



ISRAEL'S PATH TO ECONOMIC AND SOCIAL PROSPERITY

A story in 25 charts

Editors: Michael Sarel & Itamar Yakir



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Israel's Path to Economic and Social Prosperity

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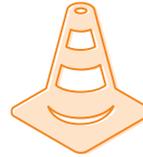
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SUCCESSSES

- *Over the past decade the Israeli labor market has improved dramatically: unemployment decreased and the participation rate grew. In both measures, Israel now ranks among the leading group of developed countries.*
- *Although many of the workers who joined the labor market during the 2000s were unskilled, the average real wage has increased over the past years by 15%.*
- *The main trends in labor and income have led to an improvement in the average household's standard of living and to a decline in inequality, especially in terms of economic income.*
- *The effective tax on labor is lower in Israel than in other developed countries.*
- *The reduction in the corporate tax rate was accompanied by an increase in government revenues from this tax.*
- *Although gaps in educational achievement between different population sectors are still significant, students in Arab localities increased their passage rate of matriculation exams, and especially in Druze localities.*
- *The Israeli health system is relatively successful, despite low levels of inputs and expenditure.*



OBSTACLES

- *The productivity gap between Israel and other developed countries has grown since the 1980s. This is a product of the high barriers that characterize the Israeli marketplace; and the large fraction of Israeli youngsters lacking basic skills, among other factors.*
- *Haredi men and Arab women are characterized by low employment rates and wages regardless of education level, resulting in significant gaps in per capita income between the main population groups of Israeli society.*
- *The proportion of non-Haredi Jews in the population is projected to shrink considerably in the coming decades, and correspondingly the share of the Haredi population will increase. As a result, if current levels of employment and wages in the Haredi and Arab population remain the same, per capita income would be lower by 15% compared to the projection assuming static population composition.*
- *Without further changes in the retirement age, the duration of retirement is expected to increase by a factor of 1.5 for men and even more for women.*
- *Israel's education expenditures are close to the median of developed countries, but performance is quite low by international standards.*



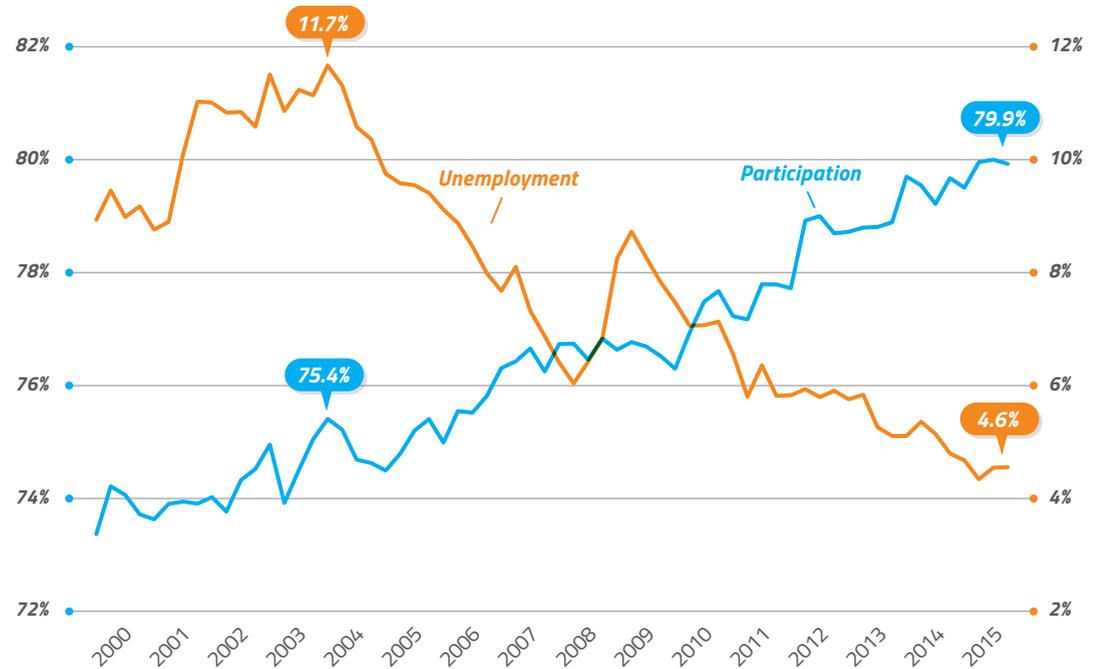
SUCCESSSES

Over the past decade, the Israeli labor market has seen a decrease in unemployment and an increase in the rate of participation.

The labor market recovered quickly from the world economic crisis in 2008 and has improved consistently over the past decade, as reflected by trends in the rates of participation and unemployment.

Changes in welfare policy helped to reduce reliance on transfer payments and encourage greater labor-force participation, especially among low-skilled employees. This led to a broad increase in the welfare of the Israeli population, including a decrease in poverty and inequality.

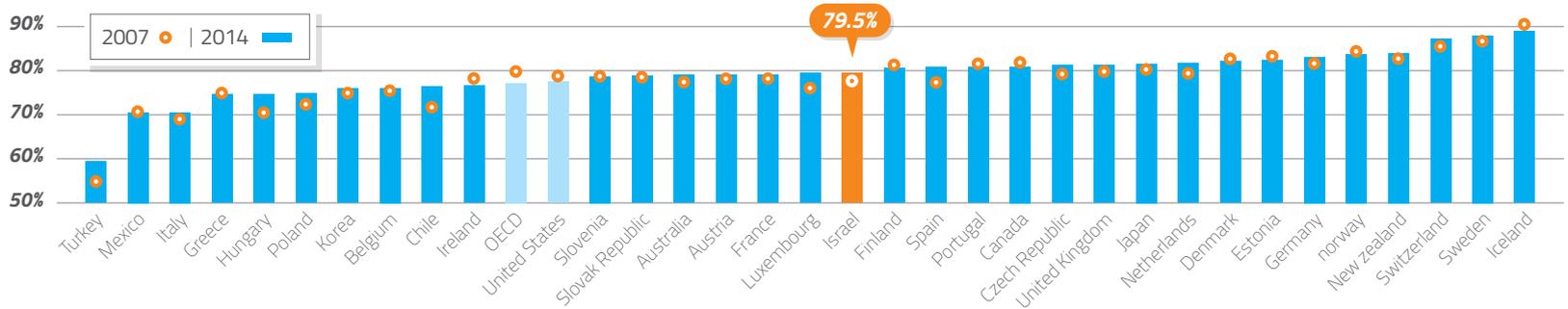
Participation and unemployment rates (ages 25–64)
Quarterly chained data, seasonally adjusted



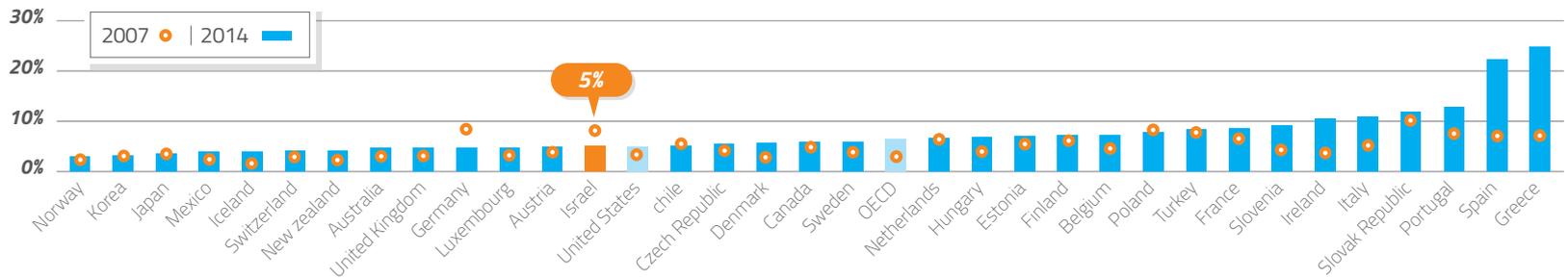
Source: Bank Of Israel

The unemployment rate in Israel is low and the participation rate is high relative to other developed countries.

Participation rate (ages 25 – 64), Israel and the OECD countries

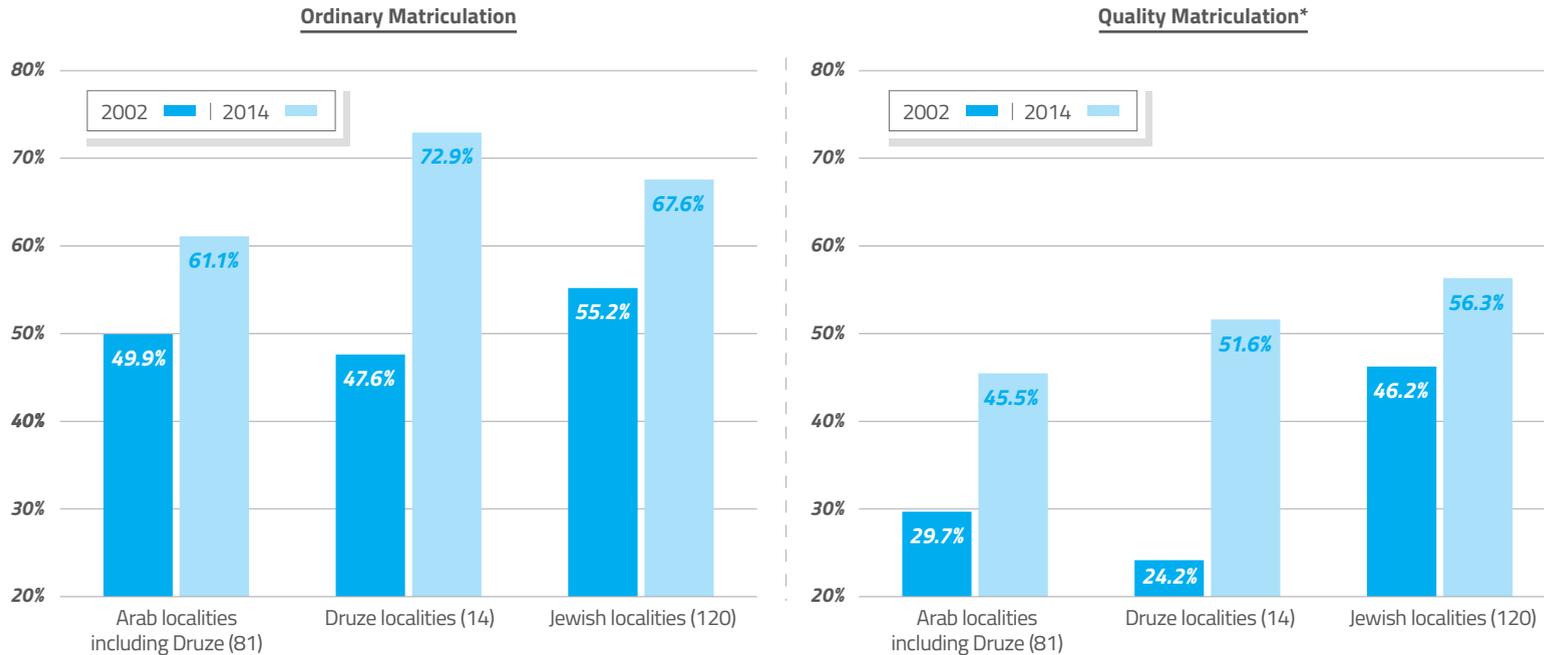


Unemployment rate (ages 25 – 64), Israel and the OECD countries



Students in Arab localities increased their passage rate of matriculation exams between 2002 and 2014, but still lag behind students in Jewish localities. Druze towns surpassed even the Jewish towns in their overall rate of passage.

Pass rate for matriculation exam among 201 local authorities



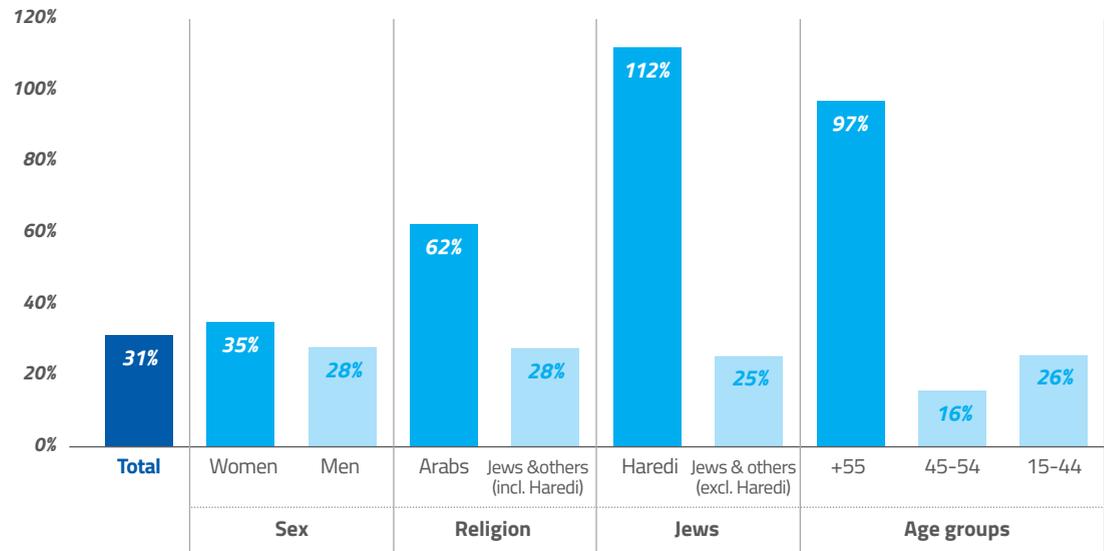
* The quality matriculation exam meets the minimum requirements of the universities

Labor market expansion over the past decade was disproportionately driven by the increase in the participation of women, Arabs, Haredi (ultra-Orthodox) Jews, and those over age 55.

The groups that entered the labor force in large numbers have relatively low levels of experience and skills.

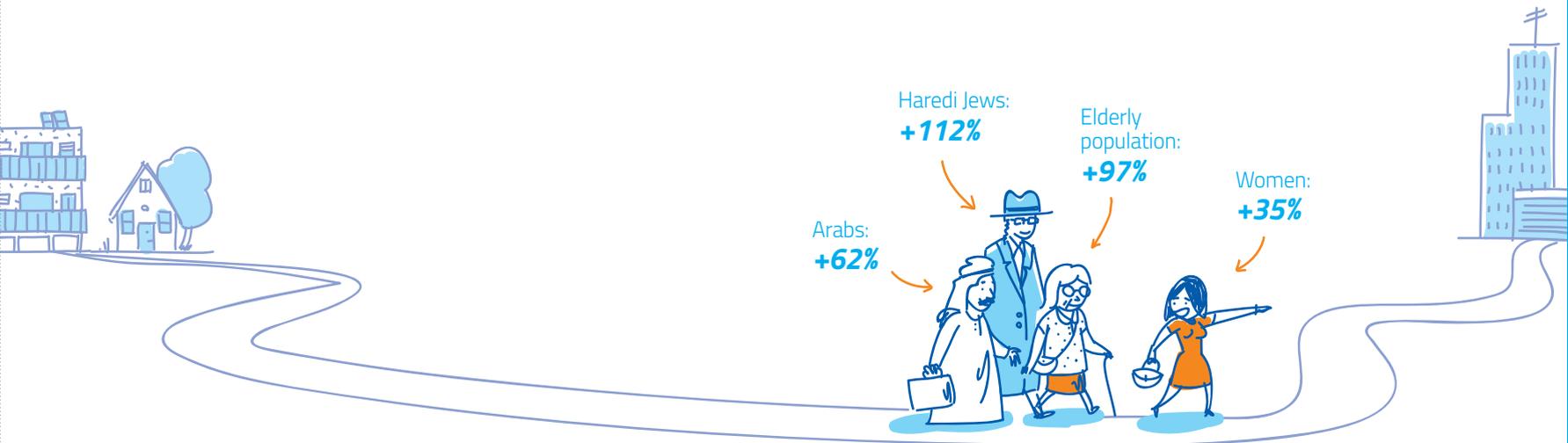
As a result, the reported average wage increased less than it would have under a static labor-force composition.

Percent change in salaried employment among selected groups, 2002-2011



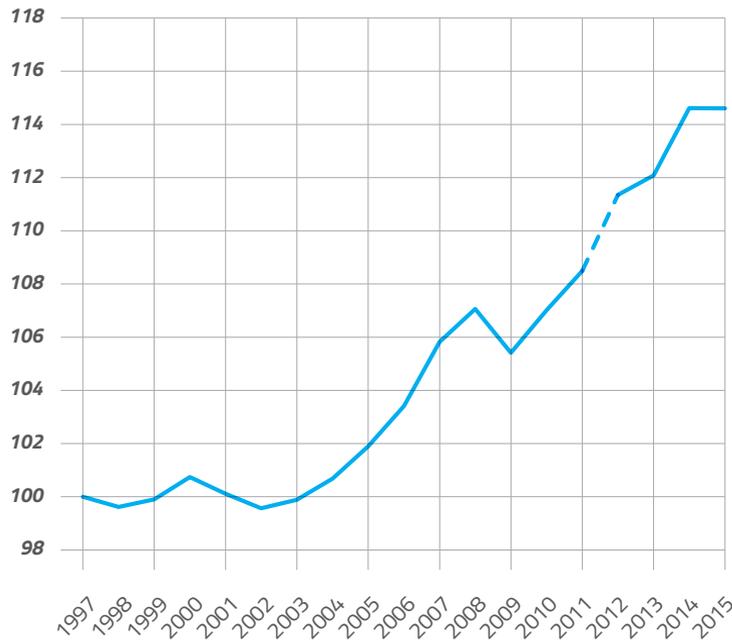
* Haredim: by most recent educational institution

Labor market participation increased dramatically among certain groups between 2002 and 2011

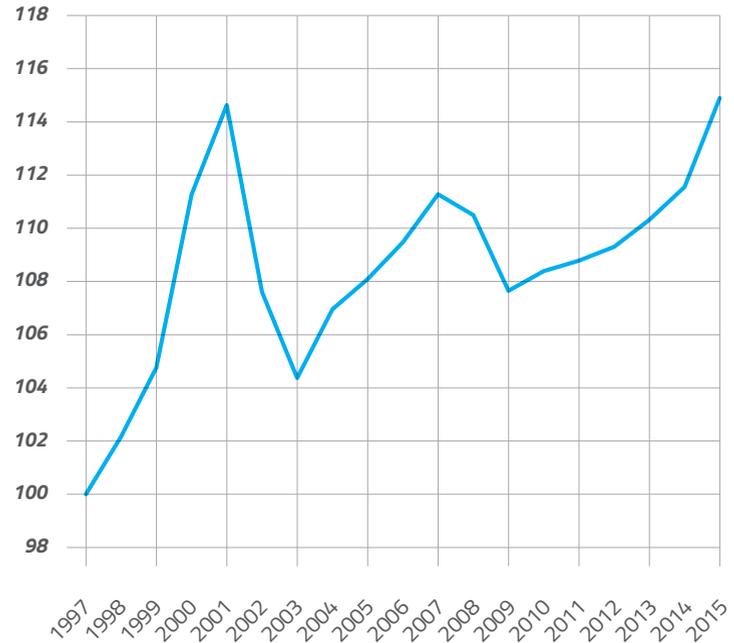


Average real gross wages have increased a lot over the past few years, surpassing in 2015 the previous peak from the boom year of 2001. In the period between 1997 and 2015, both wages and the employment rate increased by roughly 15%.

Employment rate, ages 25-64 (index: 1997=100)



Average real (gross) wages for salaried position (index: 1997=100)



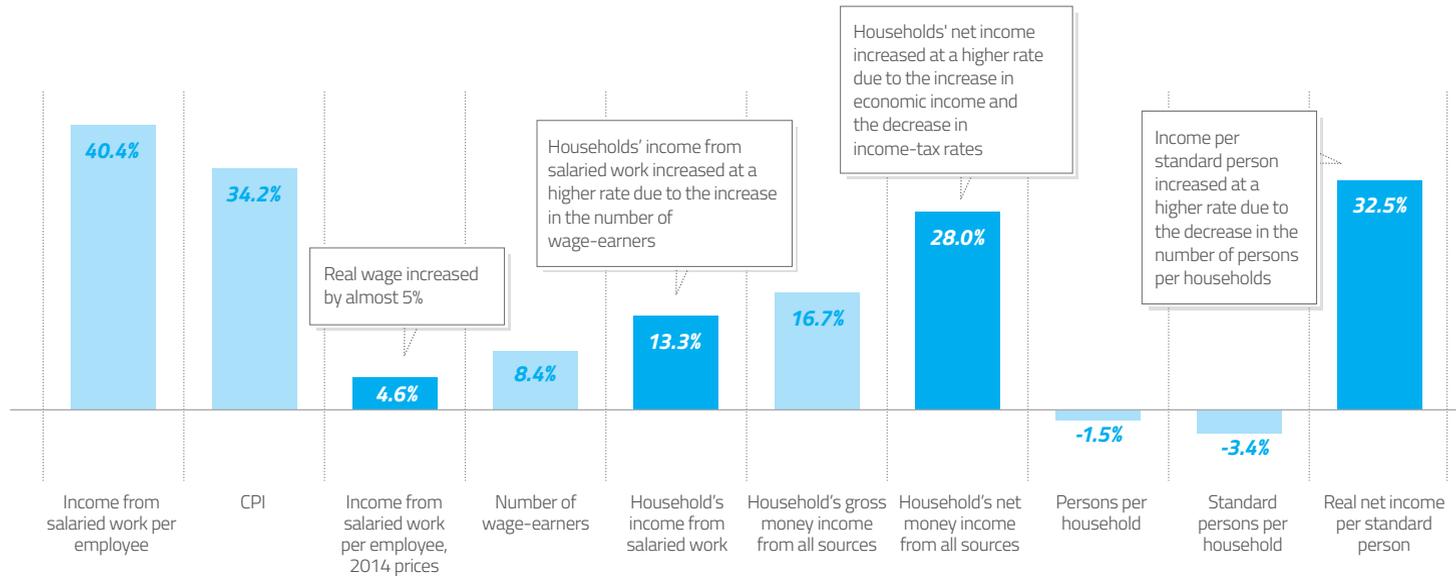
* 1997 was chosen as the base year due to the similarity in GDP gap (the gap between actual GDP and full employment GDP) between the late 1990s and the past few years.

There was a significant increase
in real wages and in the
employment rate
between 1997 and 2015



The average household's standard of living increased significantly over the past 15 years. Multiple simultaneous developments contributed to this outcome.

Changes in the economic and socio-demographic characteristics of household headed by a salaried worker , 1999–2014*

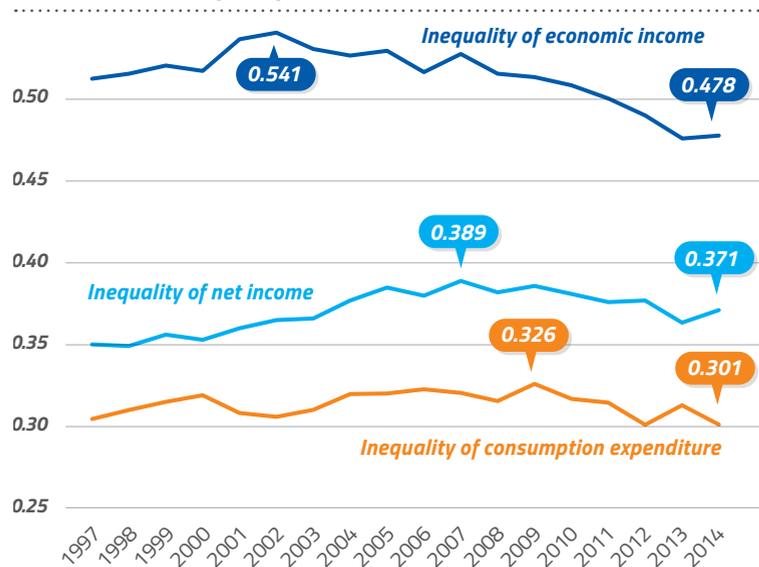


* 1999 was selected as the base year because of the abnormal incomes of the boom year of 2000.

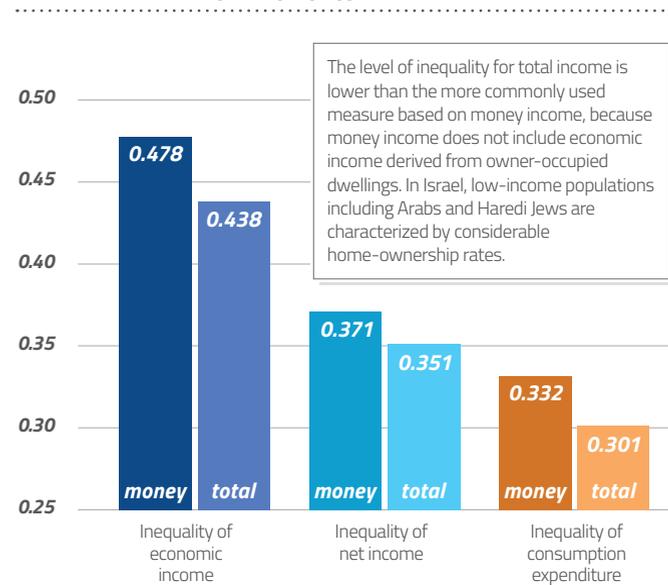
** The real wage per salaried worker increased less than the real wage per salaried position, which increased by 6% in this time period.

Inequality of economic income among households dropped markedly over the past decade, while inequality of net income and of consumption expenditures decreased more gradually. The difference in trends reflects the timing of benefit cuts and the speed of the labor market response.

Gini indices of inequality



Gini indices of inequality by types of income, 2014



* "Total income" refers to monetary and non-monetary (in-kind) income, such as imputed income for self-used housing.

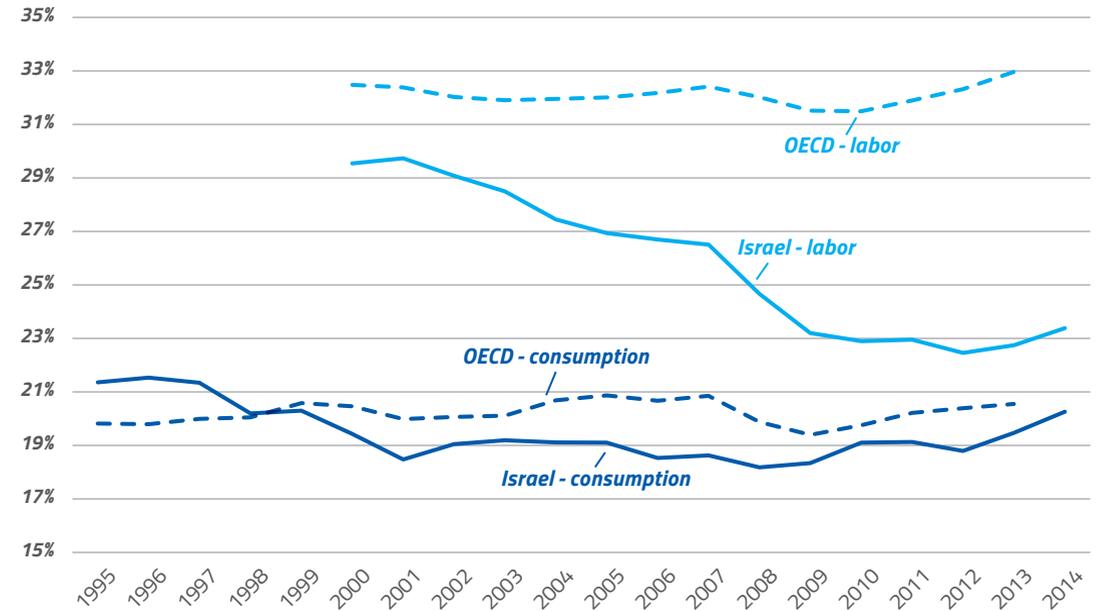
The effective tax* on labor is lower in Israel than in other developed countries.

The effective tax rate on labor in Israel has decreased significantly in recent years, from 30% in 2000 to 23% in 2013, 10 percentage points lower than the OECD average.

The effective tax rate on consumption at the end of the 1990s was about 21% - higher than the OECD average. In 2000 it was reduced to 19%, a rate slightly lower than the OECD average.

In 2014 there was a slight increase in the effective rate of the two types of tax.

Effective tax rates on labor and consumption **



* Effective tax rates - the actual tax collected relative to the tax base - substantially affect the activity of the economy. For this reason, economic policies should take them into account. In addition, an international comparison of statutory tax rates (rates set by law) does not present the whole picture, because countries differ in the structure of the tax system and the level of tax benefits.

** The analysis was done by the method shown in Mendoza et al. (1994). The years that are listed in every series are the years with data available for them, and the OECD average does not include Iceland, Luxembourg, Turkey, Mexico and Greece.

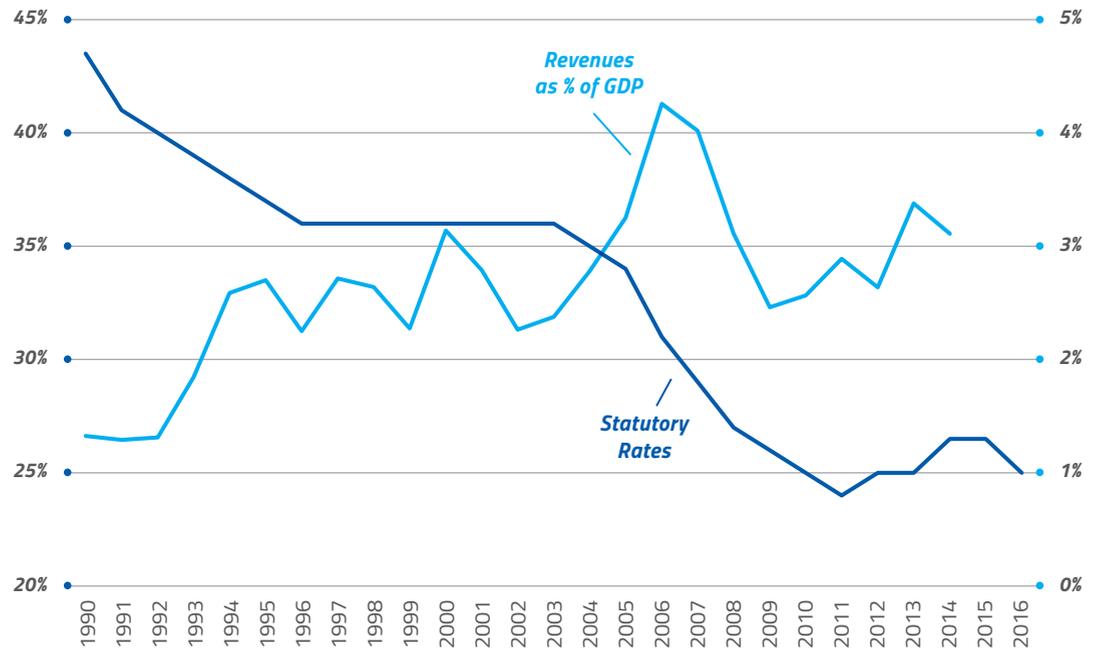
The reduction in corporate tax rate was accompanied by an increase in government revenues from this tax.

Between 1996 and 2003, after a prolonged period of reduction, the statutory corporate tax rate was 36%. Pursuant to the policies enacted in response to the economic crisis of 2001-2003, the Israeli government continued to reduce the corporate tax rate, bringing it down to 24% in 2011.

Following the conclusions of the Trajtenberg Committee, appointed by the government in 2011, the reduction of the corporate tax rate ceased. In 2014 it was increased to 26.5%, but in 2016 it was again reduced to 25%.

Although the corporate tax rate fell, government revenues from corporate taxes as a percentage of GDP saw an overall increase during the period in question.

Corporate tax in Israel



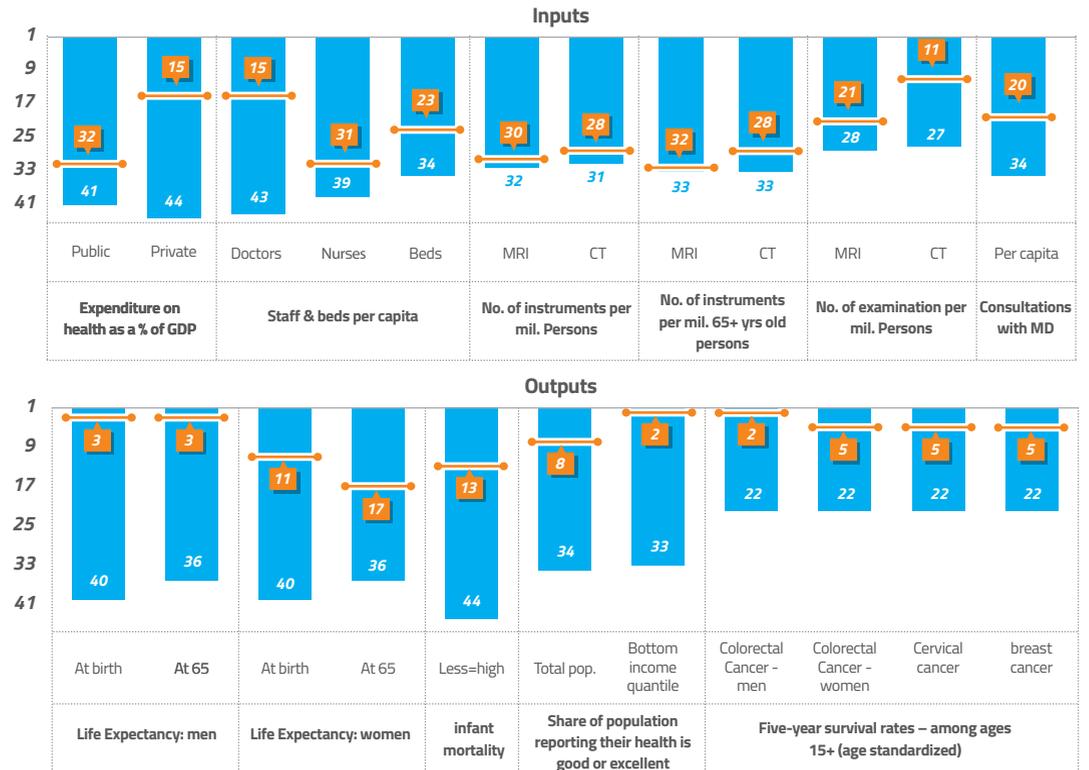
Source: Bank Of Israel

The Israeli health system is relatively successful, despite low levels of inputs and expenditure.

Israel's health system is remarkably successful compared to the health systems of other advanced countries. This is apparent both in standard measures such as life expectancy and in more specific measures such as self-reported health status and survival rates from malignant diseases. Israel attains these results despite relatively low input and expenditure levels.

The gap between inputs and outcomes can be attributed to Israel's relatively young population, the high quality of its medical manpower, and the efficiency of the health system's clinical and managerial functions.

Israel's rank in different health system indices, and the number of countries included in each index, 2013 or latest available year



Source: Kohelet Economic Forum processing of OECD data

Despite low levels of inputs and expenditure, the Israeli health system is relatively successful

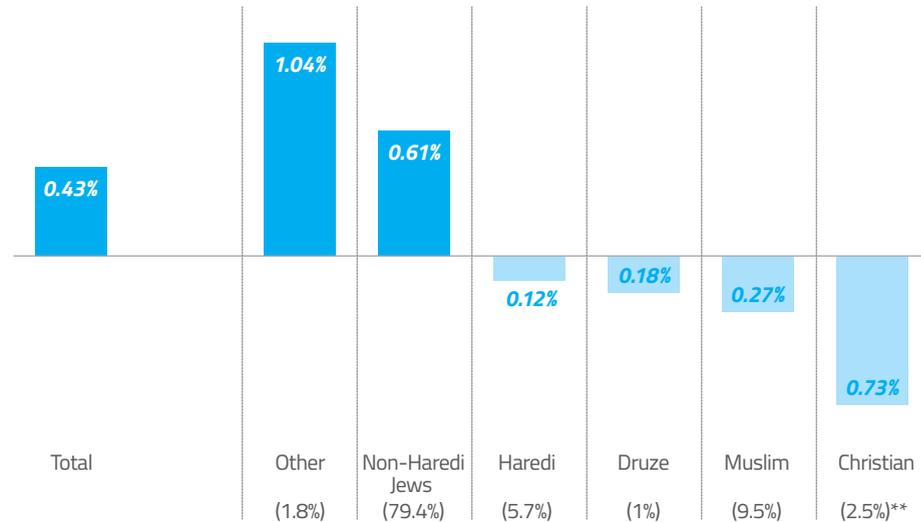


The adjusted average number of rooms per household increased over time, reducing crowding in Israeli housing.

The trend in the number of rooms per household was measured by a regression analysis, which adjusts for changes that are due solely to a change in the size and composition of households.

During this time period there has been a decrease in housing density: the number of rooms per household increased, on average, by 0.43% annually. Among Haredi and Arab households, however, crowding increased.

Average annual change in number of rooms per household, by group, 2006-2013, adjusted for household size and composition.



* Haredi Jews: by most recent educational institution

** Below each group, its share out of the total number of rooms for living

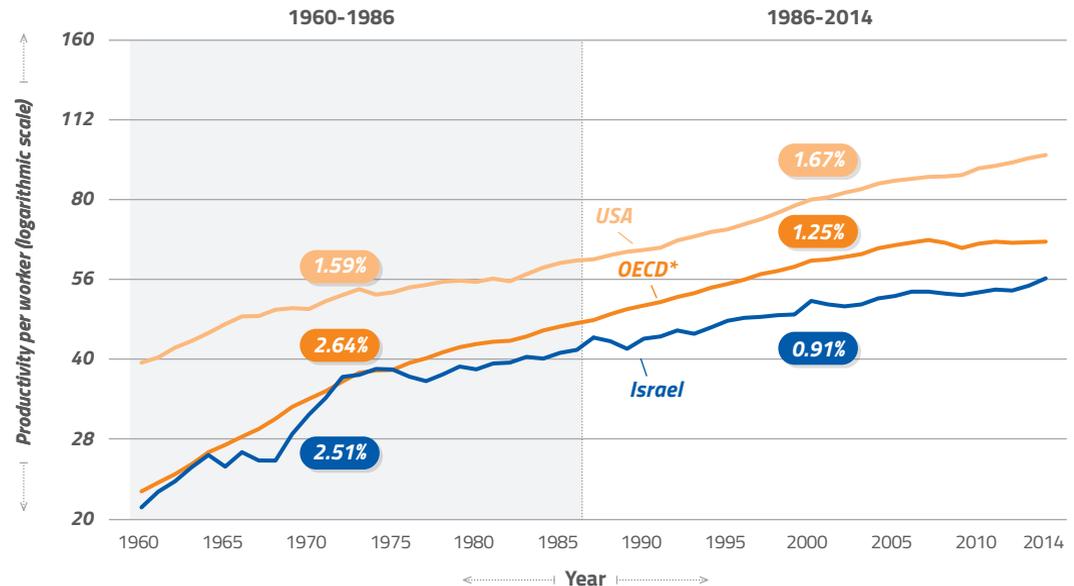


OBSTACLES

The productivity gap between Israel and other developed countries has not narrowed in the years since 1960, and has grown since the 1980s.

Countries with different productivity levels but similar institutions typically display “conditional convergence,” or a gradual closing of the productivity gap. This happens because when the capital level is relatively low, investment is more effective and it is easier to mimic existing technology than to invent it. For over twenty years, however, the gap in productivity between Israel and other developed countries, and in particular between Israel and the United States, has grown.*

Productivity per worker in thousands of dollars at fixed 2005 prices, purchasing power standardized (PPP), 1960 – 2014**



* Average of all OECD countries except the Czech Republic, Estonia, Poland, Slovakia, Slovenia, New Zealand and Hungary

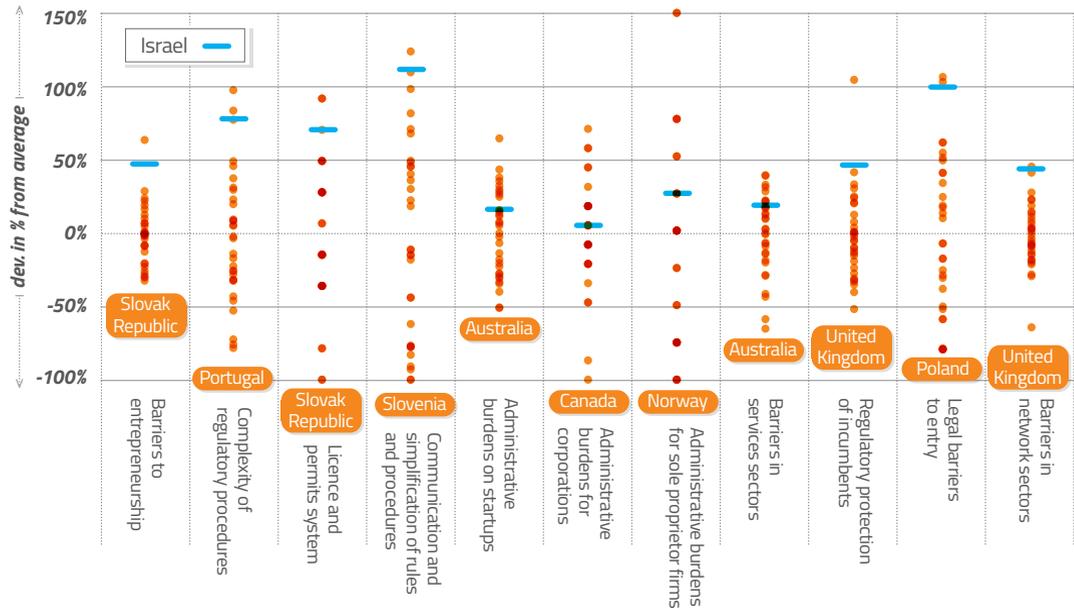
** Labels show average annual change in the relevant sub-period.

Source: Kohelet Economic Forum processing of Penn World Table 8.1, labor market data from the World Bank and the national accounting data according to the OECD

Barriers to entry and exit in the Israeli marketplace are among the highest in the OECD.

Barriers to entry and exit prevent the proper allocation of economic resources by making it difficult for successful firms to grow and for failing firms to clear the way for new ones. Israel has among the highest barriers to entry and exit of any OECD country on seven out of eleven indicators.

Barriers to entry and exit, 2013

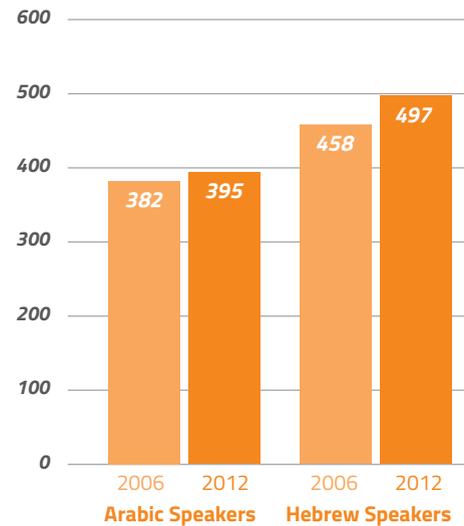


The fraction of youngsters lacking basic skills in Israel is especially high.

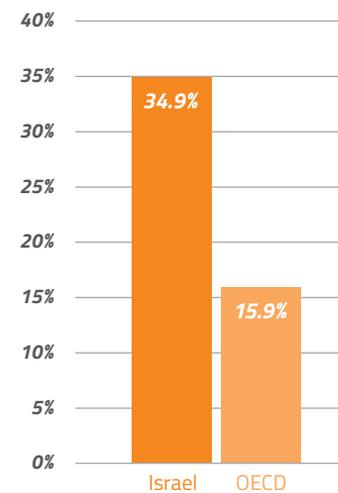
Cognitive skills have been shown to play an important role in productivity. The international PISA exams test the reading ability, mathematical problem-solving skills, and scientific thinking of 15-year-old students. In 2006, the average score of Israeli students was 445, compared with an OECD average of 500, and the variance of Israeli results was high.

The education system's lack of success in imparting cognitive skills is especially noticeable in the Arab sector, where scores were much lower and the improvement between 2006 and 2012 was smaller. Furthermore, students in Haredi institutions, who amounted to about 16% of high school students in 2006, were not examined. Given the Haredi curriculum, we conjecture that these students' performance on the PISA or a similar test would be significantly lower than the average Israeli student. As a result, the state of basic skills among Israeli youth is even more worrisome than the test scores imply.

PISA test results, years 2006 and 2012



The rate of students with low scores*



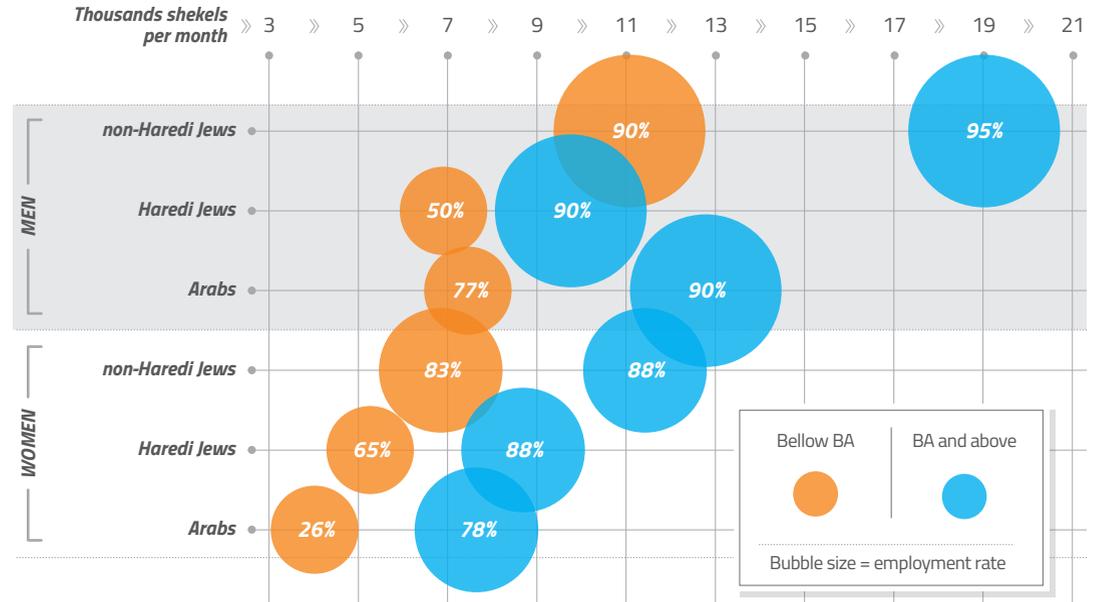
* Average score in math, reading and science at the 2006 PISA test lower than 400 (one standard deviation below the average examinee in the entire organization)

Haredi men and Arab women are characterized by low employment rates and low wages regardless of their level of education.

Among men with college education aged 30-49, there is a considerable gap between the gross monthly wages of non-Haredi Jews, Haredi Jews and Arabs, although the employment rates of these groups are relatively high. The salaries of Haredi Jews with high levels of education are lower than those of non-Haredi Jews with fewer years of schooling.

Arab women who lack a college education have a particularly low earnings level, as do Haredi Jewish women relative to both similar-age Haredi men and non-Haredi Jewish women.

Income from work per employee and employment rate by education groups (ages 30–49), 2014



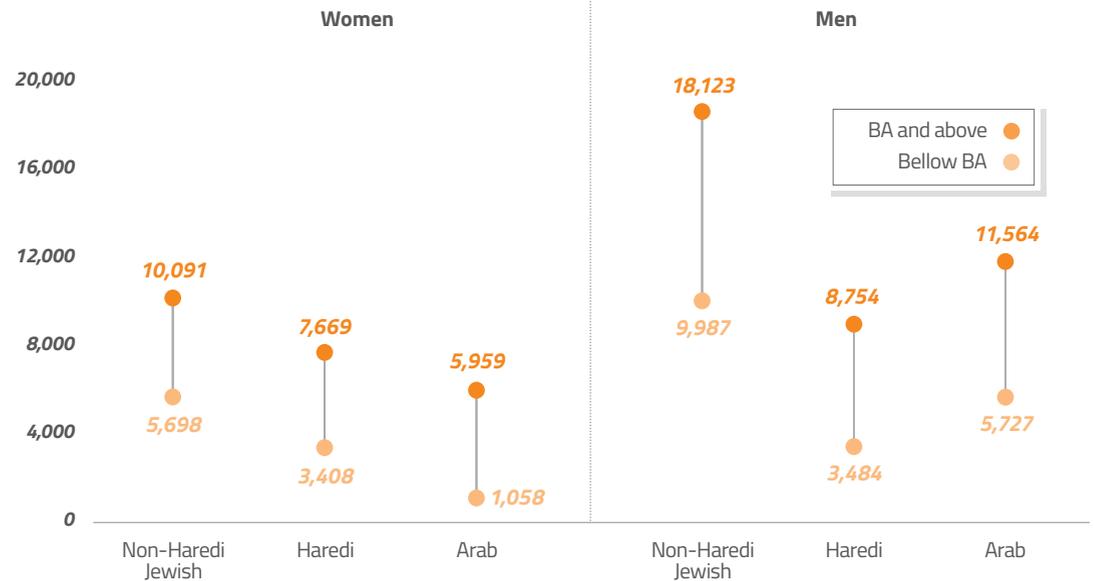
Source: Kohelet Economic Forum processing of CBS Expenditure Survey data

The gaps in per capita income between population groups are very large due to differences in both employment rates and income per employee.

Labor income per capita is affected by both the employment rate and earnings level.

Haredi Jewish men with a college education are characterized by relatively low per capita income, equal to half the average per capita income of non-Haredi men.

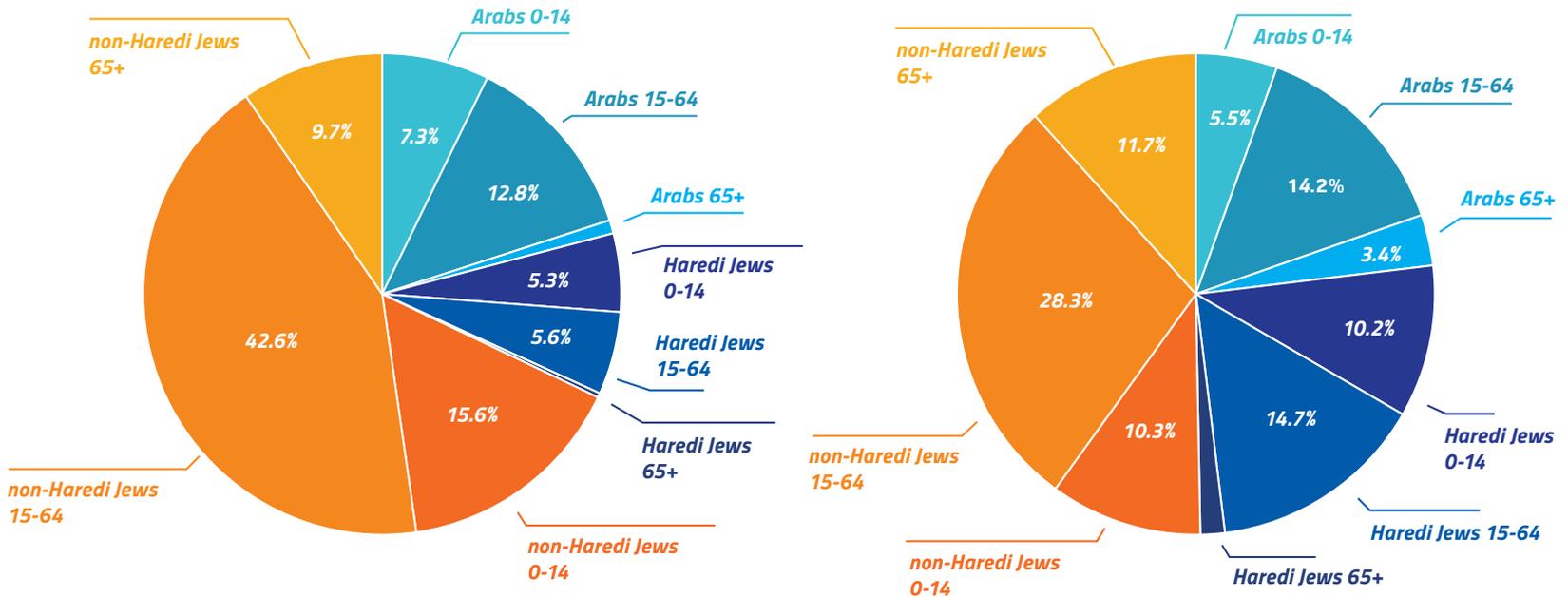
Gross work income per capita (ages 30–49) by education group, in shekels per month, 2014*



* This figure is obtained by multiplying the employment rate and the level of gross income from work per worker aged 30–49 in each group

The proportion of non-Haredi Jews in the population is projected to shrink considerably in the coming decades, especially in the working-age cohort.

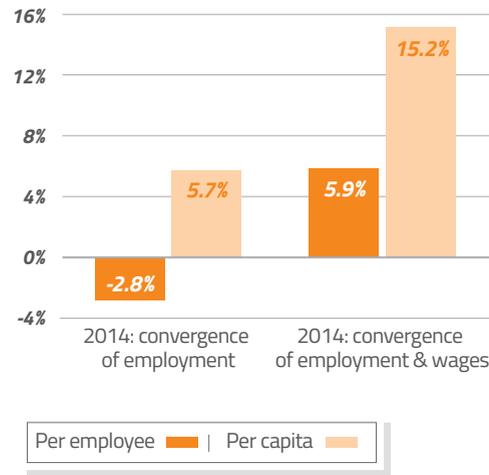
Israel's population by age and sector group



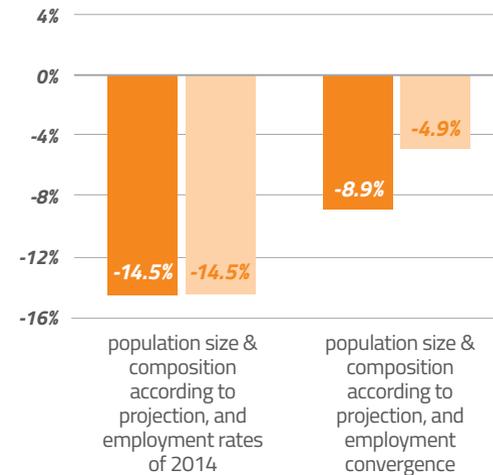
Source: Kohelet Economic Forum processing of CBS data (population forecast, 2009 – 2059, medium scenario)

If levels of employment and wages in the Haredi and Arab population were similar to those of the rest of the population, average income per capita would be 15% higher compared to the situation today. If current gaps persist, per capita income will be 15% less than it would be under the assumption of static demographic composition.

Change in labor income of all employed under the assumption of full upward convergence of employment and income, compared to existing state of 2014



Change in labor income of all employed, compared to the situation of static demographic composition and employment rate, based on projected population growth*



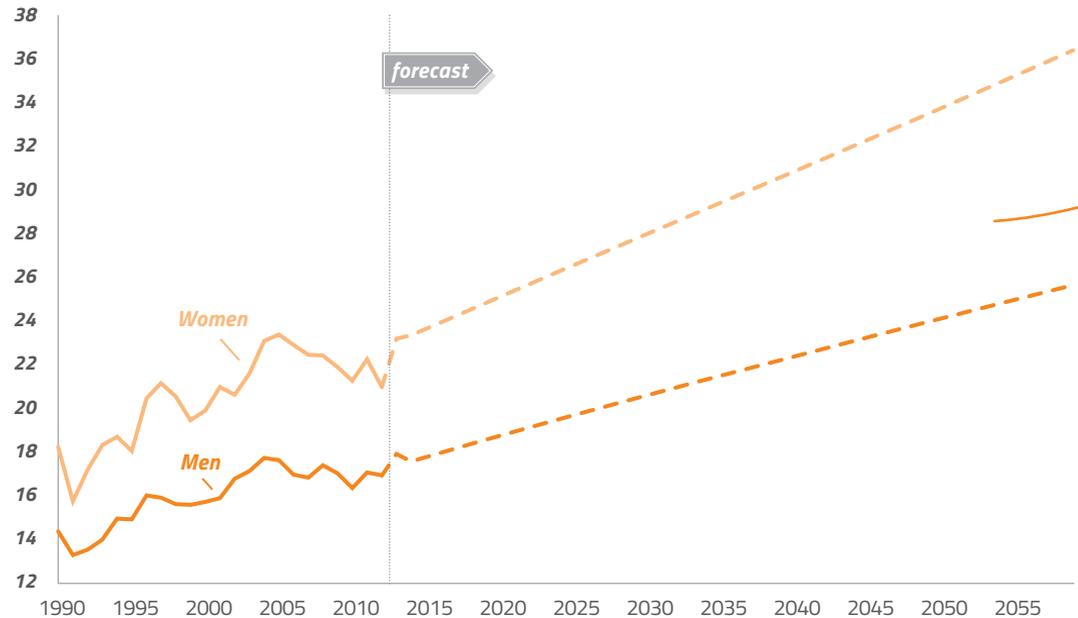
* The reference scenario assumption is that the total population, and in particular the total population aged 15 and over, increases in accordance with the official projection, but the behavioral differences among sectors is unchanged. All data from the CBS 2014 expenditures survey, except rates of population growth by population-group and sex, taken from population forecast from 2009 to 2059, published by the Central Bureau of Statistics in 2012 (medium scenario).

Without further changes in the retirement age, the duration of retirement is expected to increase by a factor of 1.5 for men and even more for women.

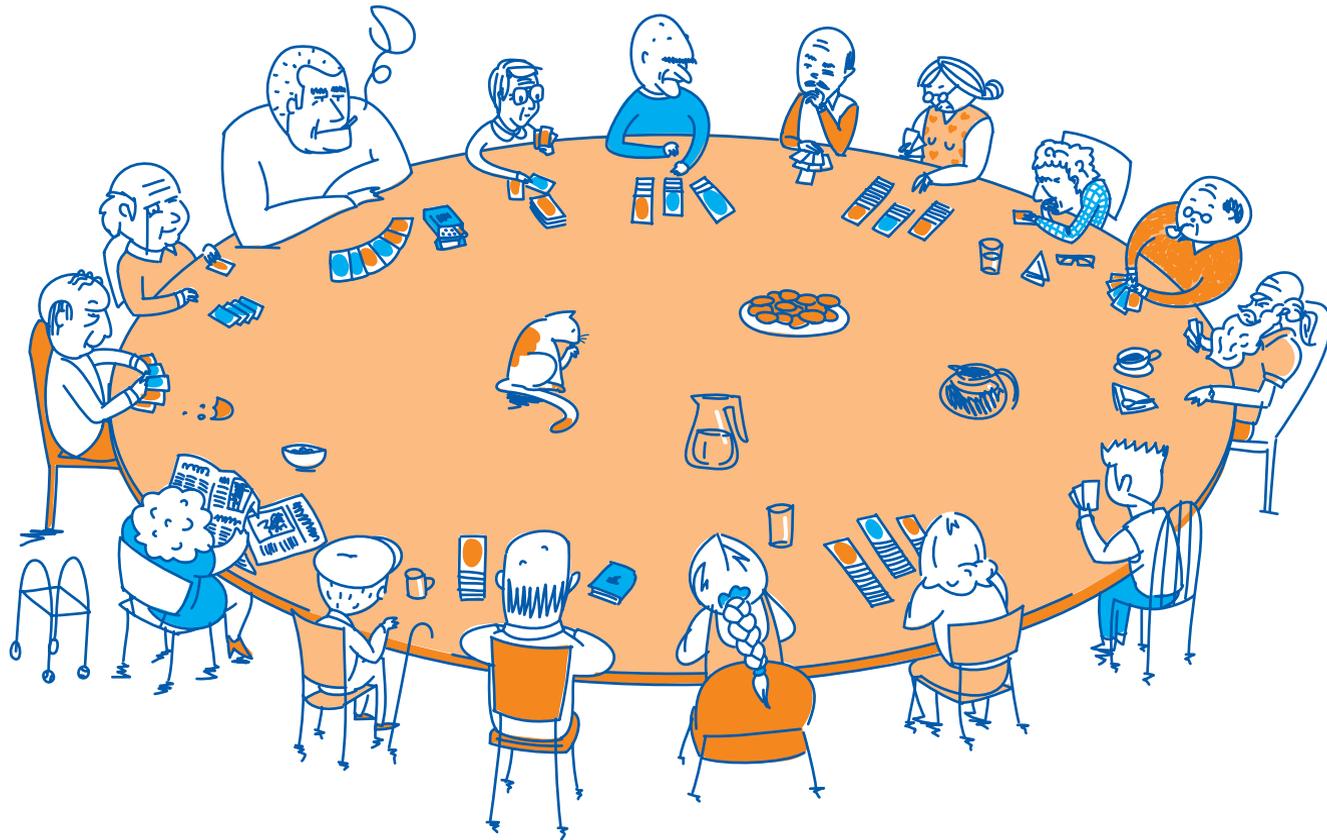
One effect of the increase in life expectancy is an increase in number of years of retirement that households must finance.

Households can therefore maintain their standard of living by increasing pension or other forms of saving, or by deferring retirement.

Gap between the effective retirement age and the life expectancy at age 65, assuming no change in the retirement age



The duration of retirement is expected to increase by a factor of 1.5

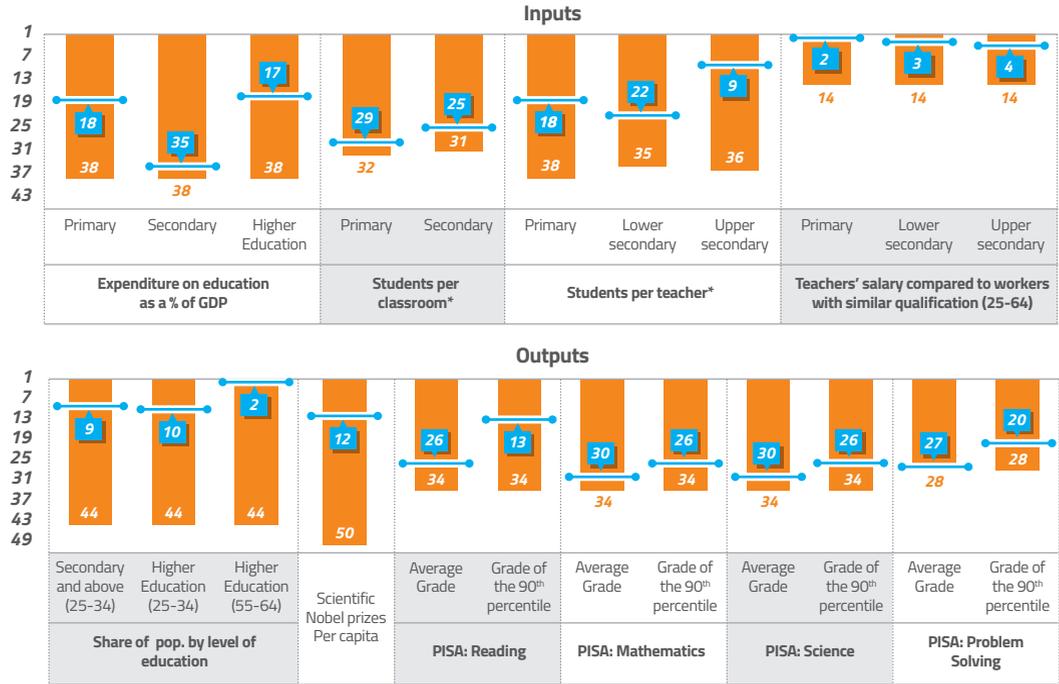


Israel's education expenditures are close to the median for developed countries, but its educational performance is quite low by international standards.

Teacher salaries in Israel stand above the OECD median, yet Israel rates quite low in terms of its educational outcomes.

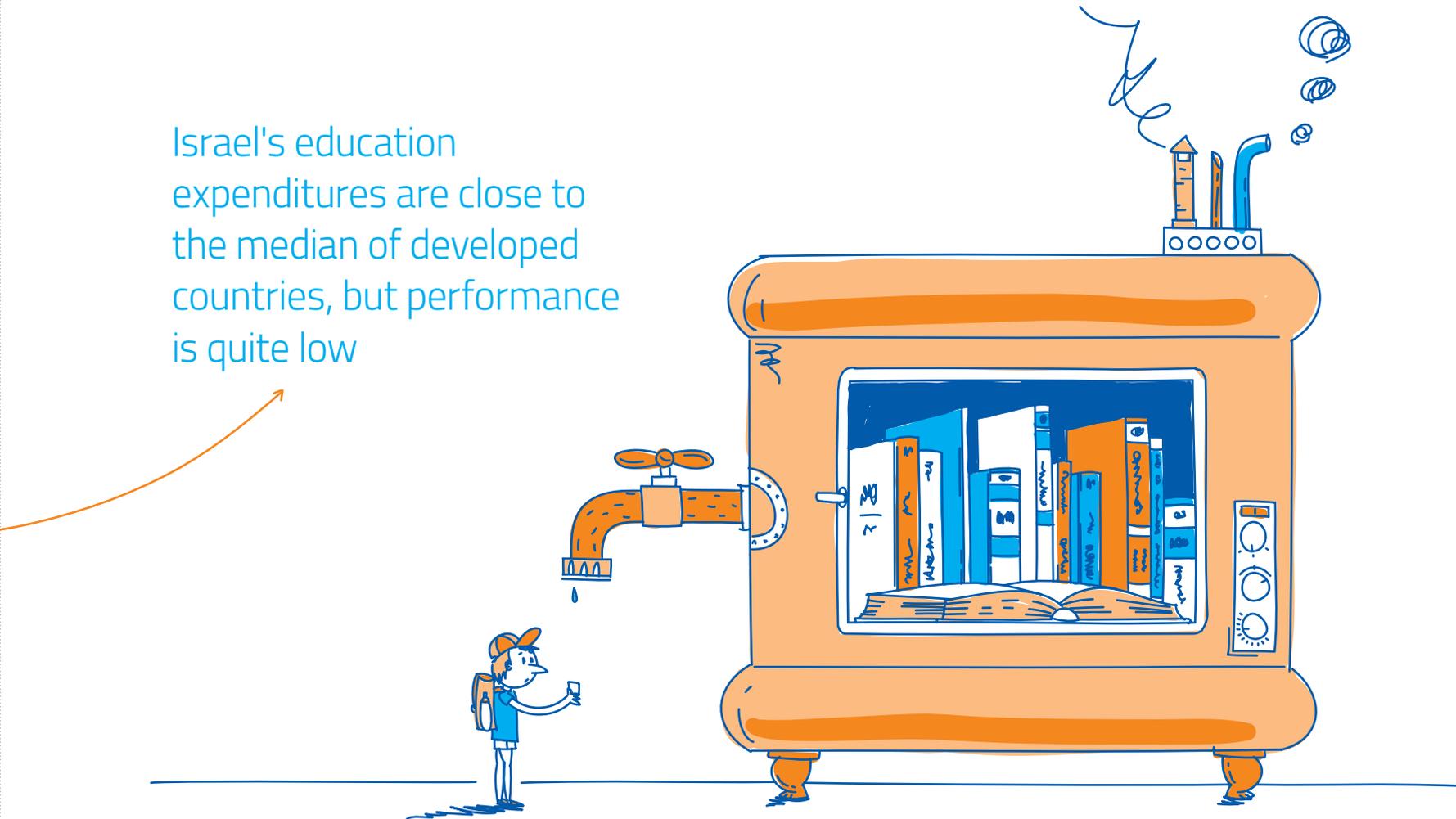
Scores for Israeli students on the 2012 international PISA exams put Israel at the bottom ranking in all categories. Israel did, however, lead in improvement of PISA scores between 2009 and 2012.

Israel's rating in educational measures compared to countries for which data exists, 2012 or the latest year available



* In these categories, a higher rank is attributed to a lower ratio.

Israel's education expenditures are close to the median of developed countries, but performance is quite low

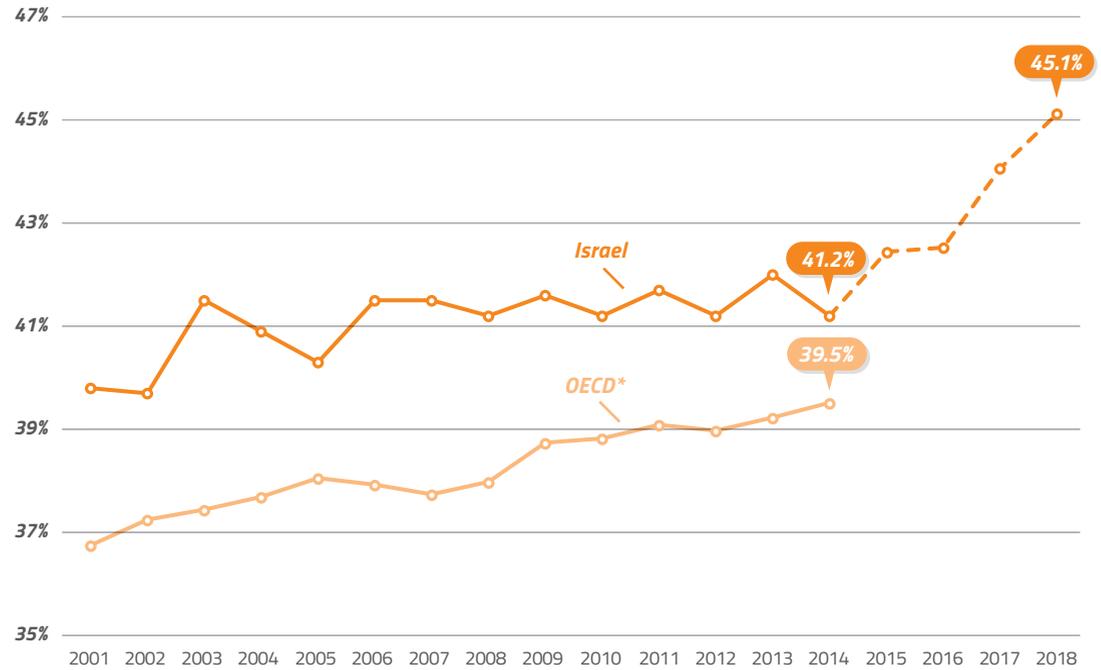


Israel's statutory minimum wage, compared to the average wage, is higher than the corresponding ratio in the OECD, and is set to grow even more in the coming years.

The statutory minimum wage in Israel was 4,300 shekels per month in 2014 and is set to rise in phases to 5,300 shekels per month by December 2017. As a result, the ratio of the minimum wage to the average wage is expected to rise from 41.2% in 2014 to 45.1% in 2018. **

According to the OECD, Israel's relatively high minimum wage threatens to make it more difficult for low-skilled and inexperienced workers to find jobs. ***

Minimum wage compared to the average wage of full-time employees, Israel and the OECD average *



* Simple average of the 25 OECD countries for which data is available.

** The forecast for Israel for 2015-2018 assumes annual growth of 3% in the average wage of full-time employees.

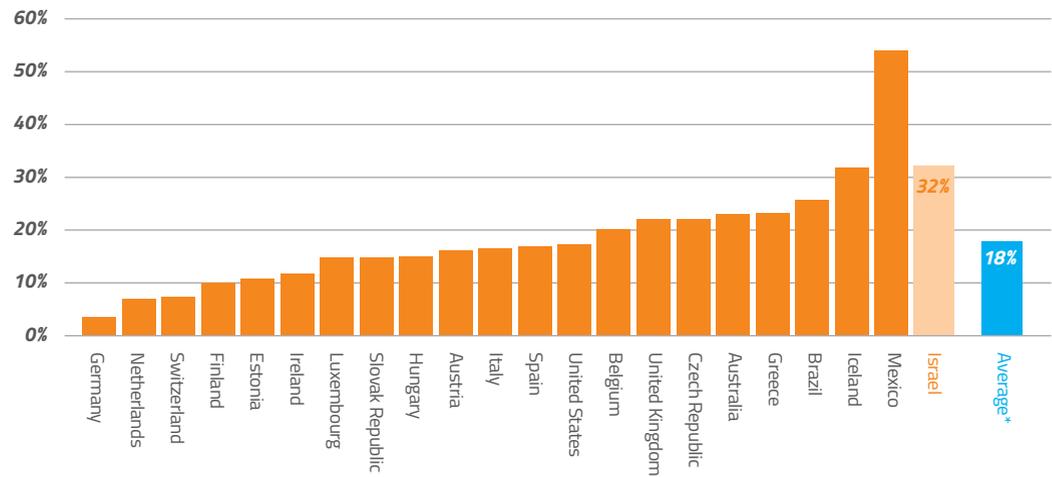
*** Link: www.oecd.org/israel/Employment-Outlook-Israel-EN.pdf

Source: Kohelet Economic Forum processing of OECD data

One third of employees in Israel work more than 45 hours per week, a very high rate compared with other developed countries.

Long working hours influence quality of life in two ways: first, long working hours mean limited leisure time, which is in itself a measure of life quality; and second, long working hours are associated with a low level of labor productivity.

Rate of employed working over 45 hours per week*



* 21 OECD countries. Data for 2013 or last year available.

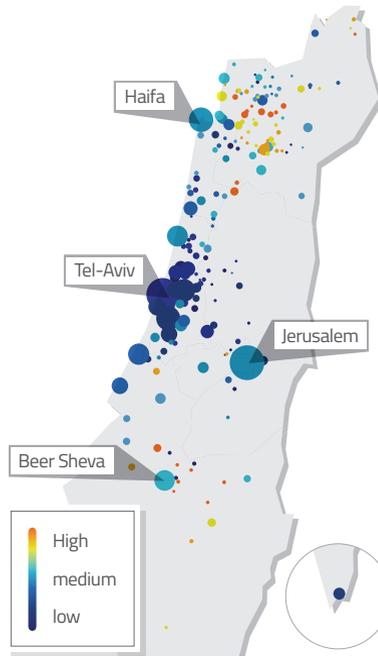
Source: Kohelet Economic Forum processing of LIS data

Unemployment rates are higher in the periphery than in the center of the country and much higher in the Arab sector than among Jews.

An econometric study* examining the relationship between unemployment and characteristics of various localities shows that in all districts of the country there is a large gap between Arab towns and villages and other localities.

For example, the predicted unemployment rate in an Arab village located in the southern region is 16%, 6 percentage points higher than that of a Jewish locality in the southern region and 14 percentage points higher than that of a Jewish locality in the central region.

Localities in Israel by unemployment rate, 2015



Point size proportional to number of employed in locality (at 2012)

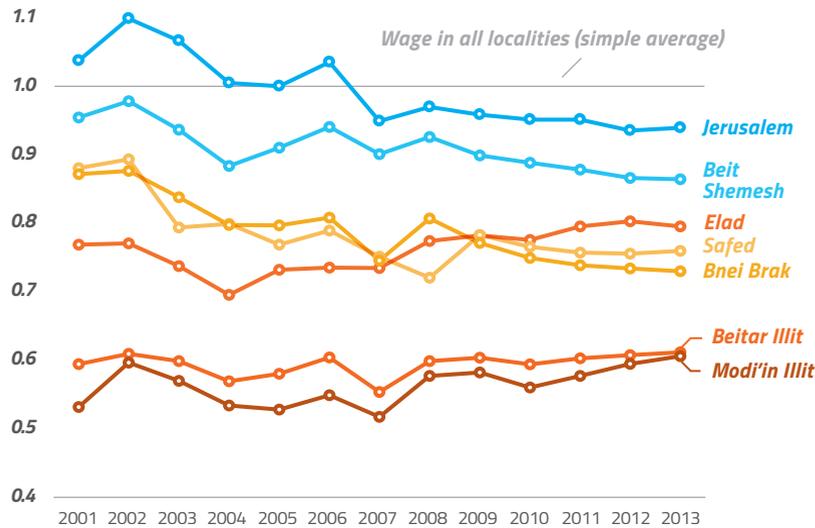
Expected unemployment rate in locality by region and sector



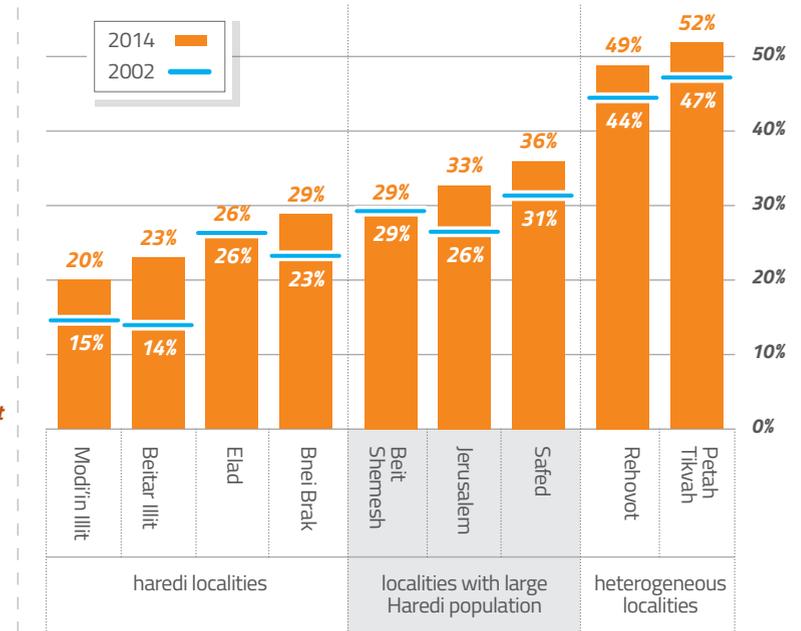
* OLS estimation of the unemployment rate in the settlement included as explanatory variables settlement size (logarithm) and dummy variables for sector and region. In calculating the forecast, we assumed settlement size equal to the average of the sample (195 settlements).

The average salary in Haredi localities remains very low compared to the Israeli average. In localities with large Haredi population, the relative wages eroded in recent years.

Employee wage in Haredi towns compared to country-wide average



The rate of employed as part of the total population in authority (all ages), 2002 and 2014



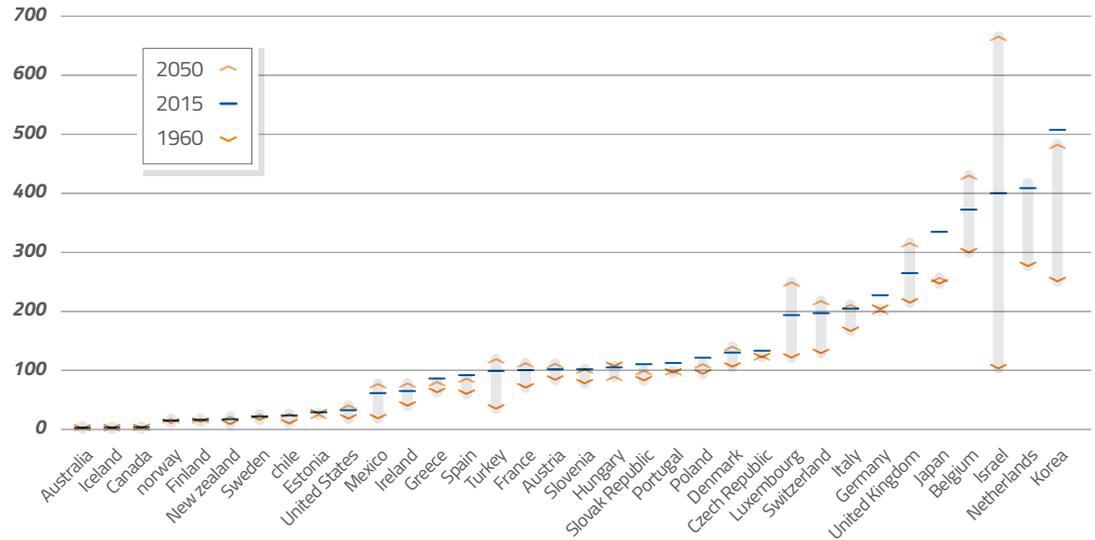
Source: Kohelet Economic Forum processing of CBS local authorities data

Israel's population density is very high relative to other developed countries. Israel is projected to become by far the most crowded country in the OECD by 2050.

Israel's high population density is likely to impair citizens' quality of life. The fact that a significant proportion of Israeli territory comprises desert land exacerbates the problem.

Israel's population density necessitates continued improvement in the planning and functioning of its transportation and energy infrastructures, and in the management of its natural and environmental resources.

Population density, residents per km² (OECD countries)



* Israel's territory does not include the Judea and Samaria and the Gaza Strip but has the Golan Heights and East Jerusalem; The population includes residents of Israel living in Judea and Samaria.



Israel's population density
is relatively very high

The Kohelet Economic Forum

The Kohelet Economic Forum promotes policy to support growth, competition and freedom, through economic and social policy research and the publication of policy proposals. The forum was founded in Jerusalem in September 2014 with the support of the Kohelet Policy Forum and the Tikvah Fund.

The Kohelet Policy Forum

The Kohelet Policy Forum is a non-partisan think tank that strives to secure the future of Israel as the nation-state of the Jewish people, to strengthen Israeli democracy, expand individual liberty and deepen free market principles in Israel.

The Tikvah Fund

The Tikvah Fund is a philanthropic foundation and ideas institution committed to supporting the intellectual, religious, and political leaders of the Jewish people and the Jewish State. Tikvah runs and invests in a wide range of initiatives in Israel, the United States, and around the world, including educational programs, publications, and fellowships.

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