. However, in Italy and Greece, and possibly in other countries, local authorities or sub-national governments may provide some form of cash support on a case-by-case discretionary basis.

Source: OECD, Tax-Benefit Models; see *www.oecd.org/els/social/workincentives*.

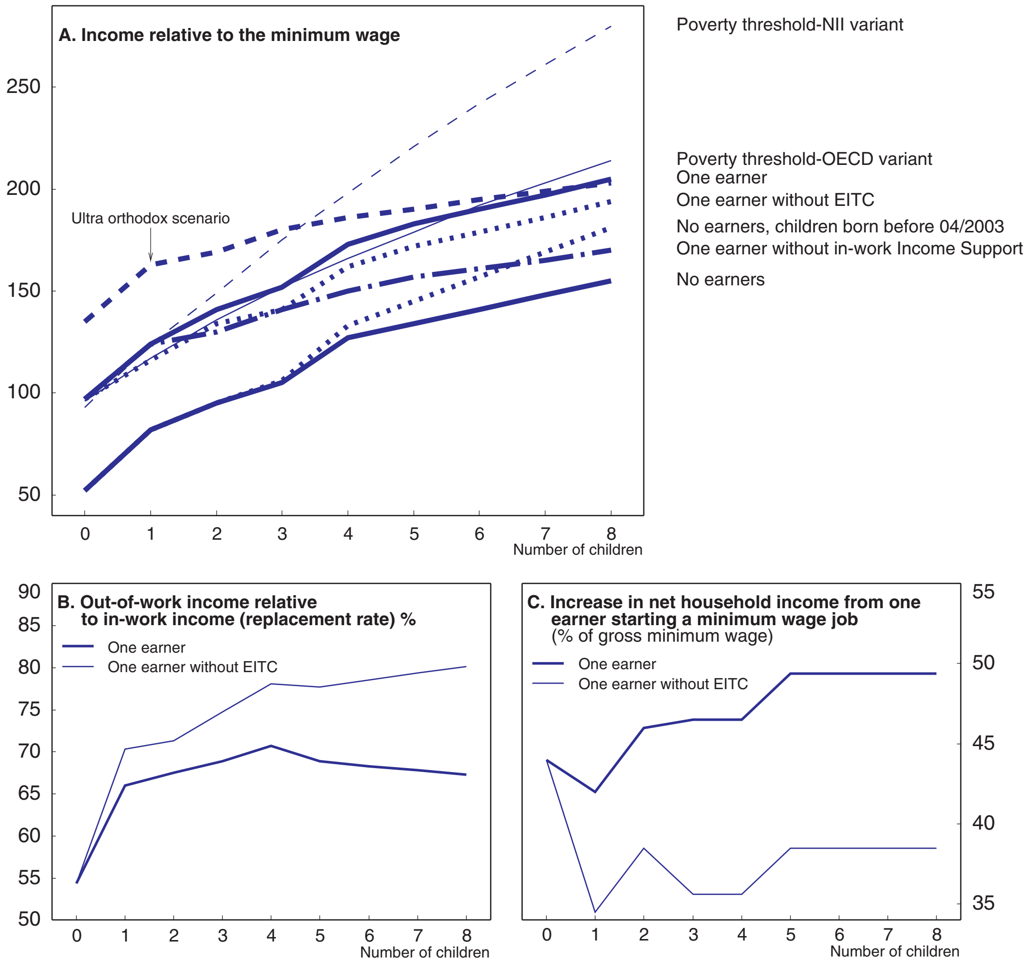
StatLink http://dx.doi.org/10.1787/775250744850

Arab-Israeli and Haredi households are often large, which has an important bearing on poverty rates. Figure 4.2 examines scenarios of in-work and transfer income for couples with up to eight children (based on tax and benefit settings in 2009). All but one of the scenarios assume all children are born after May 2003 and include the full increase in allowances currently being phased in. Therefore, the calculations represent where the system is heading, not where it is right now. It is assumed that, when earning, individuals are on the full-time minimum wage. The chart also shows the relative poverty threshold based according to the OECD's "square root" approach and that typically used by the NII (see Box 4.1). To provide a metric, values in the chart are expressed relative to the minimum wage. The results suggest the following:

- Non-working households are universally and often substantially below relative poverty thresholds, and the gap widens with family size. Net income for a couple with no children is about 50% of the minimum wage and can be as high as 180% of the minimum wage when there are eight children. However, the corresponding poverty thresholds are roughly 90 and 200% by the OECD measure and 90 and 270% by the NII measure. Furthermore, these are generous estimates of out-of-work household income because low-income households are often not eligible for Income Support (see below).

Figure 4.2. **Net household income for couples with earnings capacity at the minimum wage**

Percentage



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: OECD calculations from Central Bureau of Statistics, *Statistical Abstract of Israel*.

StatLink http://dx.doi.org/10.1787/775281138347

- Families with a single-earner on the full-time minimum wage and eligibility for Income Support are close to the OECD poverty thresholds, but typically fall well short of the NII thresholds. The EITC and in-work Income Support make an important difference. Large families who are not eligible for these fall substantially below even the OECD poverty thresholds.
- Single-earner minimum-wage Ultra-orthodox families with small numbers of children are probably better off than other single-earner households but have roughly similar net incomes when families are large. These families are typically not eligible for Income Support, because the male head of household studies full time. Ineligibility for Income Support means that in principle such households also do not receive the additional child allowances or "study grants". However, they do receive study grants of around NIS 700 per month from the Ministry of Religious Affairs. These are often boosted by private-sector grants, which typically raise income from grants to around NIS 1 500 per month (the estimate used in the calculation for Figure 4.2).

Box 4.1. **The OECD "square root" and NII measures of relative poverty**

Relative poverty thresholds are commonly calculated as half "standardised" median income. The standardisation procedure divides household income by an adjusted figure for family size that gives progressively less weight to each additional family member (conceptually allowing for overheads and economies of scale in the cost of living). However, weighting procedures differ, and this can make big differences to the thresholds:

- One approach commonly used by the OECD is to use the square root of family size. The marginal weights for each additional household member are therefore as follows: 1, 0.41, 0.32, 0.27, 0.24, etc.
- The NII uses a different weighting system; the marginal weights are 1.25, 0.75, 0.65, 0.55, 0.55, 0.45 and thereafter 0.4.

For small households, the NII and "square root" OECD approaches generate practically the same relative poverty thresholds, but the NII thresholds increase faster than the OECD ones with increasing family size. Thus, poverty rates calculated by the NII method are higher than under the "square root" method, especially for large families.

- The ratio of out-of-work income to in-work income for families with children ranges from 70 to 80% without the EITC and from 65 to 70% with EITC (Panel B). The effective "return" to one person shifting into a minimum-wage job is modest because of the withdrawal of Income Support. Without EITC, family income increases only by an amount equivalent to 35-40% of the minimum wage (Panel C). With the EITC, the return is better, but nevertheless never more than 50%. However, Israel is not exceptional in this regard. Examination of similar calculations for OECD countries reveals that the transition from unemployment to employment also often involves a fairly heavy "tax" on earnings, particularly for a move into a low-paid job. Similar to Israel, benefit withdrawal is likely to be playing a significant role.

In sum, the scenarios underscore that households without earners are very likely to be poor. At best, single-earner minimum-wage families are on the threshold of poverty. If the family is large and earnings are substantially below the full-time minimum or the family is not eligible for Income Support, then it too is likely to be below poverty thresholds. One final observation; as Box 4.1 and Figure 4.2 show, by construction standard relative poverty thresholds for large families are much higher than those of more typical family sizes in OECD countries. For example, the threshold for a couple with six children is 41% higher than that of a couple with two children under the OECD's square root approach and 63% higher according to the NII method. Even strongly "family friendly" tax-benefit systems are unlikely to make such generous provisions, and it seems very likely that large families often fall below poverty thresholds, so defined, elsewhere too.

Recommendations for tax-benefit adjustments

Tax-benefit reform can help ease poverty and strengthen welfare-to-work incentives, but it is tricky to design a combination of adjustments that do both of these things, especially without significant fiscal cost or compromise elsewhere. Raising universal benefits or introducing tax breaks does not affect work incentives too severely because both out-of-work and in-work incomes are increased. However, universality means that such measures are inefficient at targeting the poor and can therefore be expensive.

Conversely, increases in means-tested social assistance, or similar policies, target better but can compromise work incentives. Aside from these general considerations, there are some "non-starters" in the Israeli context. Because effective tax rates are already modest for low-income households, lowering the bottom end of the income-tax schedule, reducing social-security contributions for low-income workers or raising wasteable tax credits are unlikely to either relieve poverty or raise work incentives to any great degree. These avenues have therefore largely been exploited (though reportedly the government is looking into cutting social insurance contributions for low earners).

In light of these considerations and the likelihood of tight fiscal budgets for some time to come (see Chapter 2), benefit and tax adjustments must focus very tightly on the low-income households. This suggests the following approach:

- *Make more use of the EITC* ("negative income tax" in Israeli parlance, though it is not strictly that).[1] Expand coverage to the whole of the country, and consider increases in credit and increased differentiation according to the number of children. That said, vigilance regarding the take-up of the scheme is called for, as to date this has been limited. The shortfall in take-up could prove to be temporary, but permanent weaknesses may emerge. For instance, OECD (2010) suggests that it may be the case that administration of the EITC by the National Insurance Institute would be better than by the Tax Authority and Post Office, on the grounds that this body is more proximate to the low-income population.
- *Reduce the wasteable personal-income tax credits*. Reduction in the regular (*i.e.* wasteable) tax credit for earners would also focus policy on helping low-income families (especially if combined with an increase in the EITC). Parenthetically, on equity grounds the credit ought to be made available on an equal basis to men and women, *i.e.* the basic credit should be the same and the extra credits for children should claimable by either their fathers or mothers. Making this adjustment in a revenue-neutral way would probably anyway require reduction in the child credits.
- *Increase the Income Support*, and bring in new levels of benefit for families of more than two children. More generous levels of Income Support are the most direct route to reducing poverty, since it is, in principal, well targeted on both non-working and working households. Furthermore, the use of an employment test as well as a means test in judging entitlement means the benefit has a strong welfare-to-work component, especially under the Light for Employment programme (see below). The micro-simulations described above suggest that adjustments to ease the "taxation" of those with low earnings through the withdrawal of Income Support would also be beneficial to work incentives.
- *Refrain from further increases in the rates of child allowances beyond those already scheduled*; indeed, consider making economies. In the Israeli context, increasing child allowances would boost the incomes of many low-income households. But the universality of the allowance means increases also go to the less needy and do not enhance work incentives. Indeed, increases in child allowances arguably send negative welfare-to-work signals to large, low-income households. Economies in the child allowances could, for example, be made by applying the lower rates for children born after May 2003 more widely.

Creditable initiatives, but some weaknesses in benefit-delivery systems

Households' participation in the labour market is influenced not only by the straightforward financial implications of taxes and benefits but also by employment services and benefit delivery systems. These administer the benefits (including the application of eligibility criteria) and have wider responsibilities for activating the workforce and dealing with social problems. To this end such systems are usually armed with a range of activation tools.

The majority of cash benefits are processed by a network of offices run directly by the NII. For example, in the case of Income Support the offices carry out the means test, organise benefit payment and so on. However, the employment tests for Income Support (and unemployment benefit) are carried out by public employment services (the Employment Service), or by private-sector companies in those areas where the Light for Employment operates. Entitlement processes for other benefits in the NII system vary; notably, that for disability benefits involves assessment by a doctor approved by the NII and a rehabilitation officer. Benefits not run by the NII include: housing support (which is managed by the Ministry of Housing) and subsidies for childcare and early education (which are run by the Ministry of Education and the Ministry for Industry, Trade and Labor; see Table 4.1).

Stringent restrictions on car ownership in means tests

In principle, the Income Support benefit provides core financial support to low-income households, both when in and out of work. However, it is sometimes reported that certain criteria in the means test exclude otherwise deserving applicants. The fact that only 120 thousand families are recipients, while an estimated 400 thousand are below the poverty line certainly suggests there is room to expand coverage.[2] A general investigation of the coverage of Income Support should be conducted.

Rules on car ownership in the means test for Income Support are unusually strict as they generally exclude applicants if they own or even have access to a car (motorcycle ownership is acceptable). There are exceptions: the rule is waived if the applicants (or their children) are disabled, or if the vehicle is required to attend medical treatment. Also, if the applicant is working the rule can also be waived if earnings are above a certain level, the car is a relatively old model and below a certain engine capacity and if no other vehicle is owned.[3] Such stringent constraints are rare in OECD countries. To be sure, means tests for welfare benefits often have limits on the value of vehicles but typically do not rule out ownership.[4] Denying benefits because applicants have *access* to a car is unheard of. In fact, in the United States there are programmes helping those on welfare buy cars, on the grounds that this widens job opportunities. Interestingly for the Israeli context, Raphael *et al.* (2001) find that in the United States the positive effects on the employment rates are especially large for segregated minority populations. At a minimum the eligibility conditions regarding car ownership and use should be lightened, by imposing a limit only on the value of the car. Indeed, a programme that helps low-income households access automotive transport could be considered, particularly in areas with limited public transport options.

Assessment of the Employment Service and the Light for Employment Programme

The Employment Service operates along lines familiar in many OECD countries. The employees are regular civil servants and the Service is under the Ministry of Industry, Trade and Labor. Each person is dealt with by a single case officer and is required to register regularly in person. The case officer periodically arranges face-to-face meetings to discuss job opportunities, progress in applications, training options and so on. Importantly, the officers are responsible for signing off on the client's employment test and, on a discretionary basis, can impose temporary bans on benefit eligibility for transgression of rules. Use of information technologies is advanced. Most remarkably, finger-print readers are used for registration (on arrival, clients register with the readers and are informed whether they have an appointment with their case officer).

The private placement programme was initially titled the Mehalev Programme and, following alterations in 2007, the Light for Employment programme but is widely referred to as the Wisconsin Programme. Private-sector operators run the employment test for Income Support under a performance-based contract. The project started in 2005 and is being piloted in four localities (each with a separate company), which in total cover about one-fifth of the country's Income-Support beneficiaries. Individuals are transferred from the Employment Service on a non-discretionary basis with certain exemptions, notably those unemployed for a short period, mothers with infants and beneficiaries above a certain age.[5] The employment test is far more demanding than that conducted by the Employment Service. It requires following a "personal plan" of training and job search, which, at least on paper, absorbs 30 to 40 hours per week. To fund this, the operators are provided with government grants for activation and have wide discretion on their use. The operators' profits are generated from a separate payment. Initially, this attached significant weight to the savings in benefits implied from getting individuals off welfare rolls. The alterations made in 2007 resulted in job placement being given more prominence in the performance contract and the introduction of a "perseverance grant" to beneficiaries that encourages them to remain in employment.[6] However, the reforms in 2007 also excluded 45+ year-olds from compulsory participation, which practically halved the programme's client base.

Assessment by the official monitor (JDC-Myers-Brookdale Institute) has focussed on the impacts of the programme on the number of benefit recipients, employment levels and household incomes. The impacts in part stem from individuals passing from the programme into employment. But, in addition, a large share of those referred to the operators does not attend the programme, choosing to forego Income Support. Some may have already been in undeclared jobs, others are prompted into finding work and some simply decide to remain unemployed. Comparison of experimental and control groups has shown sizeable impacts on the number of beneficiaries and on employment (Box 4.2). Also, the programme increases employment from earnings. However, reduction, or complete withdrawal, of Income Support has not led to any significant positive effect on total household incomes in the comparisons made so far. That said, positive effects are likely to emerge over the longer term. As yet, neither the net fiscal implications of the programme nor the wider implications for local labour markets have been explored in any great depth.[7]

As of October 2009, there were plans to roll the programme out to the rest of the country (as early as 2011) but also to precede this with further adjustments. This is broadly welcome. Provisional proposals for adjustment include expansion of coverage up to

Box 4.2. **The impact of the Light for Employment programme**

Analysis by the official monitor of Light for Employment, the JDC-Myers-Brookdale Institute, has principally comprised comparisons between "experimental groups" in the areas where the programme operates and control groups in other parts of the country. The latest results look at the impact of the programme between November 2007 and July 2008 (National Insurance Institute, 2009):

- Over this period the experimental group's employment rate increased by 10.5 percentage points (from 41.4%), while that in the control group increased by 1.4 percentage points (also from 41.4%).
- In July 2008 59% of the experimental group were receiving Income Support, compared with 78% in the control group.
- In the experimental group, average monthly income from earnings increased by NIS 441, but income from benefit dropped, on average by NIS 447 per month.

age 60 and increased cash bonuses for participation, which seem sensible. The proposals also include some "softening" through new exit routes that would allow a person (under certain conditions) to be released from the programme. Clearly some care is needed in designing these. Too many clients may exit the programme or the operators may be able to use these routes for cream skimming.

The future role of the Employment Service needs to be clarified in advance of the programme roll out and dovetailed appropriately with contracted services. In those areas where private-sector placement operates, the Employment Service's client base is narrowed to the short-term unemployed and those beneficiaries who are exempt from Light for Employment. There may be better ways of dividing the roles of the Employment Service and private operators. Furthermore, there are potential complications. For example, if some Employment Service offices are awarded contracts under Light for Employment (such a move is being mooted), the relative merits of them having a dual role have to be considered.

Following roll out, it will be important to keep an open mind to further adjustment of the programme, as significant uncertainties remain as to its effectiveness. In particular, very close attention should be paid to competition issues. At present there is no "immediate" competition to operators and no plans to introduce it. Currently, the system relies on initial competition for the tenders backed by supervision to ensure that the contract is being fulfilled. On a day-to-day basis the operators are effectively local monopolies. This could prove to be a significant weakness in the system. Some countries have arrangements that overcome this problem. For example, in the Australian "Star Rating" system clients can choose between several approved placement services (OECD, 2010). The Israeli authorities claim that ensuring choice of provider in the Israel context would not, on balance, be beneficial, because this would reduce economies of scale in costs and service quality. While this is a plausible counter-argument, it cannot be presumed correct and should, as far as possible, be gauged in the monitoring process. Multiple-provider systems operate not only in Australia, which has a large number of remote communities, but also in Denmark (at the regional level) and in some small US states. This suggests that efficiency losses from multiple provision and other difficulties, such as ensuring provider competition in remote areas, are perhaps surmountable.

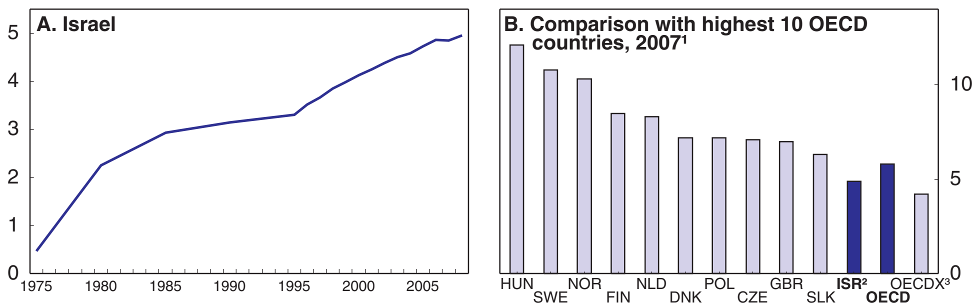
Differentiation of clients according to difficulty of placement and other criteria may also need to be strengthened. Operators are required to run four types of programme (for immigrants, disabled persons, long-term beneficiaries and "academics"). However, the activation funds given to providers do not distinguish between different client types, which is a source of potential inefficiency. If client characteristics play an increasing role in the system, then profiling processes may also need upgrading. And, the impact of absenteeism on the programme's effectiveness needs to be closely watched. Reportedly, around 30% of clients do not show up on the grounds of sickness on any given day.

Worrying trends in disability benefit

The number of working-age individuals receiving disability benefit has been increasing rapidly. There was a 30% increase in those receiving the core benefit (the "Disability Pension") between 2001 and 2007 and an even larger increase in those receiving additional benefits. The number of recipients as a share of the working-age population has been increasing rapidly since the mid-1990s and is currently 4.5% (Figure 4.3).[8] Mental impairments are the most common form of disability among prime-age recipients, and muscular and other conditions among older cohorts. Around 80% of recipients are classified as "100% incapacitated", entitling them to the maximum level of benefit, which is well above the level provided by Income Support.

Figure 4.3. **Disability benefit recipients**

As a percentage of working-age population (15-64)



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Or latest available year.
2. Israel has the 18th rank.
3. OECD average excluding top ten.

Source: National Insurance Institute Annual Survey 2008 and OECD, *Disability Database*.

StatLink http://dx.doi.org/10.1787/775282723032

Such a rapid increase in beneficiaries is worrying. Experience in OECD countries (for example, Hungary, the Netherlands and the United Kingdom) has shown that if disability benefit becomes prevalent, it becomes difficult to tighten rules for new entrants and to implement reforms that re-assess existing recipients with a view to integration in the labour market. As a result, disability benefit can end up undermining welfare-to-work policies. Although incidence of disability-benefit receipt in Israel has not reached the levels faced by some OECD countries, it could do so if recent trends continue.

In recognition of this issue, welcome reforms have recently been made that encourage disability beneficiaries to enter the labour market. Following the recommendations of the Laron Committee, more generous rules regarding employment were introduced at the beginning of 2009. In particular: those classified as permanently incapacitated will not be re-assessed if they start working; benefit withdrawal rates have been made more favourable; individuals who leave employment can return to previous disability benefit levels without re-assessment; and, recipients can opt for a new "incentive" pension.[9] To maximise effectiveness, closer attention to facilities for disabled workers may be required.

Entitlement procedures should also be examined with a view to stemming inflows to disability benefit, especially as the Laron reforms make it even more attractive relative to other benefits. The entitlement procedure comprises a first assessment by a doctor (authorised by the NII), who determines whether the person is eligible for any level of disability benefit. In a second stage, the doctor consults with a rehabilitation officer to set the degree of incapacity (and therefore the level of benefit). However, the rehabilitation officer's assessment is allowed to be influenced by other factors such as the "labour-market situation in the disabled person's area of residence".[10] The authorities should reconsider this rule and more generally the eligibility procedure. Also, a shift in the approach of medical assessment from general disability to capacity for work should be contemplated.

Increasing government support for daycare and early childhood education

Ensuring there are feasible options for parents with young children to combine work and family is important for the success of welfare-to-work strategies. Israel's relatively short period of paid maternity leave (three months) means that parents organise some form of full-time childcare from an early stage if they both continue working. This is reflected in international comparisons. Nearly 50% of infants aged under 2 years attend daycare (the OECD average is 30%), and over 90% of those aged 3 to 5 years are in early education (the OECD average is a little over 70%) (OECD, 2010).

Government support primarily comprises:

- *Daycare* (children aged three months to three years). The Ministry of Industry, Trade and Labor supervises and financially supports various NGOs (such as the Women's International Zionist Organisation (WIZO), Na'amat and Emunah) that have long been the main providers of daycare. Home-based daycare is being supported by a special programme (the Mishpachton programme). Parents' fees for daycare are regulated and subsidised according to a means test.
- *Nurseries and Kindergarten* (three to four years and five years, respectively) policy is under the Ministry of Education, while municipalities are directly responsible for provision. The Ministry sets and supervises minimum provision requirements, administers state transfers for running services, and regulates and subsidises parents' fees. Provision is flexible; municipalities can operate services directly or contract out to private-sector providers.

Welcome attention is being paid to improving services. Significant additional resources, both for infrastructure and recurrent spending, have been pumped into childcare support in recent years. And regulatory changes are underway. A law extending the number of hours of pre-school is gradually being implemented; and compulsory provision of free services for three-to-four year-olds by municipalities in Arab-Israeli localities is being introduced.[11] However, childcare services for Arab-Israeli infants warrant further attention. Only 10% of Arab-Israeli children aged 0 to 2 participate in formal care compared with 45% for the rest of the population (OECD, 2010). While this may well partly reflect differences in demand, it probably also reflects low priority on childcare facilities among the NGOs serving Arab-Israeli communities.

Also welcome are efforts to limit the impact of a controversial Supreme Court decision in 2008 that ruled in favour of a claim that childcare expenses should be tax deductible. Indeed, the Court ruled that 100% of expenses towards private childcare (such as a nanny) should be tax deductable and 63% of daycare and pre-school expenses. This could be helpful in encouraging some parents to combine work and family responsibilities. But it is highly regressive, implying potentially significant tax breaks for middle- and upper-income earners and little or no benefit to low-income households. The government has sensibly endeavoured to limit the impact of the decision by proposing a bill that would introduce a tax break for each child aged under five.

A mixed picture in labour regulation

Successful welfare-to-work policy requires labour markets conducive to absorbing typically low-qualified individuals who have either not worked for some time or who have never worked before. The volume and turnover of jobs in sectors requiring limited qualifications and experience are often strongly cyclical but are also affected by wage-setting processes and labour-market regulation. These were once set predominantly by collective agreement, but declining union influence has seen a rise in company and individual-level bargaining and greater reliance on state-sponsored regulation *via* the legislature and the courts (see Box 4.3).

Hiring and firing regulations generally fall well within the norms of developed countries and are overall less restrictive than the OECD on average. Indicators show protection of permanent workers against dismissal is slightly stronger than the OECD average, while requirements for collective dismissal and regulation of temporary employment are relatively light (Figure 4.4). In fact, the score on temporary employment would be even lower, were it not for the implementation of more stringent conditions at the beginning of 2008 (see Box 4.3). In Israel, as well as in a number of OECD countries, collective agreements provide additional conditions which are not included in the indicators used in Figure 4.4. However, information gathered during meetings conducted with employers' representatives for this *Survey* suggests that in Israel's case these additional regulations are not generally onerous. In broad terms, the absence of heavy employment-protection legislation helps "outsiders" such as the long-term unemployed get a foothold in the labour market. Nevertheless, policymakers need to be mindful of adverse behavioural reaction to regulatory changes. For example, the more stringent conditions on employment *via* temporary-work agencies are believed to be prompting a switch to self-employment contracts, which could have consequences for tax and social-security revenues.

Enforcement of the minimum wage and other labour regulation has, at least in the past, been light. A report by the State Comptroller in 2007 estimated that between 8 and 11% of employees were paid below-minimum wage rates but found that labour inspections paid scant attention to the issue and that legal follow-up on cases of abuse in general was slow.[12] Steps have been taken to strengthen labour inspection, including hiring more inspectors, improvement in IT systems and changes to processing

Box 4.3. **Industrial relations in Israel**

Wage setting and labour regulation began shifting away from a corporatist system in the mid-1980s as part of the wider move to a more market-oriented economy (see Chapter 1). Prior to this, the vast majority of employees were members of a single union body, Histadrut, and non-members were typically covered by extension through collective-agreement rules. The fall-off in union membership and coverage has been greatest in the private sector. The decline has been partly driven by the compositional shift in employment away from sectors with strong union membership but also by employers opting out of the collective-agreement system. Legislative reform has also played an important role. Notably, health insurance funds were separated from the unions in the mid-1990s, and new regulations ensured access to medical insurance, regardless of union membership. A survey conducted in 2006 revealed that only about one third of all employees were union members, with coverage of collective agreements at around 55% (Cohen *et al.*, 2007). In recent years Histadrut and the main employers' representative bodies (the Manufacturers' Association of Israel and the Federation of Israeli Economic Organizations) have increasingly presented a common front on key issues.

Nevertheless, centralised wage setting and regulation *via* collective agreements remain important. Industrial relations in the public sector remain strongly centralised and annual increases highly uniform. For instance, in 2008 Histadrut signed an agreement with the government for an increase of 5% in three stages between November 2008 and December 2009, which the union successfully defended in negotiations over the draft 2009/10 budget. Collective agreement over non-wage issues also remains important. For example, the introduction of mandatory second-pillar pensions (see below) was made *via* collective agreement, not government legislation.

Declining union influence over the 1990s saw growth in employment *via* temporary-work agencies (both in government and the private sector).* This process undermined the collective agreements, providing greater flexibility without reforms to the agreements themselves. There was no specific regulation until 1996 when new legislation included a rule that agency employees working beyond three years in the same establishment would have the same rights as regular employees. Additional regulations have been added through collective agreements. In 2000 a law was passed that agency workers would have the same rights as those working directly for the same employer and that an employee of an agency cannot be employed with any user firm for more than nine months. The latter rule was, however, not implemented until January 2008.

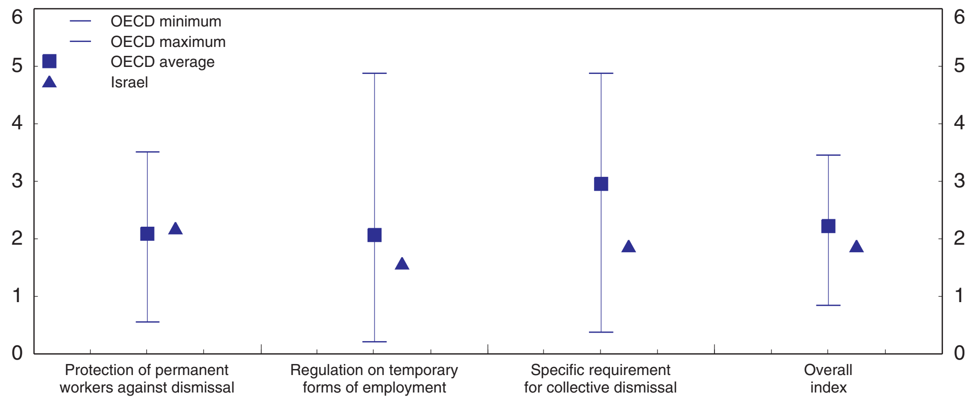
* One estimate is that, by the end of the 1990s, around 5% of employees worked for temporary-work agencies, a large share of which for government. Unfortunately, more recent estimates are not available (OECD, 2010).

procedures. It is too early to gauge the full impact of these measures, though OECD (2010) suggests that more measures may well be required. For instance, international comparison shows the number of employees per inspector is still high. Some argue that minimum-wage enforcement is particularly difficult in some segments of the Israeli labour market, for instance due to intra-family employment and distrust of the authorities among the Arab-Israeli population. This suggests that enforcement efforts may have to be rather more intense than elsewhere to achieve results.

At the same time, the ratio of the minimum wage to the average wage is worryingly high. Minimum-wage legislation sets a floor to the ratio of the minimum to the average gross wage. For example, a floor of 47.5% applies to all those aged 18 or above (lower floors

Figure 4.4. **Employment protection in OECD and Israel, 2008**[1]

Scale from 0 (least restrictions) to 6 (most restrictions)



1. Horizontal bars represent the minimum and maximum score in OECD countries.

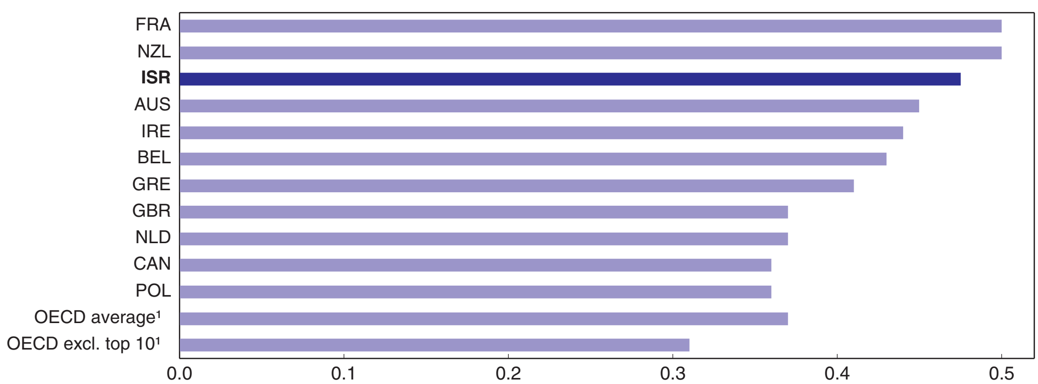
Source: OECD Indicators on Employment Protection.

StatLink http://dx.doi.org/10.1787/775342455638

apply to younger workers).[13, 14] This is very high compared with the equivalent ratios in most OECD countries (Figure 4.5). It is likely the floor is curtailing demand for low-productivity workers. There are also better mechanisms for ensuring a decent living standard for workers, not least because the statutes anyway are widely ignored. In light of this, some erosion over time in the minimum wage relative to average earnings should be considered, especially if enforcement activity is ramped up further. An increase in Income Support (that would also increase in-work benefit in the case of low-earning households) and/or a larger EITC, as suggested above, could be used to guard against an increase in-work poverty.

Figure 4.5. **Ratio of minimum to mean wage**

Comparison of Israel with highest ten OECD countries, 2008



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Nineteen countries available for OECD average.

Source: *http://dotstat.oecd.org/wbos/Index.aspx.*

StatLink http://dx.doi.org/10.1787/775354005022

Policy towards non-Israeli workers and the poverty issue

Non-Israeli workers account for a significant share of employment. Employers have become accustomed to low-wage labour on temporary work permits, particularly in agriculture and construction. Also, a large number of non-Israelis are employed as domestic carers for the elderly and disabled, many *via* a scheme for long-term care (OECD, 2010).[15] In past decades these workers came mainly from the West Bank and Gaza Strip.[16] Security issues restricting the number of permits created inconveniences in cross-border employment and led to a widening of channels for workers from further afield. For instance, Thai workers have become common in agriculture, Chinese in construction and Filipinos in households. Permits for these workers are administered by separate systems for each sector (quota systems operate in agriculture and construction but not for domestic carers).[17] Despite efforts to tightly control flows, many foreign workers do not have valid employment permits. As of 2008, estimates suggest that non-Israelis accounted for nearly 12% of business-sector employees, comprising one quarter cross-border workers, another quarter reported foreign workers and half unreported foreign workers (Bank of Israel, 2009).

The presence of large communities of poor Israeli households with weak earnings capacity certainly implies that non-nationals in low-wage jobs may be substituting for local labour. In-depth research confirms this. Analysis of non-Israeli employment by the OECD's Directorate for Employment, Labour and Social Affairs discusses a number of papers that find a negative effect on Israeli participation rates from the presence of non-Israeli workers (OECD, 2010). Hence, in the Israeli context there appears to be a policy trade-off between the economic benefits of cheap imported low-skilled labour and costs in terms of undesirable socio-economic outcomes.

The number of foreign workers in the domestic-care sector continues to rise, but the number of foreign workers in construction and agriculture has to some extent been contained. In construction the number of foreign-worker permit holders has fallen substantially since peaking in the mid-1990s, according to official statistics. In an agreement with employers, the present government envisages there being no foreign-worker permits in this sector by 2012. In agriculture the number of foreign-worker permit holders has stabilised in recent years, and an agreement with farmers will, in principle, bring some decline in the future. However, it remains to be seen whether these goals will be achieved; similar efforts by previous governments were often compromised by successful lobbying by employer organisations. Also echoing previous administrations, the government has proposed mechanisms for making it more attractive to employ Israelis. There is a pilot programme to grant households more hours of subsidised long-term care if they hire an Israeli worker, in addition to plans to boost vocational training for Israelis in construction and to set up a pilot programme (for about 300 workers) in agriculture.

Employers' preference for non-Israeli workers in some sectors lies partly in straightforward gross labour costs, but there are additional incentives. Non-Israeli workers are reportedly often willing to work longer hours than Israeli workers and under conditions that fall below regulated standards. Employers also have monopsony powers over permit workers, and some profit from "visa floating". As in some other countries' visa systems, a market for work permits has developed that allows employers and intermediaries to extract rents from the permits. It is believed that this is particularly prevalent in permits for foreign workers and that it is one factor causing employers to prefer foreign workers over their cross-border counterparts, as well as over nationals.

These considerations further amplify the need for rigorous enforcement of labour law. In addition, measures to tackle rent-taking could also prove useful in putting the employment of Israelis on a more equal footing with that of non-Israelis. Furthermore, positive discrimination in favour of Israeli workers *via* "labour-market tests" could be exploited. Such measures are preferable to wage subsidies in that they do not involve direct fiscal outlays. They might also be easier to implement than cuts in permit numbers because it is harder for employers to argue against them. That said, tighter enforcement of labour regulation and permit rules might drive up undocumented and clandestine employment; any such reactions should obviously be closely monitored.

Policy options for reducing poverty among retirees

Poverty in retirement is relatively high: around one quarter of households headed by those aged 65 and over fall below the relative poverty threshold. Part of the solution lies in reducing poverty and increasing employment rates among those of working age, thus providing more scope to save for retirement and reducing the risk of poverty for retirees living in extended family situations.[18] But policy on pensions obviously also plays a role in providing transfers to those in retirement as well as tax incentives and regulations that guide long-term savings.

Key features of the pension system

Until recently, only the first pillar of the pension system provided universal coverage. It comprises an insurance pension combined with means-tested income support under the same system as that for working-age households described above (though in this instance it is called the Income Supplement). Men are eligible for the pension at age 67 and women currently at age 62 (see Table 4.3). The vast majority of those reaching retirement age (insured or otherwise) are eligible for the insurance pension; among households headed by those aged 65 or above, around 90% currently receive the NII pension (Bank of Israel, 2008a).

The second pillar of the pension system has undergone significant reform over the past 15 years or so with a shift from occupational defined-benefit schemes (that had proved financially unsustainable) into defined-contribution schemes with a choice of provider. The second pillar has three key elements (see Table 4.3 for further detail):

- *Occupational defined-benefit pensions* (Old Pension Funds). These are being wound down (new members have not been allowed since 1995) but will nevertheless account for a significant share of pensioner incomes for some time to come.[19]
- *Defined-contribution pensions with the private sector* (New Pension Funds). This sector has expanded significantly with the closure of the defined-benefit funds. In January 2008 mandatory contribution rates to these funds were introduced for earnings up to the average gross wage under an agreement struck between unions and employers.
- *Tax advantages in the contribution and accumulation of long-term savings and in annuity payouts*. The tax advantages apply not only to traditional pension products but also life-insurance products and savings in so-called provident funds.[20] In fact, the breadth of pension products contributes to concerns that many households find it difficult to make

Table 4.3. **Key features of first- and second-pillar pensions**

	First pillar
Retirement age	A schedule increasing the ages of entitlement to the NII pension retirement began in 2004 with increases from 65 to 67 years for men and from 60 to 64 years for women. Men's retirement age reached 67 years in 2009, while women's is 62 years and not due to reach 64 years until 2017. There are limits on earnings while in receipt of pension up to age 70 for men and age 67 for women (this is being increased to age 70).
Contributions	Total mandatory employee and employer contributions to the NII have several components, including one for pensions. The NII's accounts are fungible in this regard, and the amount of contribution has no bearing on the pension payout.
Coverage	Practically universal. Exceptions include immigrants who arrived in Israel when over the age of 60 who are covered by a special arrangement.
Payout	Payouts vary according to household composition. For example, as of 2009 the pension for a single person is NIS 1 268 per month and for a couple NIS 1 906.
	A seniority increment increases the pension by 2% for each year of full insurance after the first 10 years of insurance (with a ceiling on the total increment of 50% of the pension). Thus, for instance, the pension for a single person with 35 years of full contribution is NIS 1 902 and for a couple it is NIS 2 858.
Income Supplement	The income-support system guarantees minimum income levels subject to means testing. As of 2009, for example, single persons under the age of 80 are guaranteed NIS 2 368 and couples NIS 3 511.
Deductions	A deduction for medical insurance is made on the basic pension (which is lower if the individual is eligible for the Income Supplement).
	Second pillar
Contributions	As of January 2008, mandatory contributions have applied to employees earning up to the average gross wage. Initially the rates were 2.5% but are undergoing stepped increases and will reach 15% (5% from employees and 10% from employers) by 2013. Five percentage points of the contribution also serves as severance insurance.
	Non-mandatory pension fund contributions to the new pension funds typically range between 5 and 5.5% for employees.
Tax incentives	Tax incentives not only apply to "regular" pension products but also to saving *via* life-insurance and so-called provident fund products.
	Employer contributions are not counted in employees' taxable income (with a ceiling).
	Employee contributions are subject to a 35% (wasteable) tax credit (with a ceiling).
	Returns on pension saving are not taxed.
	Payouts (annuities) are taxed according to regular income-tax rules except there is: *a*) a tax credit of 35% on the annuity (with a ceiling equal to about 30% of the average wage); and, *b*) an additional "credit point" (worth NIS 197 per month in 2009) if one's spouse does not work and has no pension.
Other dimensions	Tax incentives generally guide the retirement age (or equivalent) in long-term saving products. But there are some regulations too. For example, provident fund savings can be withdrawn only at age 60 or above.
	Defined-contribution pensions include insurance for severance pay, withdrawal of which affects the pension payout.
	As of January 2008, pensioners must redeem their pension on a monthly annuitised basis (and not, for example, make capital withdrawals), unless the person already has a monthly income of at least NIS 4 000 (*i.e.* about 60% of the average wage).
	In 2008, the tax treatment of long-term saving products was made the same and portability provisions for switches between them introduced (in the past unions or employers often chose the savings vehicle).

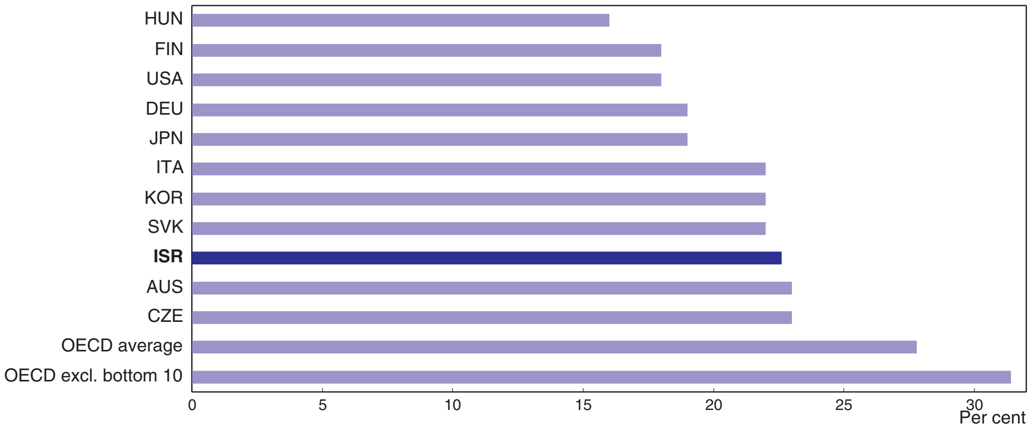
informed choices and that it is too easy for those selling long-term savings products to mislead them.[21]

Benchmarking the first-pillar pension

When measured relative to the gross average wage, the first pillar of the pension system is less generous than that in many OECD countries. Standardised calculations of gross pension replacement rates show that, even with the Income Supplement, Israel ranks alongside the lowest ten in the OECD (Figure 4.6) with a replacement rate of 22% compared with an OECD average of 28%. This comparison of course does not reflect the "generosity" of pension systems as a whole because many countries also have mandatory second-pillar pensions, and Israel itself now falls into this group (this is discussed further below).

Figure 4.6. **Total first tier of pensions as a percentage of average wage**

Comparison of Israel with bottom ten OECD countries, 2006



Source: OECD, *Pensions at a Glance 2009*.

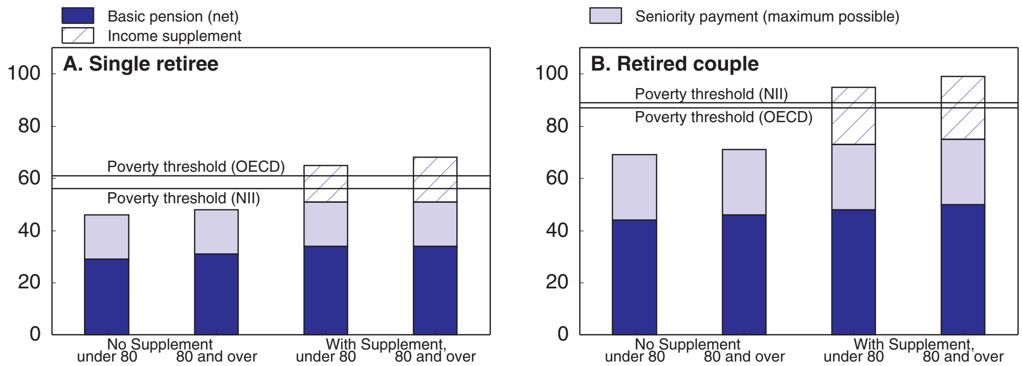
StatLink http://dx.doi.org/10.1787/775421532754

However, in relation to poverty thresholds, the first pillar of the pension system ensures, in principle, adequate support for retired single people and couples. The basic pension is very modest, but top-ups from seniority payments and/or the Income Supplement can bring income close to or above the thresholds. For example, among single retirees aged under 80, the net basic pension is equivalent to 28% of the minimum wage, while the poverty threshold is estimated to be equivalent to 61% under the OECD method and 56% under the NII method (see Figure 4.7). The seniority payment can raise the pension to up to 44% of the minimum wage. And, if eligible for the Income Supplement, the retiree is guaranteed an income equivalent to 61% of the minimum wage which puts them at or above the estimated poverty thresholds. The results are qualitatively the same for those aged over 80 and for retired couples.

However, echoing Income Support, only a small share of retirees is eligible for the Income Supplement, and the seniority payment is typically modest. For instance, in 2007 only 16% of those receiving regular state pensions received the Income Supplement, though this figure is higher once special arrangements targeting older immigrants are taken into account.[22] As for working-age households, it is likely that the eligibility conditions are in some way limiting access to means-tested benefits for retirees in similar ways to other households (see above). Limited access to Income Supplement implies greater reliance on the basic pension and seniority payments. But the latter are typically smaller than shown in Figure 4.7, which shows maximum possible values. For example, in 2007 for four out of five pension recipients the seniority payment was worth on average only 29% of the basic pension (compared with the maximum possible of 50% after 35 years of contributions).

Figure 4.7. **The insurance pension and income supplement**

As percentage of gross minimum wage in relation to poverty thresholds[1]



1. A deduction for medical insurance applies to the basic pension which is lower if the person is eligible for the Income Supplement. Data refer to 2009 values. The poverty thresholds are based on the latest available thresholds (2005 for OECD measure and 2006 for NII measures).

Source: OECD calculation based on data from the National Insurance Institute.

StatLink http://dx.doi.org/10.1787/775424748827

The above suggests that measures to stem poverty using the first-pillar pension should focus on widening access to the Income Supplement, rather than increases in the universal component of the pension, which could prove costly. The Income Supplement itself appears to guarantee incomes close to poverty thresholds, so that large increases in generosity do not appear necessary.

As regards other dimensions of the first-pillar pension, the retirement ages are particularly remarkable. As Table 4.3 notes, the age at which men can first access the state pension has been increased to 67 years, which is ahead of developments in many OECD countries. Women's retirement age is currently 62 years. While it is being increased, the schedule will bring it only to 64 years by 2017 (a rate of increase around three months per year). This is a reasonable pace of increase, but the process should be extended beyond 2017 so as to eventually equalise women's and men's retirement ages.

The implications of mandatory second-pillar pension savings

Introduction of the new mandatory contributions in January 2008 *via* a formal agreement between employers and unions implies the share of retirees with income from a defined-contribution pension fund is set to rise sharply; currently only around half of households headed by retirees have income from a second-pillar pension fund (Bank of Israel, 2008a). However, the full impact on pension payouts will take time because the compulsory contribution rates are initially small (see Table 4.3), and those approaching retirement who were prompted into starting pension plans by the agreement will initially have only short contribution periods.

A weather eye should be kept on compliance with the agreement, adverse behavioural reactions and its impact on coverage among households in general. There is a risk of low compliance; employees and employers may see advantages in avoiding the regulation. Indeed, it is believed that certain details in the agreement might prompt employers into undesirable employment practices: rotating employees to avoid contributions or shifting to self-employment contracts.[23] These, and other factors, could detract from the agreement's coverage.

During the phase-in of the mandatory savings, the outcomes for older workers should be closely monitored with a view to granting temporary exemptions. Phase-in of the agreement makes no exceptions for older workers, which is unusual. When similar schemes have been introduced elsewhere, concerns about risk on market returns from short contribution periods and disproportionate overheads in management fees have led policy designers to exempt employees above a certain age. Contributions are initially small in the Israeli case, so that the financial commitment will not be large for those close to retirement. But this also means possibly trivial payouts, with the risk of poor effective rates of return once administrative costs are taken into account.

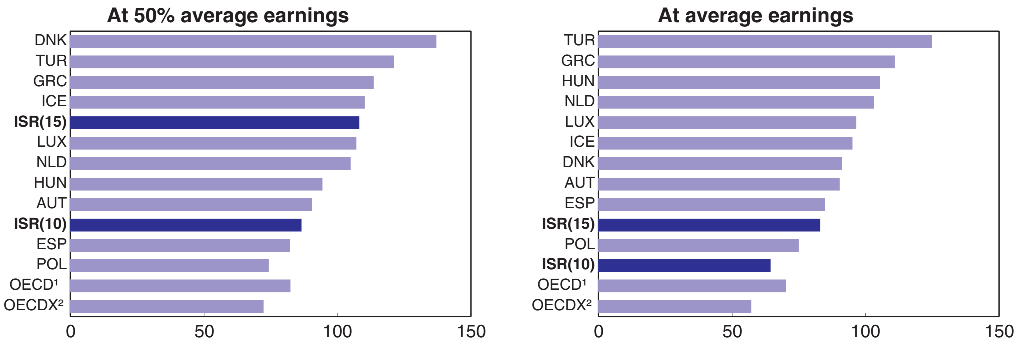
Once the agreement's effects have fully worked through, the value of mandated pensions in relation to previous earnings will be much higher than at present. By 2013 the mandated contribution is scheduled to reach 15% of the gross wage (capped at the average wage; see Table 4.3), which is high compared to similar systems elsewhere. For example, Australia's rate is 9%, Hungary's 8% and the Slovak Republic's 9% (OECD, 2009). That said, 5 percentage points of the Israeli contribution also serves as severance-pay insurance, and so an individual might get a pension payout based only on a 10% contribution rate if the insurance is fully utilised. To illustrate the implications of the mandatory saving, Figure 4.8 simulates the net pension replacement rate for males starting full-time careers at age 20 and compares this with the equivalent calculation for OECD countries (the calculations factor in other forms of pension income as well as that from mandatory defined-contribution schemes). Assuming a contribution rate of 15% implies a replacement rate of 108% at half of the average wage and 83% at the average wage. Assuming a 10% contribution rate lowers these figures to 87 and 47%, respectively. Certainly, at a 15% contribution rate, these replacement rates are high compared with those in many OECD countries, particularly for low-wage earners. On this basis, the contribution rate would appear too high. But, as pointed out below, vulnerable groups in the Israeli context are likely to accumulate particularly short contribution periods, a point that is also raised in analysis by the Bank of Israel (Bank of Israel, 2008b). Unlike in the Bank's analysis, however, the evidence here suggests that future evaluation should not look toward raising the contribution rate beyond 15%.

For low-income households, the net benefit of the agreement is uncertain. Similar to seniority payments in the first-pillar pension, Arab-Israeli and Haredi households are likely to accumulate far fewer contribution years than assumed in the simulations for Figure 4.8. Also, they are quite likely to use the severance insurance. Furthermore, for those eligible for the Income Supplement in retirement, the effective return to second-pillar saving is lowered because income from the mandated pensions will reduce the supplement. Also, the deduction of the 5 percentage-point employee contribution may have a significant marginal effect on living standards for low-income households. The fact that many households were not voluntarily making such saving before either means that it genuinely does not make economic sense for them to do so, or that they are making systematic "mistakes" in their decisions. As for all mandatory saving schemes, the economic justification rests on presumptions that: *a*) a significant share of households is myopic as regards pensions savings; and *b*) mandating a single minimum level of savings is therefore worthwhile, despite the risk that this floor forces some non-myopic households into saving that is excessive from a life-cycle point of view.

Reforms to the tax treatment of pensions should be considered. Now that mandatory saving has been introduced, tax incentives for pension contributions are at least partially

Figure 4.8. **International comparison of simulated net pension replacement rates by earnings levels, men**

Highest ten OECD countries and Israel, including second pillar pensions



1. Unweighted average.
2. OECD average excluding highest 10.

Source: OECD, from OECD pension models.

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redundant from a policy perspective. The incentives anyway have practically zero value for low-income households, because other credits anyway cut tax bills to zero, or close to it. And for middle- and upper-income earners the mandatory contributions are arguably now dealing with "myopia" concerns in pension savings. Indeed, it is somewhat unfortunate that employers and unions were allowed to strike a deal without adjustment of the tax breaks. At some point reforms should be made so that at least the tax credits on pensions contributions apply only to long-term savings that are over and above mandatory levels. These credits might also be made "non-wasteable" so as to boost the lifetime returns to defined pensions for those on low incomes. For instance, the government's initial proposal for a mandatory pension credit for low-income workers (that did not make it into the final agreement) could be resuscitated. Furthermore, cuts in the tax concessions in pension payouts could be made on the grounds that they too are not particularly benefiting low-income households.

Box 4.4. **Summary of recommendations on labour-market and social policies**

Tax breaks and benefit payouts

- Make more use of the EITC: expand coverage to the whole of the country, and consider increases in the credit rate and greater differentiation according to the number of children. That said, heighten vigilance to the take-up of the scheme as to date it has been limited.
- Increase payout in Income Support, and bring in new levels of benefit for those with more than two children. Refrain from further increases in universal child allowances beyond those already scheduled. Indeed, consider making economies, for instance through wider application of the lower rates that currently apply only to children born after May 2003.
- Reform other tax credits. For instance, consider reducing the regular (*i.e.* wasteable) tax credits, (especially if combined with an increase in EITC). However, on the grounds of equal treatment, the same credit should be applied to men and women. The extra credits for children should be made claimable by either fathers or mothers and not just the latter.

Box 4.4. **Summary of recommendations on labour-market and social policies** *(cont.)*

Entitlement conditions and employment services

- Ease the prohibition on car ownership and access to a car in the means test for Income Support and related benefits and conduct a general investigation of eligibility with a view to widening coverage.
- Nationwide adoption of the Light for Employment Programme should proceed, but it is important to define the future role of the Employment Service before doing so. Further monitoring should pay particular attention to competition issues.
- The moves to lighten employment rules for disability-benefit recipients should be followed by removal of rules allowing labour-market conditions to have a bearing on eligibility and a general review of the eligibility procedure. Also, a shift in the approach of medical assessment from general disability to capacity for work should be considered.

Childcare services

- Support for childcare services is moving in the right direction; daycare services for Arab-Israeli children warrant particular attention.

Labour regulation

- Efforts to increase the enforcement of labour regulation should be intensified but combined with lowering the value of the minimum wage relative to average earnings.
- In sectors dominated by foreign workers increased enforcement of labour regulation should be accompanied by measures to limit rent-taking in the permit system.

Pensions

- For first-pillar pensions, as with regular Income Support, eligibility rules to the Income Supplement should be reviewed with a view to widening coverage.
- Increases in women's retirement age for eligibility for state pensions should be extended beyond 2017 so as to eventually equalise with that of men.
- Tax breaks on pensions should be pruned. The credits on long-term saving should apply only to savings that are over and above mandatory levels and credits in pension payouts reduced. Credits might also be made "non-wasteable" to boost their value to those on low incomes.
- During the phase-in of the mandatory savings, the outcomes for older workers should be closely monitored with a view to granting temporary exemptions and a weather eye should be kept on compliance with the agreement.

Notes

1. The term negative income tax is generally reserved for the (largely untried) concept of a large *universal* non-wasteable tax credit (effectively a universal basic income) that would obviate the need for means-tested welfare systems.
2. According to the NII, as of 2007, 120 218 families received Income Support benefit (National Insurance Institute, 2008, p. 123), while for 404 400 families net incomes were below the poverty line based on the Institute's relative poverty index.
3. The model of the vehicle must not have been available for at least seven years for engine capacities up to 1 300 cc and for 12 years for engines up to 1 600 cc.

4. Exceptions among OECD countries include some US states, Canadian provinces and Swiss cantons.
5. The operator's "client base" includes some in employment, for instance those who entered the programme, subsequently found jobs but who remain eligible for Income Support.
6. The contract with the operators now includes payment of 7% of calculated savings in welfare benefits and payments ranging between 20 and 30% of the wages of programme participants' annual earnings once in employment. For further detail on the changes made to the programme in 2007, see OECD (2010).
7. Interestingly, the Employment Service appears to be run with relatively few resources. OECD comparisons of the number of registered unemployed per PES staff member is very high in Israel compared with available figures for OECD countries (OECD, 2010).
8. According to the NII's Annual Survey (National Insurance Institute, 2009), Disability Pension recipients numbered 150 512 in 2002 and 194 988 in 2008. Among the auxiliary benefits, the Attendant Allowance beneficiaries for instance increased from 20 614 to 29 390 over the same period, an increase of nearly 50%. Increases of similar magnitudes were seen in the other auxiliary benefits.
9. Further detail on the reform can be found on the NII's website.
10. The entitlement procedure is described in National Insurance Institute (2008, page 202).
11. The authorities also see significant growth in unofficial daycare centres as a cause for concern and are taking countervailing measures. Private unlicensed daycare is forbidden by law. However, according to a report commissioned by the OECD, there were an estimated 96 000 children in unlicensed daycare in 2008, compared with 77 600 in approved daycare.
12. The State Comptroller and Ombudsman (2007) reports that only 11% of the inspections conducted by the enforcement unit of the Ministry of Industry, Trade and Labor covered minimum wage issues, a share which severely underrepresented the scale of the problem. The report also found that 70% of cases requiring legal follow-up had been left unattended for an average of nearly 15 months. Other evidence on enforcement is cited in OECD (2010).
13. There is also an indexing system comprising legally binding, economy-wide floors to wage increases when inflation is above a certain level. The index is partial, guaranteeing a nominal increase of 90% of the margin of inflation above 4.25%. The mechanism is a remnant of the once comprehensive system of indexing in the economy used to cope with high inflation in the 1970s and 1980s. It has not been triggered since 2003 and is unlikely to re-emerge as an important influence on wages unless there are serious failures in monetary policy.
14. The legislated minimum wage can deviate slightly from 47.5% of the average wage in any given year due to the annual updating mechanism. It is initially updated at the beginning of the year according to a cost-of-living index, which may bring it above or below the threshold. If it is below the threshold, it is increased again in April.
15. The long-term care programme provides individuals with the right to a certain number of hours of domestic help per week. The carers are employed through private-sector agencies, which receive payment from the government. Recently, the ability of foreign workers to change from one agency to another was improved in an attempt to reduce abuse of these workers (OECD, 2010).
16. Workers from the West Bank and Gaza Strip are employed *via* permits linked to their employer that are renewed every one to three months and must also pass an annual security check. Non-wage labour costs comprise various levies and fees; for instance, there is an 11% "equalisation tax" (OECD, 2010).
17. A separate procedure applies to small numbers of specialised workers outside these areas. Unlike in many OECD countries, the permit system does not require employers to advertise jobs internally or justify hires from elsewhere prior to the recruitment of foreign workers (OECD, 2010).
18. According to the Central Bureau of Statistics, 12% of households headed by an individual aged 65 and over comprise four or more individuals. In the Arab-Israeli population the share is nearly 30% (Statistical Abstract of Israel, 2008, Table 5.7).
19. The Old Pension Funds were often funded only by employer contributions. Government subsidised the schemes by providing special bonds with above-market returns (funds were required to invest a certain percentage of portfolios in these bonds). Closure of the funds in 1995 transferred all public-sector employees to defined-contribution schemes and nationalised the remaining Old Pension Funds.

20. Provident funds are a "pure" savings instrument, notably excluding any insurance components. The return is calculated according to the individual's share in the fund's assets. Withdrawal can begin only at age 60 or above and, up to a certain value, must be in the form of an annuity.

21. The Capital Market Insurance and Savings Division in the Ministry of Finance has released a "pensions handbook", is setting up an interactive website and, in co-operation with the Ministry of Education, plans to introduce more financial education in school programmes (OECD, 2010).

22. The 16% figure quoted in the main text refers to the share of those receiving the Income Supplement among those who have become eligible for a pension according to the standard regulations, notably the minimum ten years of contributions. However, according to a special arrangement between the NII and Ministry of Finance, the Ministry funds the pensions of some who do not fulfilled the contribution criteria, the chief target being older immigrants. Reportedly, many of those benefiting from this scheme are also eligible for the Income Supplement. As a result, the overall share of pensioners receiving the Supplement was 27% in 2007, according to the Ministry of Finance.

23. Rotation may arise because mandatory contribution levels must be implemented immediately for employees who already have a pension plan but do not have to start until after six months of employment for those without a plan. Thus, some employers might be tempted to sack staff with pension plans and replace them by a rotation of workers who are kept for no more than six months (Bank of Israel, 2008b).

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Chapter 5

Selected policies affecting the business environment

Israel is assisting businesses and promoting market competition in ways that are familiar to many OECD countries. Nevertheless, red tape is overly burdensome. Active policies to support business include incentives geared towards foreign investors, innovation policies and various aids for small and medium-sized enterprises (SMEs). As in many other countries, the agriculture sector receives considerable support. Ground still needs to be covered in bringing a healthy level of competition in electricity, post and sea ports. Transport infrastructure has struggled to keep pace with the rapid pace of population growth, and the mix between private and public transportation has become unbalanced, adding to problems of congestion in urban areas.

Previous chapters have demonstrated that the quality of Israel's wider environment for business is mixed. The establishment of low, single-digit inflation has been helpful, as have reductions in the overall "size" of government, largely *via* the attendant tax cuts. However, the longstanding presence of a large public debt may have been crowding out business investment. Also, there are flaws in education that limit the availability of human capital and there are underutilised labour resources, particularly among Arab-Israelis and the Haredim. This chapter looks at more proximate business policy from four dimensions: red tape and regulation, targeted support programmes, competition regulation and policy, and infrastructure. Recommendations are summarised in a concluding box (Box 5.3).

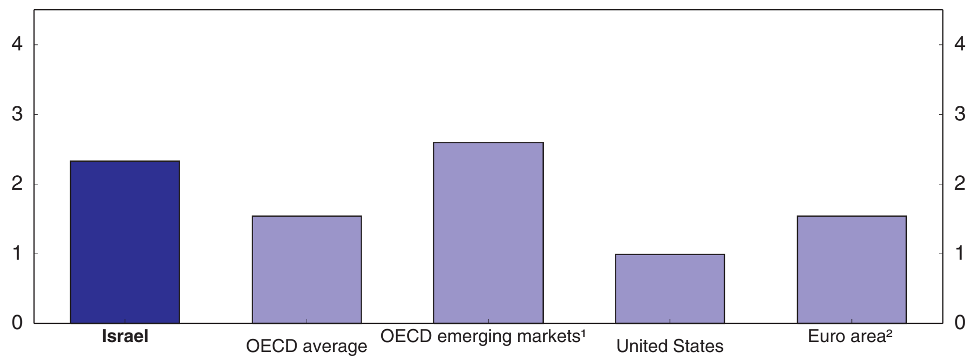
Room for improvement in red tape and regulation

Israel's position in OECD indicators of red tape and regulation

International indicators of red tape and regulation suggest there is ground to cover in cutting red tape and regulation in the process of setting up and running a business. The OECD's *Product-Market Regulation (PMR) Database* for 2008 provisionally shows that Israel's score is lower (*i.e.* more favourable) than those of "emerging" OECD economies, but a good deal higher than the OECD average according to a sub-indicator on administrative burdens on business start-ups (Figure 5.1).[1] The indicator includes measures of how many administrative processes are required to set up a business and how long it takes for permits and other forms of approval to be processed by the government authorities. Moreover, provisional PMR results show Israel does not score well in other sub-indicators of red tape. This concurs with frequent comments from policymakers and others that barriers to doing business remain significant. Ongoing government efforts to tackle these issues include plans to make the process of issuing licensing new firms faster and less costly.

Figure 5.1. **Index on administrative burdens on start-ups**

2008



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Czech Republic, Hungary, Korea, Mexico, Poland, Slovak Republic, Turkey.
2. Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain.

Source: OECD, *PMR Database*.

StatLink http://dx.doi.org/10.1787/775470263450

Implications of the recent Land Reform Bill

As discussed in Chapter 1, most land is not technically privately owned, and, as a result, the property market is primarily conducted *via* trading in long-term leases. In August 2009, the Knesset passed a Land Reform Bill that will facilitate private ownership. According to the Bill, leaseholders on 200 000 acres of land held by the Israeli Land Administration (ILA) (5% of ILA-regulated land) will have the option of purchase.[2] Half the land will be made available by 2014 and the remainder thereafter. A low regulated price has been set for peripheral areas, while the price in central districts will be based on estimated market value. The somewhat limited release of land for privatisation partly reflects concerns that property developers might be able to corner the market in some areas by quickly buying up property. Side conditions on purchase have been added to the legislation to prevent this. In addition, the reform includes substantial institutional changes to streamline and improve administration. The ILA, which is to be transformed into the Israel Land Authority, reportedly has a reputation for being inefficient and bureaucratic. The original draft of the reform also included a proposal in which the Jewish National Fund (JNF), which owns some 12% of all land, would hand over land owned in the centre of the country to the state in exchange for land in the periphery. Arab groups and also the JNF itself objected to the proposal, the latter succeeding in getting a court injunction against it.

The Land Reform Bill looks set to have some positive effects on the "ease" of doing business, though its impact is not likely to be enormous. While the reform appears to bring a welcome "clean up" in state administration, the implications of private ownership for apartment and land owners, whether private businesses or households, are not thought to be hugely significant. Because the property market already functions quite effectively *via* trade in leases, the reform does not in itself "liberalise" the property market in any important way. Also, switching from leasing to ownership will not substantially alter planning regulations concerning land use. Nevertheless, switching to ownership may help some landowners (particularly farmers) to obtain access to larger amounts of credit on more favourable terms. Finally, the reforms in administration might ease some application and approval processes for businesses. There are plans to follow the Land Reform Bill with reforms to planning and building legislation; these may have a more profound effect on the ease of doing business.

Complex support for investment, innovation and SMEs

Israel's business support programmes can be divided into three categories: investment incentives that are primarily aimed at attracting businesses to poorer regions; innovation policies; and, programmes for small and medium-sized enterprises (SMEs). In broad terms, the programmes echo those found in many OECD countries.

Tax breaks and financial support for greenfields investment

The most important investment incentives are tax breaks and grants provided under the Law for the Encouragement of Capital Investment. These focus on attracting foreign-funded high-technology or research and development activities to poorer regions of the country based on a map of "National Priority Areas" that is also used in some other areas of policy.[3] Thus, the generosity of tax concessions and grants depends on the location of facilities, the degree of foreign ownership (a higher share of foreign ownership means greater concessions) and the size of the investment. The greatest support is provided to the "Priority A" regions of Galilee, the Jordan valley, the Negev and Jerusalem. Generally, assistance is available either for new facilities or for the expansion of existing establishments. To qualify for assistance a company has to satisfy certain criteria regarding the international competitiveness of its output and the number of jobs the investment will create. The investment incentives programme is augmented by various employment subsidies, which, again, are aimed primarily at encouraging businesses to locate in certain regions of the country. The tax concessions and grants are listed in Box 5.1.

Box 5.1. **Investment incentives and employment subsidies**

The following investment incentives are available under the Law for the Encouragement of Capital:

- Tax holidays. Exemption for two to ten years (depending partly on location) from company tax on undistributed profits.
- Reduced tax rates. Instead of a tax holiday, a company can choose a reduced rate of company tax for seven years. Enterprises can also claim accelerated depreciation rates on fixed assets and buildings for the first five years of their use. There are special provisions for foreign companies (at least 25% foreign owned), which can get the reduced tax rates for ten years. The higher the level of foreign ownership, the greater the reduction of tax rates.
- Cash grants. Grants covering between 10 and 24% of the cost of investment in land development, investment in buildings and machinery and equipment are available in the two priority areas: Galilee, Jordan Valley, the Negev and Jerusalem ("Priority Area A"); and the Lower Galilee and Northern Negev ("Priority Area B").

In addition there are schemes of employment grants to employers:

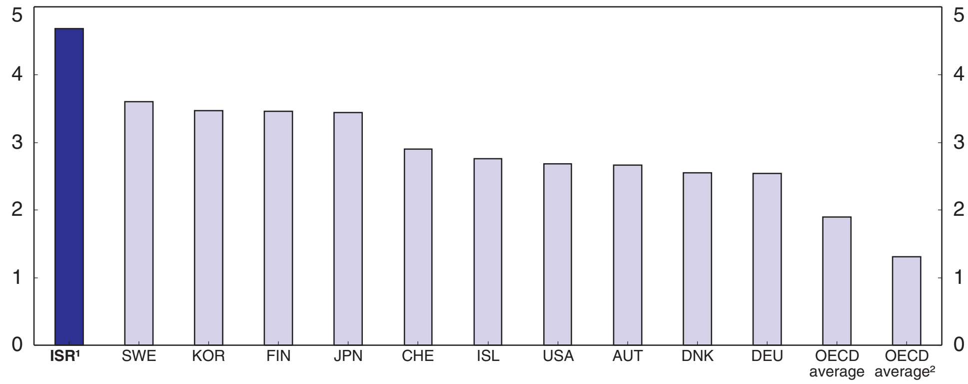
- Employment grant programme. This provides support ranging from 5 to 30% of the gross wage bill for 30 months to businesses setting up, transferring to or expanding in certain regions and towns. The geographic coverage includes Priority Area A and what are called designated towns (comprising certain Arab, Druze, Circassian and Ultra-orthodox Jewish populations).
- Programme for attracting R&D firms to the Negev and Galilee. Eligibility is based on the firm's average salary cost (it has to be either at least 1.5 times or 2.5 times the average, depending on the specific scheme) Support ranges between 5 and 45% and is available over a four-year period.
- Grants for employing highly qualified new immigrants and returning residents. For example, an annual grant up to NIS 46 140 per year for employing someone with a doctorate degree is provided for three years for new immigrants and one year for returning residents. This scheme operates under the Ministry of Immigrant Absorption.

Competitively awarded R&D grants head innovation policy

As discussed in Chapter 1, there has been impressive development of high-tech industry and research and development activity since the late 1980s. Israel has a remarkably high level of spending on R&D: its share in GDP is greater than in all OECD countries (Figure 5.2). While a wide range of policies clearly influence the degree of industrial and scientific innovation (and innovation in a wider sense), the focus here is on the key programmes to encourage commercial research.

Figure 5.2. **International comparison of expenditure on R&D**

As a percentage of GDP, 2008 or latest available year



1. Defence excluded.
2. Excluding top 10.

Source: OECD, *Main Science and Technology Indicators Database.*

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The promotion of R&D activities and high-tech start-up companies has long since been a key focus of government support to business (Trajtenberg, 2002). The main R&D fields are chemical and electrochemical, mechanical and electromechanical, software, electronics, biotechnology and computing. The applications for the technologies being developed are predominantly in industrial and control processes, medicine and cosmetics, and transport and communications, with agriculture also a significant beneficiary.

At the core of innovation policy is a "grant" system, which bears similarities with mechanisms elsewhere, except for an obligation to pay back the funding if projects reap commercial returns. In this sense, it is more akin to a system of high-risk loans. The programme is run by the Office of the Chief Scientist (OCS), which is supervised by the Ministry of Industry, Trade and Labor. The Ministry is also responsible for various other aspects of innovation, such as business-academic linkages. Grants are awarded on a competitive basis and typically cover between 66 and 90% of the total cost of the research project. Successful projects that eventually lead to sales of the company, are required to pay back to the OCS the amount of support received *via* a deduction of a small percentage of annual sales. The total amount of these revenues is considerable and provides an important source of OCS funds.

As in many OECD countries, the state has supported special business parks (so-called business incubators). A large number of fully state-owned incubators were initially established in the 1990s (Modena and Shefer, 1998). Of the 24 incubators currently operating, only two remain in state hands. However, government support remains important. During a two-year period, entrepreneurs based in the parks receive grants, business planning, administrative back-up and help in finding financing. Projects in incubators with an industrial investor may obtain a grant of 66% of R&D costs. Independent incubators can receive up to 100% grants towards establishment and operating costs. In most cases, the same payback rules apply to incubator projects as to R&D assistance in general.

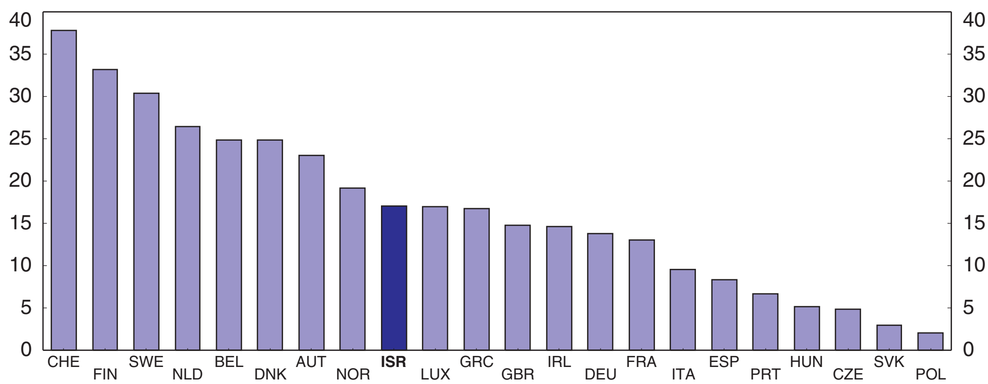
A range of programmes augment the grant and incubator systems. For instance:

- The Heznek seed fund fully matches investor financing (the investor is later given an option to purchase back the government share).
- The Tnufa programme supports individual entrepreneurs in their initial efforts to build a prototype, register a patent or design a business plan. Grants are up to 85% of approved expenses.
- The Magneton and Noffar programmes support applied academic research, particularly in the field of biotechnology and nanotechnology.
- The Magnet programme supports the formation of consortia comprising individual firms and academic institutions.

Some Israeli research companies benefit quite substantially as partners with European companies in joint projects that are supported by EU funding. These companies are often attractive partners because of their expertise and because in some areas there are fewer restrictions on research in Israel, particularly in the field of biotechnology. Israel is a participant – and the only non-European country – in the Seventh Framework for R&D of the European Union (FP7), the EU's most ambitious research programme to date (Figure 5.3).[4] The funding is allocated mostly to projects in biotechnology, nanotechnology, and information and communication technologies.

Figure 5.3. **Research funds allocated to EU and non-EU countries under FP7**

Euro per capita, 2007 to September 2009



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: European Commission.

StatLink http://dx.doi.org/10.1787/775485202376

Financial and "soft" support for small and medium-sized enterprises

SMEs are an important component of the high-tech sector. Indeed, with an estimated 4 000 start-up companies, Israel has the highest per capita concentration of start-ups in the world (see Global Information Technology Report, 2008-2009 and Box 5.2). The sector also plays a significant role in services exports, *i.e.* software and computer-related services. And, in the past decade, more than 100 Israeli start-ups have gone public on the NASDAQ stock exchange. Much of the activity remains centred in the greater Tel Aviv region, but industrial parks in more peripheral areas (dubbed "Silicon Wadis") have also made an important contribution. Co-operation with academic institutions (Technion, Weizmann

Box 5.2. **Calculating the contribution of start-ups to GDP**

Most of the start-ups are engaged in producing R&D-based products for the software, electronics and telecommunication industries. Firms are sometimes sold at high prices (often to foreign companies), which have no apparent relation to their recorded production costs, operating surplus or revenues, but rather reflect the value of the product, which is itself sometimes intangible. For example, in 2000 three exceptionally large takeovers amounting to USD 4.8 billion, USD 2.7 billion, and USD 1.6 billion took place, a significant amount, given that GDP was only slightly above USD 100 billion at the time.

Estimating the value added of start-up activity for GDP purposes is tricky.* Products developed by start-ups are typically new and hard to compare with similar products, so are valued at cost plus a mark-up. The Central Bureau of Statistics estimates the costs using data on new investments in start-ups gathered by the Venture Capital Funds Association and other sources. The mark-up is estimated using trend data on revenue of venture capital funds and aims to represent the average mark-up, including that for those start-ups that do not succeed.

Start-ups' activity is also treated in particular ways in other respects. The initial production of software and R&D is recorded as an increase of inventories; once the product is sold it is included as a decrease in inventories. If R&D is sold abroad, an increase in exports will be registered; if sold within the country or used by the enterprise itself, there is an increase in intermediate consumption. If software is sold abroad, it counts as an increase of exports; otherwise it will be accounted as an increase in fixed capital formation.

* Further details can be obtained from the Central Bureau of Statistics (2006).

Institute of Science, Hebrew University and the Tel Aviv University) has played an important role (Global Information Technology Report, 2005-2006).

Support for SMEs accelerated in the 1990s, partly with a view to encouraging innovation, but also as a means of providing employment for the large wave of immigrants from the former Soviet Union. SME policy is steered by the Authority for Small and Medium-Sized Businesses, which is an independent, non-profit organisation with representatives from government, economic organisations and the general public on its committees and boards. Clearly, elements of innovation policy described above are relevant for certain types of SMEs, such as the support for business incubators. However, there are also two programmes providing assistance to a wider range of businesses (as in innovation policy, these also run under the Ministry of Industry, Trade and Labor): general loan guarantees and "soft" support through a mentoring programme.

Loan guarantees are provided by the State Guarantee Fund for Small Businesses. Light collateral requirements (the borrower need only provide a mortgage on the fixed assets financed by the loan and a personal guarantee) and a compulsory business plan are the main bases for assessing credit worthiness. The loan is given for up to five years for the purchase of equipment and one year for operating capital. Eligibility terms for loans are as follows: *i*) the business may employ no more than 70 workers, and its annual turnover may not exceed USD 5 million; *ii*) the requested credit line may serve only new business activity, *i.e.* establishing a new business or expanding an existing one (it may not be used to finance real estate purchases and construction, nor to purchase existing businesses); and *iii*) the business owner must invest his or her own capital at a rate of no less than 25% of the total credit approved. During its first three years of operation the Fund has guaranteed loans to some 2 800 small businesses, for a total of over NIS 600 million.

Soft support is provided by the Mentoring Programme, which subsidises private-sector business experts to work with SMEs. The mentor analyses the business, builds a programme suitable for its needs and accompanies the business during implementation. A large database was established comprising details on consultants with expertise across a wide variety of fields such as: general management, finance, production, marketing, information systems, human resources and other relevant fields.

Also, the government helped kick start a venture capital (VC) industry in the 1990s by setting up the state-owned enterprise Yozma. It was the first venture capital company in Israel and had initial funding of USD 100 million. The company initially focussed on financing start-ups directly and later on attracted foreign investors and the private sector to invest in start-up companies. Yozma was privatised in 1997 and currently operates as Yozma II. Currently, around 60 venture capital funds are estimated to operate in Israel.

General policy recommendations

Israel's support for investment, innovation and the SME sector has a familiar air of complexity and uncertainty in effectiveness to that found in many OECD countries. In part, this cannot be helped: the economic arguments for intervention rest on plausible but hard-to-measure spillovers and externalities; and there are usually wide choices on how intervention is made. As a result, policy tends to scatter many seeds in the hope that some take root. As such, it is important that "end users" are aware of the options for support and that critical evaluation of individual programmes and the degree of co-ordination between them is conducted on a regular basis. Research conducted for this *Survey* found evidence that some efforts are being made on this latter front. The investment incentives programmes are subject to periodic cost-benefit review with a view to establishing whether they should continue (review bodies comprise representatives from the Israel Investment Center, the Bank of Israel, the Ministry of Finance, the Knesset, the Manufacturers' Association of Israel and academia). That said, no evidence could be found of similar reviews in innovation programmes or support for SMEs.

As regards the investment incentives under the Capital Investments Law, many argue that, if the prime goal is indeed to promote regional development, then settings are too skewed towards capital-intensive, high value-adding activities. Specifically, the criticism is that the incentives are unsuited to the skill base of peripheral regions and do not dovetail well with the employment incentives schemes because they sometimes substitute for the employment of unskilled workers (Schwartz *et al.*, 2008). This suggests that some re-balancing of the investment incentives may be warranted. Requirements on job creation could be increased with perhaps additional requirements on workforce training. This said, it is likely that reducing unemployment in peripheral areas requires additional investment in other policy spheres, such as education.

Some OECD countries have pared back support programmes in exchange for a significant reduction in the rate of corporate taxation, and this might be a useful way forward in the Israeli context (see Chapter 2 for a wider discussion on taxation). For instance, in the early 2000s the Slovak Republic ended a wide number of tax breaks and concessions for business accompanied by substantial reduction in the rate of corporate income tax (Brook and Leibfritz, 2005). Clearly, this strategy can pay off if there are big returns to a low corporate "headline" tax rate and less complex taxation. Globalisation is increasing the number of possible locations for business, with the result that, arguably, smaller countries in particular benefit from simple, non-discretionary tax and business support.

Substantial support for agriculture

Israel's agricultural sector is noted for its exports of fruit and vegetables, advanced techniques in water management and collective production arrangements *viakibbutzim* and *moshavim*.[5] The sector once contributed significantly to overall GDP, but today the shares in total employment and in domestic product have fallen to just 2% each. As in many OECD countries agricultural producers receive various forms of special support.

An in-depth OECD review of the agricultural sector (OECD, 2010) concludes that the level of support has declined since 1995, both in terms of what is provided to individual producers and the cost of that support to the wider economy. However, the review also argued that support remains highly distortive and that there is considerable scope for further reform. The government is heavily involved in the key factors of production (land, water and foreign workers), and support mechanisms continue to generate a high cost for consumers and taxpayers.

The OECD review highlights the following:

- The state still plays a much larger role in the agricultural sector than in most other industries, as reflected in the continued subsidisation of water, capital and natural-disaster insurance and compensation schemes. In addition, indirect assistance to the agricultural sector is provided *via* the permit system for foreign workers (though this support is set to decline, see Chapter 4). Furthermore, high tariffs defend the domestic market from imports of certain products. Markets for agricultural goods were traditionally controlled by co-operatives, but most of these have now been incorporated and privatised, although they remain highly regulated.
- The composition of agricultural support has become increasingly distortive. This mostly reflects still high border protection for agricultural commodities that pushes domestic prices above international levels and results in high market price support – one of the most distortive forms of agricultural assistance. Also, significant assistance is provided through payments based on variable or fixed input use, which are widely recognised as being inefficient because only a small fraction of transfers from taxpayers ends up as farmers' income. Less distortive policies are recommended: import tariffs on agricultural products could be reduced and simplified, including on fruit and vegetables.
- In addition, agricultural water productivity can be further improved, even though Israel is a world leader in irrigation technology and management. Farmers still pay a price for water that is below that paid by other consumers and below the opportunity cost of producing fresh water. Hence, they produce their output in a more water-intensive fashion than would be the case if costs were recovered through higher prices. The water balance remains highly precarious and is likely to be further endangered by climate change and continued population growth (see Chapter 1). A welcome agreement was struck between government and farmers in 2006 that schedules increases in water charges to 2014, which, according to the authorities, will bring them to cost-recovery levels.

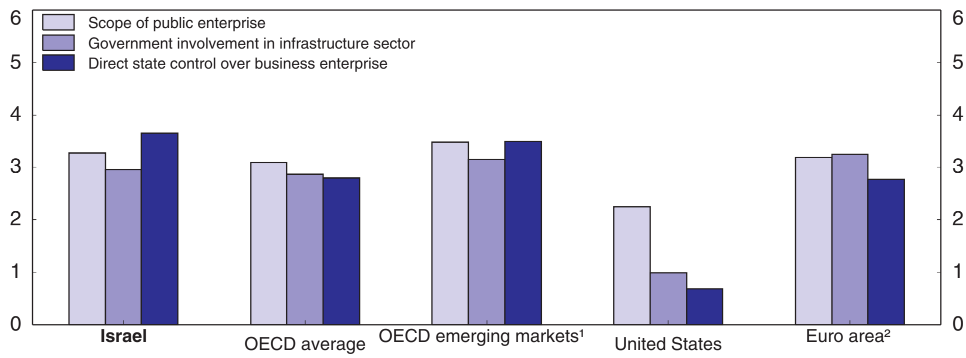
Mixed progress on strengthening competition

Israel's position in OECD indicators on government involvement in business

Provisional PMR indicators show that the state's role in the business sector is still quite significant in certain dimensions. Two indicators, reflecting the scope of public enterprise and government involvement in the network sector, are slightly above the OECD average (Figure 5.4). The "Scope of public enterprise" indicator reflects the proportion of major sectors in which the state holds an equity stake in at least one firm. The "Government involvement in infrastructure sector" indicator broadly measures the extent of public ownership in the network sectors (gas, electricity, rail, air transport, postal services and telecommunications). However, the third indicator shown in Figure 5.4 ("Direct state control over business enterprise") has a rather high score. Further analysis of the *PMR Database* shows this is because the state has particularly strong powers in those companies where it still has interests *via* "golden" shares.[6] For instance, these shares give it powers in determining mergers and acquisitions, changes in controlling coalitions, acquisition of equity by foreign investors, choice of management and strategic management decisions.

Figure 5.4. **PMR index for public ownership**

2008



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

1. Czech Republic, Hungary, Korea, Mexico, Poland, Slovak Republic, Turkey.
2. Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain.

Source: OECD, *PMR Database*.

StatLink http://dx.doi.org/10.1787/775504313027

A positive assessment of competition legislation and enforcement

The system of competition law – the Restrictive Trade Practices Law (RTPL) – dates from 1988 and enforcement is in good shape. The 1988 legislation puts greater emphasis on supporting stronger market competition than its predecessor, and application of the law has followed suit. As is customary, cartels are prosecuted as a *per se* violation. Block exemptions are based on EU models. Monopoly law similarly reflects the EU's approach and replaces an earlier approach based on market share. Mergers are reviewed using advanced, effects-based analysis. Decisions have applied the RTPL to a wide range of conduct, developing in the process a methodological sophistication in enforcement that is informed by close attention to judicial and academic analysis. Competition issues and competition law compliance have been successfully put on the business community's agenda. Exclusions from the competition law are granted to agriculture and international maritime transport. Enforcement of the RTPL is conducted by the Israel Antitrust Authority (IAA), which operates separately from government, with its own funding and personnel. The IAA has powerful investigative tools and can invoke an array of enforcement procedures.

However, there is room for improvement. *First*, authorising the IAA to impose civil penalties should be considered as an additional enforcement tool. Such a move would also encourage the courts to treat criminal cases against hard-core cartels more seriously. *Second*, problems in retaining staff due to salary differentials with the private sector make it harder to maintain institutional memory and staff expertise. On this basis there appear to be grounds for increasing the IAA's budget allocation. *Third*, the IAA's advocacy and regulatory roles should be made more explicit. Its involvement in formulating regulations and resolving competition issues in regulated sectors has been by invitation, not by requirement. Also, there is no general programme of regulatory impact analysis nor has there been a systematic review of existing laws and regulations to correct those that impair competition. The IAA's authority to advocate reform and advise regulatory authorities when significant competition issues are at stake would be strengthened by making its participation more regular or mandatory.

Concerns about competitiveness in retail banking

Five Israeli-based banking groups occupy the vast majority of market share in retail banking services. The largest of these are Bank Leumi and Bank Hapoalim, and the remaining three are First International, Mizrahi-Tefahot and Israel Discount Bank. There have been longstanding concerns that the banks are not subject to strong competition in retail markets for credit and saving. A reform initiated by the Bachar Committee in 2005 targeted this issue and resulted in the banks being forced to divest themselves of mutual and provident funds (due to concerns about conflicts of interest). Nevertheless, public suspicion about the degree of competition has remained, focussing particularly on banks' service charges. This has prompted the Bank of Israel, as supervisor of the banking sector, to introduce rules that reduce the number of fees and harmonise their definition.

Patchy progress in network industry reform

Network industry reform has been patchy, with a notable deadlock in the electricity sector to which some solution needs to be found. The incumbent Israeli Electricity Corporation (IEC) remains fully state owned and vertically integrated. Legislation has been passed allowing private-sector electricity generation. However no providers have yet begun operating, though, according to the Ministry of Finance, two are likely to come on stream in 2010. Other steps towards opening the sector to competition are making little progress. Press reports indicate seemingly continuous frictions surrounding current financing problems and future reform between the IEC, trade unions and government. For instance, the IEC and its employees have failed to agree on a set of reforms that would include the establishment of four divisions: grid management, production, transmission and marketing. Currently, there are discussions to establish a government corporation to manage the system, partly with a view to encouraging private producers to enter the market.

Progress towards competitive markets has been rather better in the gas sector and telecommunications. A state-owned firm, Israel Natural Gas Lines Ltd., operates the pipeline system. However, the retail and commercial end-user services are now provided by private distributors. A new gas pipeline for natural gas deliveries from El Arish in Egypt to Ashkelon was completed in 2008. The sector is under independent supervision by the Natural Gas Authority, and the passage of legislation to facilitate switching between suppliers suggests a commitment to strengthening competition.

In telecommunications, the incumbent, Bezeq, has been fully privatised, and all three sectors of telephony (fixed domestic, fixed international and mobile) are technically open to competitors. Various steps have been taken to reduce barriers to entry. For instance, universal service requirements for new entrants into fixed-line services have been eliminated and telephone-number portability regulations introduced to facilitate supplier switching. Also, rate caps are set on Bezeq's fixed-line telephone services. However, independent supervision has not yet been introduced (the sector is currently supervised by the Ministry of Communication), though this is planned. In addition, unbundling of the local loop is not yet complete, according to a recent government report, and this is preventing the development of packages that combine television, internet and telephone services (Gronau Report, 2008). Bezeq's market shares are declining but remain quite substantial in some segments; in the household-telephony market it has dropped to 75% and for the business-telephony market it has fallen below 85%.

Good progress has been made on some other fronts as well. The national airline EL AL is fully privatised, and an agreement has recently been signed with the EU authorities for low-cost airlines to begin operating on some routes. Airports themselves remain fully state owned. Also, oil refining and distribution of distillates is now completely privatised. Controls on wholesale prices or petroleum distillates were eliminated, although the retail price of gasoline for vehicles remains set by a formula based on the price of crude oil.

However, some network services have remained largely unreformed, and efforts to privatise and introduce, or strengthen, competition in some areas should continue. As is still the case in quite a number of OECD countries the rail, postal and water supply services remain wholly run by incumbents that are fully or almost fully state-owned. Lack of reform probably in part reflects resistance by the incumbent companies and trade unions but also challenges in designing industry structures that are assured to bring effective competition. There are plans to re-structure the Israel Postal Company with a view to bringing market competition in some services. Also, there are plans to privatise the water company Merkerot in 2010 (the government currently has a 92% shareholding), but no indication of plans to follow this up with steps to introduce competition. In rail (where the incumbent is Rakevet Yisra'el) competition for freight services has not yet been introduced as has been done in many OECD countries. Reform of the seaports has been slow. The privatisation of the seaport authorities started in 2005 by divesting the facilities to a separate government company (Israel Ports Development and Asset Company, IPC). This was supposed to be followed up by the creation of separate subsidiaries to operate the ports at Haifa, Ashdod and Eilat with a view to privatisation. However, there has been an acceleration of developments in recent months. Privatisation of 15% of the Haifa and Ashdod ports is due in January 2010, and a further sale of 34% of the Ashdod Port and the Haifa is planned for February 2011. In the third stage, beginning in February 2020, the government will sell shares in the Ashdod and Haifa Ports to reduce its holdings to 51%, thereby retaining the controlling interest.

Significant challenges in road and rail transport

Good transport infrastructures are particularly important for certain businesses and help widen commuting possibilities to the benefit of both businesses and households. Also, the general ease of getting around a country, access to airports and so on can be an important factor in firms' decisions on where to locate production and service facilities.

Rapid growth in the population and economic output in recent decades has placed heavy demands on transport infrastructure and posed significant challenges for policymakers. The road network is reasonably well developed, and public-private partnerships are increasingly being used in constructing them, though not always successfully. However, road-use charges are not yet widely used; only one stretch of road currently operates a toll system. There are plans to use tolls for a tunnel below Haifa, which will open in mid-2010, and for a 12-kilometer section of fast lane on Highway 1 near Tel Aviv.

Public transport is principally in the form of state-subsidised bus services operated by private companies. Dan is the main provider in Tel Aviv and the surrounding area, while Egged runs local bus networks in most other cities and towns. Services for smaller communities and inter-urban services are run by Egged and a range of other companies.

Currently, rail services play a relatively minor role in the transport system but are being expanded. Israel Railways, a state-owned monopoly, operates the handful of lines linking urban areas. It has recently received a budget of NIS 32 billion for extending the network. The key project is the construction of a fast rail link between Tel Aviv and Jerusalem. As yet there are no urban rail systems. But progress is underway. A light rail transport (LRT) system is being built in Jerusalem under a public-private partnership, but the project has been bedevilled by a dispute between the authorities and the private consortium. Various delays have held up the planning of LRT in Tel Aviv, and the timetable for completing the long-term development plan will be much longer than originally thought.

Clearly efforts are being made to improve public rail transport, but many argue more needs to be done, given the large share of the population living in urban areas and a high overall population density (Bank of Israel, 2007). Public-transport usage has declined in recent years from 25% of all passengers' kilometres in 1996 to some 20% in 2005. In contrast, utilisation of the road network has increased rapidly, leading to severe problems of congestion in urban areas and in some inter-urban routes, while also contributing to pollution problems.

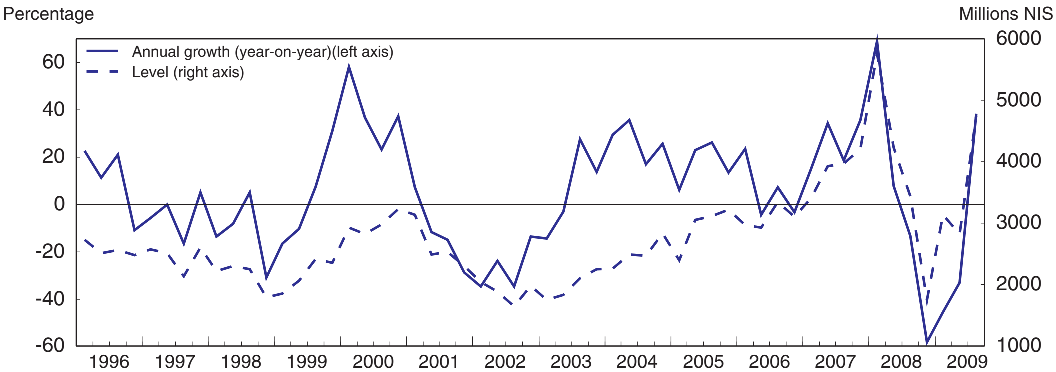
In 2007 a parliamentary committee (the Sadan Committee) recommended the establishment of a national authority for transport, which seems to be eminently sensible and should be pursued. Such an authority could ensure co-ordination between policy on transport modes and lead reforms to upgrade and improve public transportation. It could also ensure not only that public transport appropriately services the general population but also that characteristics of local demand, notably those of Arab-Israeli and Ultra-orthodox communities, are taken into consideration.

In addition, local authorities should be given a bigger role in planning, financing and operating public transport systems and road networks. The main stakeholders are the Ministry of Transport and the Ministry of Finance, along with the various public and private companies involved in provision. This is unusual: most metropolitan areas in other OECD countries have a metropolitan transport authority. This provides the local authority with strong powers to develop local transport and ensures their participation and responsibility in the risks and returns of network development. The lack of strong local authority representation is thought to lie behind both difficulties in getting good co-ordination on urban transport development and the lack of progress in developing urban rail networks.

Progress in public investment in transport infrastructure is highly erratic (Figure 5.5). An uneven pace of investment can make sense. For example, putting investment "on hold" during periods of fiscal difficulty can yield macroeconomic returns that are worth the opportunity cost of some delay in the completion of infrastructure. But this can go too far, with infrastructure goals excessively overridden by other priorities. Some OECD governments have attempted to tackle this. Such concerns, for instance, lay partly behind the United Kingdom's efforts to ring fence infrastructure by treating investment spending differently from current spending in its fiscal rules. Whether such mechanisms are required in the Israeli context is uncertain on the basis of this brief assessment, but the issue should be given some consideration.

Figure 5.5. **Investment in land transport infrastructure**

Constant 2005 chained prices



Note: For technical reasons, these figures use Israel's official statistics, which include data relating to the Golan Heights, East Jerusalem and Israeli settlements in the West Bank.

Source: Central Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/775541752701

Box 5.3. **Summary of recommendations on policy towards business**

Business support

- In general, ensure there are good processes for pruning, modifying and innovating within the various menus of support measures.
- Given regional-policy objectives, re-balance investment incentives to better cater for the skill base of the peripheral regions that are targeted by these programmes.
- Consider paring back targeted support for business in exchange for significant reductions in the rate of corporate taxation.
- Reduce support for agriculture and make it less distorting, for instance through further reduction of trade barriers on agricultural products and further simplification of the current highly complex tariff profile as well as through cuts in support payments based on input use.

Box 5.3. **Summary of recommendations on policy towards business** *(cont.)*

Competition policy and network industry regulation

- As regards the Israel Antitrust Authority, consider authorising civilian penalties, increasing the budget to deal with staff-retention problems and making the IAA's advocacy and regulatory roles more explicit.
- In the electricity sector, continue to press for a solution in the deadlock on reform of the Israeli Electricity Corporation.
- In telecommunications, follow through on plans to introduce an independent regulator, and continue to push for market opening, notably through unbundling of the local loop.
- Press on with efforts to privatise and introduce or strengthen competition for services in post, sea ports and water.
- Explore whether there is any justification for the state's "golden" shares having unusually strong rights, as is suggested by the OECD's product-market regulation data.
- Give continued policy attention to underdeveloped road infrastructure and rail service. Consider establishing a national transport authority and giving local authorities a bigger role in planning, financing and operating public transport systems and road networks.

Notes

1. Further details on the OECD's product-market regulation (PMR) database are discussed in Wölfl *et al.* (2009) and can be found on the OECD's website.
2. The Negev desert, which covers 55% of land in Israel, has very low population density.
3. The map of National Priority Areas is renewed each year, and the possibility of revisions to the boundaries therefore adds some uncertainty for businesses evaluating locations for investment.
4. The Seventh Framework Programme (FP7) is the European Union's chief instrument for funding research over the period 2007 to 2013. It bundles all research-related EU initiatives together under a common roof. The total budget for FP7 is 51 billion euros over seven years.
5. A *kibbutz* is a type of collective community that was traditionally based on agriculture; nowadays, farming has been partly replaced by other activities, such as industrial plants and high-tech enterprises. Previously, *kibbutzim* were based on a strictly communal principle of equity; *kibbutzniks* did not individually own land, houses or even clothing (conditions are less strict today). The *moshavim* are similar to *kibbutzim,* but such farms tended to be individually owned and the collective approach is not as strong.
6. Strictly speaking government control is not through "golden shares" (these were previously terminated) but so called "Vital Interest orders" to maintain safeguards in privatised companies. These were first introduced in 2003, and, at present, four such orders have been issued.

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OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(10 2009 21 1 P) ISBN 978-92-64-07663-1 – No. 57073 2009

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Volume 2009/21 – January 2010
Supplement No. 3

ISSN 0376-6438
2009 SUBSCRIPTION
(18 ISSUES)

OECDpublishing
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ISBN 978-92-64-07663-1
10 2009 21 1 P