

A Picture of the Nation

Israel's Society and Economy in Figures

Avi Weiss




TAUB CENTER
 FOR SOCIAL POLICY STUDIES IN ISRAEL

Demographics 
 Macroeconomics 
 Welfare 
 Health and Healthcare 
 Spotlight: Arab Israeli Health 
 Education and Employment: An Overview 
 Spotlight: Ostracism in Schools 
 Education and Employment: Arab Israelis 
 Education and Employment: Haredim 

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Taub Center for Social Policy Studies in Israel

Jerusalem, May 2018

The research upon which most of the figures and analyses in this booklet are based can be found in the *State of the Nation Report 2017* and other Taub Center publications

Taub Center for Social Policy Studies in Israel

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The Taub Center is an independent, nonpartisan, socioeconomic research institute based in Jerusalem. The Center conducts quality, impartial research on socioeconomic conditions in Israel, and develops innovative, equitable and practical options for macro public policies that advance the well-being of Israelis. The Center strives to influence public policy through direct communications with policy makers and by enriching the public debate that accompanies the decision making process.

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Center address:

15 Ha'ari Street, Jerusalem, Israel

Tel: 972 2 567 1818

Fax: 972 2 567 1919

Email: info@taubcenter.org.il

Website: www.taubcenter.org.il

English lay-out: Laura Schreiber

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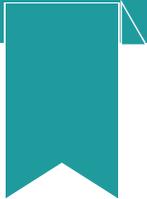
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Abbreviations

BOI	Bank of Israel
CBS	Central Bureau of Statistics
CPI	Consumer Price Index
FSU	Former Soviet Union
GDP	Gross domestic product
IMF	International Monetary Fund
Meitzav	Hebrew acronym for Measurement of School Growth and Efficiency — nationwide exams in schools in Israel
NII	National Insurance Institute
NIS	New Israeli Shekel
OECD	Organisation for Economic Co-operation and Development
PISA	Programme for International Student Assessment — worldwide exams of the OECD
RAMA	National Authority for Measurement and Evaluation in Education
STEM	Science, Technology, Engineering, and Mathematics — grouping of academic disciplines
TIMSS	Trends in International Mathematics and Science Study — worldwide exams of the IEA



A Message from the Executive Director



It is with great pleasure that I present *A Picture of the Nation 2018*, generously supported by the Koret Foundation. As in recent years, the figures and texts in this pamphlet highlight some of the most crucial social and economic issues facing Israeli society as well as some of the most important trends, and present these as a continuous and comprehensive story. As always, the findings are based mostly on recent studies carried out by the Center's outstanding researchers.

We begin with some surprising information about demographic changes occurring in Israel, and their implications for the future makeup of the country's population. We then paint a macroeconomic picture of the Israeli economy, which has been quite strong over the past few years. In this section we explain why the remarkable success in Israel's Start-Up Nation industries has not trickled down into the rest of the economy.

We turn next to welfare. We consider how the war on poverty is progressing, and reflect on implications of the welfare financing system currently employed in Israel – “matching” by the Ministry of Labor and Social Welfare of the local authorities' budgets.

Health is next, and is divided into two sections. The first section considers general trends, and in it we demonstrate the regression in health funding in Israel relative to other countries. In the second section we shine a spotlight on health among Arab Israelis, and explain the sources of gaps between this population and the Jewish population in measures such as life expectancy. Finally, we dedicate a number of sections to education and employment. We begin with an overview, which, among other things, considers the degree

to which the Ministry of Education has attained the goals it set out in recent years. In a special section we consider the degree of reported ostracism (*herem*) in Israeli schools, and we highlight the differences in the likelihood to be a victim of ostracism in different groups (grades, genders, sectors), and show that ostracism has decreased substantially over time. Finally, we show trends in education and employment among Arab Israelis — with a special focus on young Arab Israeli women — and Haredim.

I would like to thank the Koret Foundation for generously sponsoring this publication, and appreciate their supportive friendship in not only bringing this book to light, but in partnering with us to ensure that it reaches all those with a vested interest in Israel. I hope that these materials are informative for all, and, in particular, assist decision makers in basing their choices and actions on unbiased data and professional analyses.

Professor Avi Weiss
Executive Director, Taub Center
Department of Economics, Bar-Ilan University



Demographics

Change is afoot

Projections have been made in recent years regarding the future demographic makeup of Israeli society, projections that have raised serious concerns regarding the sustainability of the economy given existing education and employment patterns among some of the population groups, and, in particular, among the Haredim (ultra-Orthodox). However, there are a number of significant demographic shifts occurring, some of which, it seems, have not been fully accounted for and internalized in these forecasts. The coming pages present changes that, if they continue, may have significant consequences for the future composition of the country, or, at the very least, for the pace at which the demographic changes will occur.

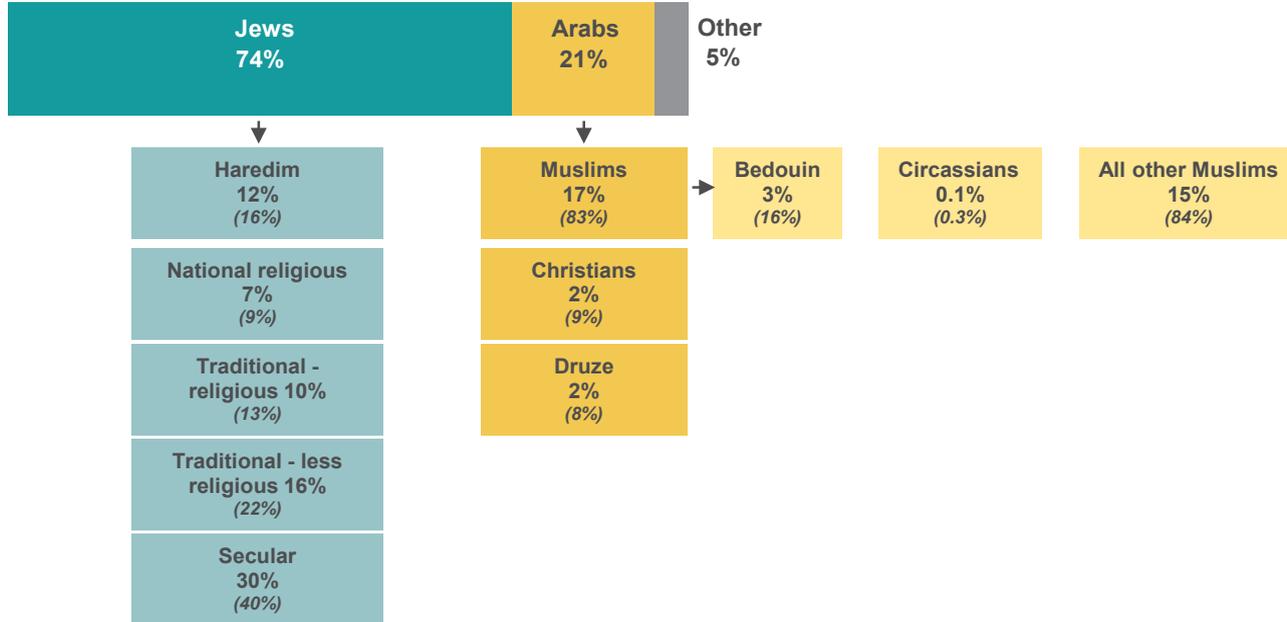
A demographic overview of Israel

The current demographic makeup of Israel is about 74% Jewish, 21% Arab, and 5% “Other.” The Arab population is predominantly Muslim, about 17% of the population of Israel, of which about 3% are Bedouin. Arab Christians and Druze constitute about 2% each of the population.

When attempting to break down the Jewish population by level of religiosity, two problems arise. First, due to sampling problems within the Haredi population, the percentage reported in the Central Bureau of Statistics *Social Survey* (9%) is known to be an underestimate, with the actual size estimated to be about 12% as shown in the figure (16% of the Jewish population, though more than 20% of Israeli children). Second, religious affiliations are based on self-reporting, making the boundaries between the statuses blurry. For both of these reasons, the listed percentages should be viewed as approximations only. Under these assumptions, we see that if we group Traditional and Secular Jews, they make up about 56% of the population in Israel (75% of the Jewish population).

Population distribution by sector and religion, 2016

Percent in parenthesis is out of the total sector population



Note: Numbers may not sum due to rounding.

Christian refers to Christian Arabs only. Christians who are not Arabs are included in the “Other” category. About 80 percent of the Christians in Israel are Arabs.

Source: Based on CBS, *Social Survey, The Moslem Population in Israel* (Press Release, August 30, 2017), *Christmas 2017 – Christians in Israel* (Press Release, November 24, 2017), *The Druze Population of Israel* (Press Release, April 25, 2018)

Large demographic differences between Israeli population groups

There are quite stark differences in some key demographic variables across population groups in Israel. The age distribution among Haredim is much younger than among Arab Israelis, who, in turn, have a much younger distribution than non-Haredi Jewish Israelis. The opposite trend is found with respect to the percentage of those aged 20 and over who are married: the highest percentage of married people is among Haredim, and the lowest is among non-Haredi Jews.

The average family size is similar for the Arab and Haredi populations. This last finding, however, is changing as fertility rates among the Arab Israeli population have fallen drastically (as shown on the next page), and are currently close to that of non-Haredi Jews.

Demographic characteristics of the population 2017

	Non-Haredi Jews	Haredi Jews	Arab Israelis
Median age	34	16	22
Average age	36.2	20.8	26.4
Percent of the population under age 18	28.5%	56.0%	42.9%
Percent of married individuals age 20 and over	62.7%	81.6%	69.0%
Average number in household	3.4	5.2	4.9
Total fertility rate*	2.7	6.9	3.1

Note: * Total fertility rate (TFR) is the average number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years having births according to the current age-specific fertility rates.

Source: Dov Chernichovsky, Taub Center

Data: CBS, *Social Survey 2016, Statistical Abstract of Israel 2017*

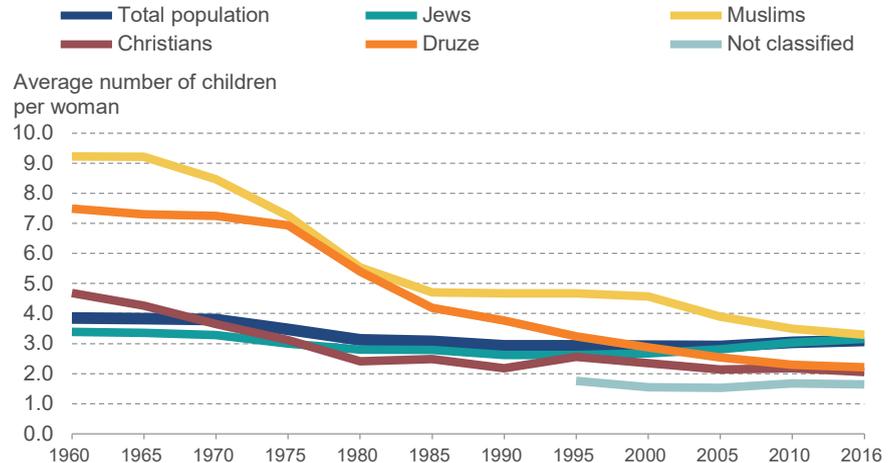
Major shifts in fertility across population groups

The fertility rate (number of children per woman) in Israel has been fairly constant over almost four decades, remaining around 3 since 1980, after falling from closer to 4 in the 1960s and 1970s. The current rate of 3.11 makes Israel the only OECD country with fertility substantially above the replacement rate (2.1). In fact, the fertility rate in Israel is almost twice the average in the other OECD countries.

While the average has remained fairly constant, the makeup has not. There have been substantial changes within the Arab Israeli population. Between 1960 and 2016, fertility rates fell by 56% for Christians, by 64% for Muslims, and by 70% for Druze. Jewish fertility followed a very different path, falling from 1960 to 1990 by 23% and increasing since then by 21%.

The increase in the latter period is the result of a combination of two separate phenomena — an increase in the portion of Haredim (with a fertility rate of 6.9) in the population, and an increase in the number of children among Secular and Traditional Jews.

Total fertility rates by religious group



Source: Alex Weinreb, Taub Center | Data: CBS, *Statistical Abstract of Israel*

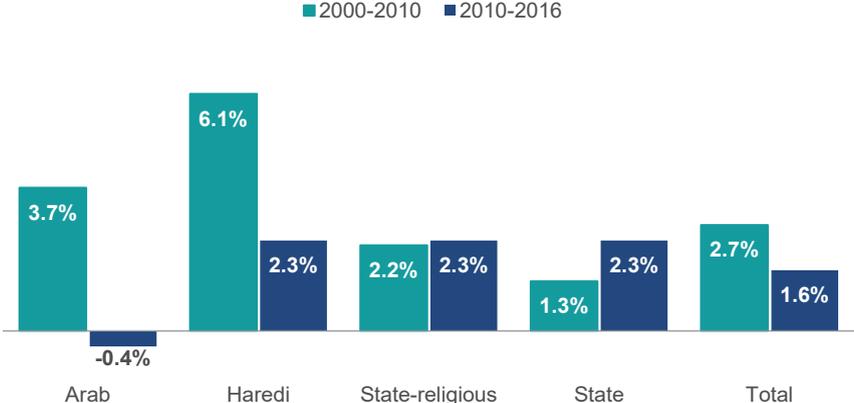
Surprising changes in first-grade enrollment rates

A surprising demographic change has taken place with respect to the growth rate in 1st grade enrollment in the different education streams. The first decade of this century saw an expected pattern, with annual growth highest in the Haredi stream, followed by that in the Arab Israeli stream, the State-religious stream, and, finally, the State stream. This reflected fertility rates in these sectors.

The second decade shows a drastically different pattern, with the number of children in the Arab stream actually falling slightly, while the growth rate in the Jewish population is basically identical in all streams. The former finding is not surprising given the fall in fertility in the Arab population. The number of Arabs in recent birth cohorts is now stable at about 40,000 per cohort. The similarity among

the Jewish streams in growth rates is very surprising given the very different fertility rates between the Jewish groups. It seems that this divergence is partially explained by movement between the education streams, which may be an indicator of a shift away from religious studies.

Average annual change in the number of 1st grade students



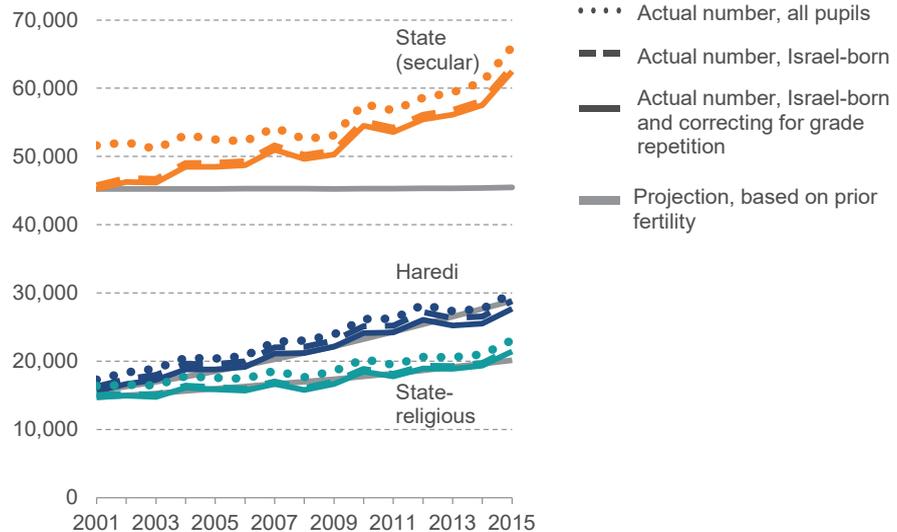
Source: Nachum Blass and Yossi Shavit, Taub Center | Data: Ministry of Education, *Transparency in Education*

Far more children in State schools than projected

Opinions about the direction of change in the level of religious commitment among Jews are divided. In order to evaluate this, we compared enrollment in 1st grade for all students in Israel to projected enrollment based on fertility rates within each of the religious sectors 6 years earlier.

Results support the idea that there is considerable movement towards more secular schools. Although the population of 1st graders in Haredi schools has been growing rapidly, it has fallen below the projected level in recent years. Enrollment in the State stream has grown faster than the rate implied by prior fertility levels. In addition to migration from religious schools, much of the increase has come from Arab Israelis registering in Jewish schools and children of immigrants.

Projected versus actual 1st grade enrollment in the Hebrew education sector



Source: Alex Weinreb and Nachum Blass, Taub Center
Data: Hleihelel, 2015; Ministry of Education, Student database

There has been a net movement out of religious primary schools

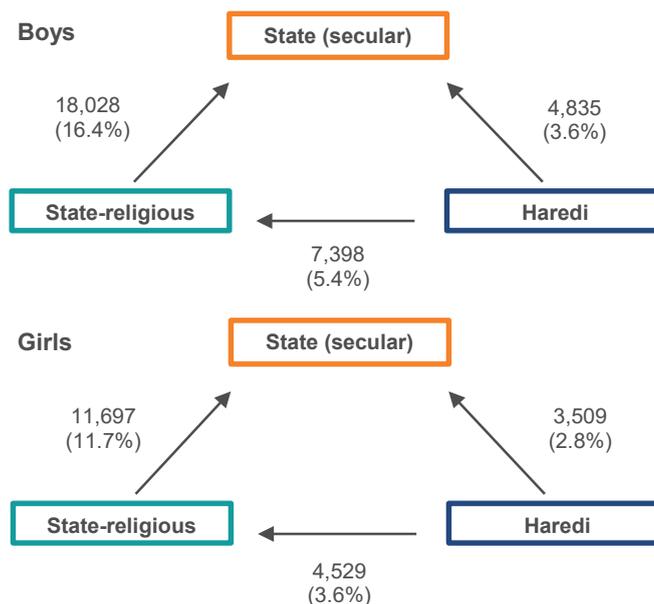
The second indicator of possible religious change is the magnitude of net flows between the State (secular), State-religious, and Haredi educational streams, between 1st and 8th grades. We examined this by following all students across these grades, comparing the stream in which they were first enrolled to that in which they were last enrolled. Here, too, results point to a net flow of students towards a less religious educational stream. Across the 2001 to 2015 period, there is a net flow of 9.0% of boys and 6.4% of girls from Haredi to one of the less religious streams by 8th grade (about 60% to State-religious schools, the rest to State schools). Likewise, there is a net flow of 16.4% of boys and 11.7% of girls away from State-religious schools toward the secular stream. Given the larger size of the secular educational stream, students from Haredi and religious schools add only 1.3% and 4.6%, respectively, to the population in State secular schools.

Note: Restricted to students born between 1992 and 2003 who spent at least 2 years in the Israeli education system.

Source: Alex Weinreb and Nachum Blass, Taub Center

Data: Ministry of Education, Student database

Net movement of students between educational streams from 1st to 8th grade, 2001-2015

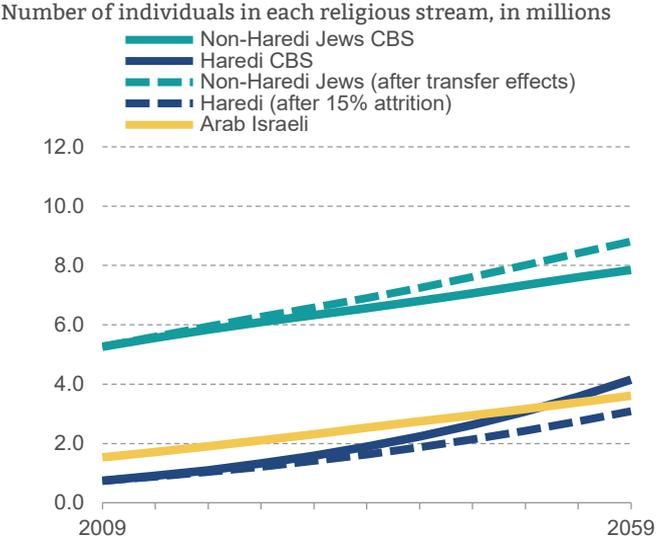


Taking educational stream movements into account substantially changes population projections

The Israeli Census Bureau's long-term population projections (2009-2059) assume zero religious mobility between the Haredi population and the combined secular/religious population. In view of the findings of movement to less religious education streams (previous page) which seem to indicate a trend towards less religious commitment in the Jewish population, we assumed a rate of 15% net religious change from the Haredi to the non-Haredi sector and added this to the CBS projections, changing no other parameter in the CBS projections.

The results show that to the extent that the observed levels of religious mobility continue, they will have very significant effects on the future composition of the Israeli population. In the original CBS medium-growth projections, the Haredi population will be around 4 million individuals by 2059 — about 27% of the population (versus about 12% today). Incorporating religious mobility into these estimates, presented as dashed lines in the figure, reduces the Haredi population to 3.1 million individuals, about 21% of the population. This is still a large increase, but it allows more time for other trends, such as increased labor force participation by Haredi men, to take hold.

The effect of net religious mobility from Haredi to non-Haredi sectors on long-term population projections



Note: Based on the medium growth projection of the CBS.
 Source: Alex Weinreb and Nachum Blass, Taub Center
 Data: CBS, Long-Range Population Projections for Israel: 2009-2059



Macroeconomics

Unravelling the big picture in Israel

From a macroeconomic perspective, Israel has been doing very well for the past few years. GDP growth is relatively high (but not GDP per capita), wages and the standard of living are on the rise, and even poverty levels have started to fall slightly. However, with this good news come some concerning signs regarding future growth, and regarding the divide between the high tech industry and the rest of the economy. In this section, we present a few of the main macroeconomic indicators and then try to shed light on the underlying causes of the complex reality.

A decade of increases in the standard of living in Israel relative to the OECD average

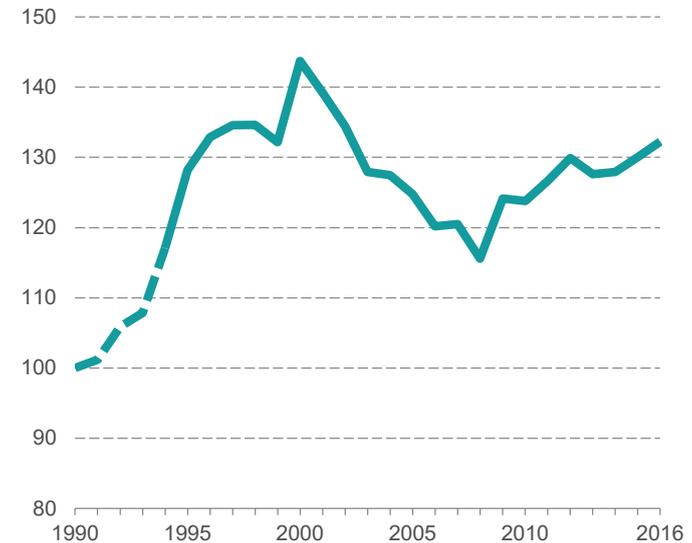
The measure in this figure is the ratio of per capita income in Israel to that in the OECD divided by the ratio of private consumption prices in Israel to that in the OECD.

The 1990s was a decade in which the standard of living in Israel rose significantly faster than in the average OECD country for a number of reasons, including trade liberalization, large investments in Israeli high tech companies, falling relative prices, and a decrease in inflation. The first decade of the current century saw a reversing of this trend, kicked off by the second intifada.

The current decade has thus far seen a return to growth in the relative standard of living, caused, among other things, by increasing income from work and decreasing prices, as shown in the following pages.

Standard of living in Israel relative to the OECD average

1990 = 100



Note: The broken line from 1990 to 1995 denotes data for OECD countries without Chile, Czech Republic, Estonia, Latvia, Slovakia, and Slovenia (data unavailable).

Source: Gilad Brand, Avi Weiss, and Assaf Zimring, Taub Center | Data: OECD

Real wages have recently grown as the result of earlier productivity growth

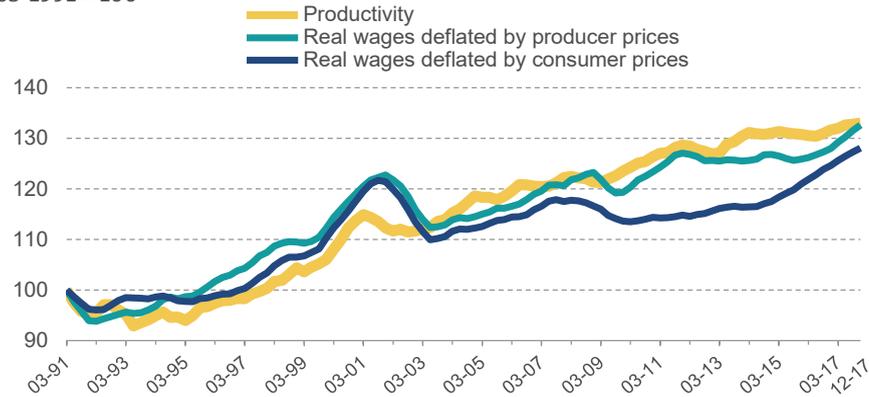
The real wage rate has been rising since the turn of the decade after a decade of stagnation, but from the employer's perspective (using the producer price index instead of the consumer price index) this increase has been almost continuous since 1990. The gap between these measures is unusual, and was caused by a divergence between these two price indices. Producer price indices are constructed using the basket of goods and services produced in Israel, while consumer price indices measure the prices of goods purchased by consumers.

One of the main reasons for this divergence is the dramatic price increase since 2008 in two major cost components for consumers — housing and food. These components comprise a far smaller portion of the

producers' basket of goods than of the consumers' basket. As a result, increases in productivity yielded increased wage payments from the producers' perspective, but the workers did not feel this increase in real terms because prices rose by more than their wages rose.

Productivity and wages per worker from the employer's and worker's perspective

03-1991 = 100



Source: Gilad Brand, Taub Center | Data: Bank of Israel website

Private consumption is rising, but prices are not

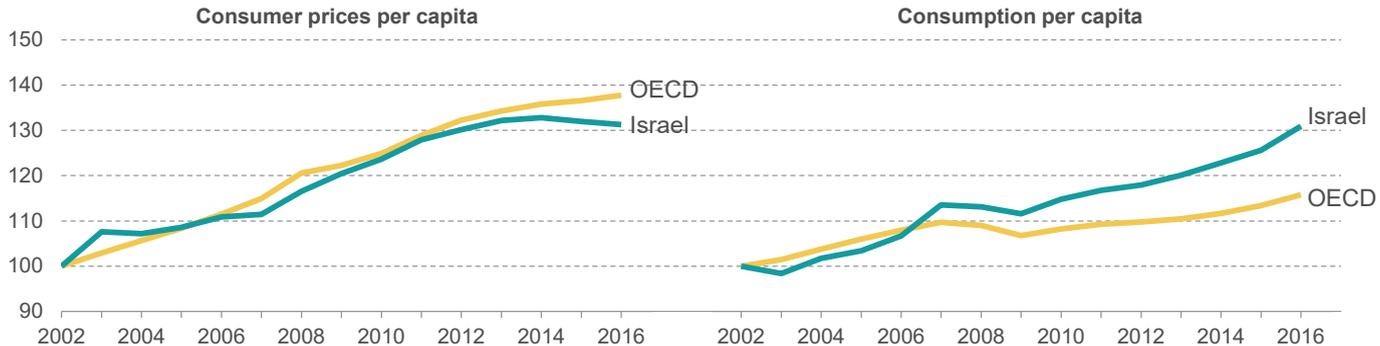
From 2002 to 2010, changes in price and consumption levels in Israel mostly mimicked those in other OECD countries on average. This decade is different, as prices have been dropping relative to those in the OECD, while consumption levels have been increasing rapidly. These, together with increasing wages, have combined to yield a

relative increase in the standard of living as shown on page 24. Much of this has resulted directly from steps taken by the Israeli government to combat high prices.

It is important to note, however, that, with respect to prices, this refers only to the change in prices and not to the level of prices in Israel, as demonstrated on the next page.

Private consumption price and per capita consumption indices

2002 = 100



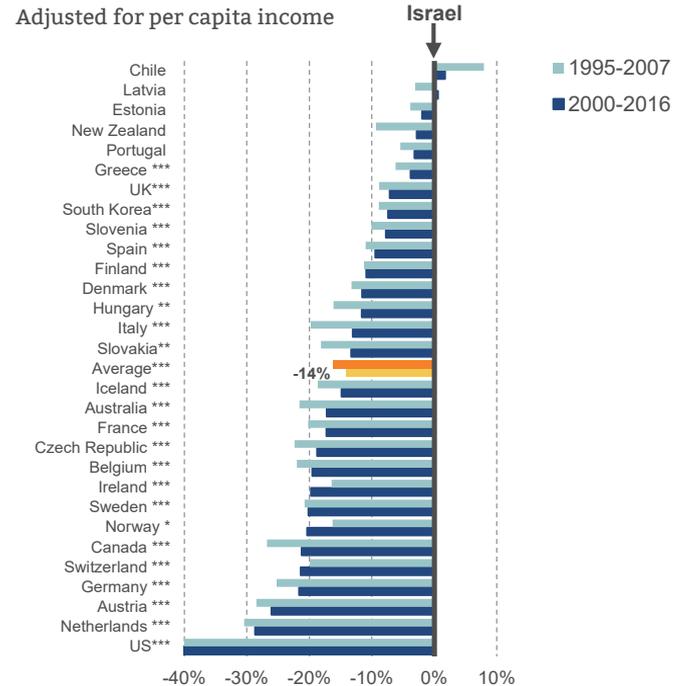
Source: Gilad Brand, Avi Weiss, and Assaf Zimring, Taub Center | Data: OECD.Stat; Bank of Israel

While the gap has shrunk, relative prices in Israel remain high

Although prices in Israel over the past few years have not been rising as much as in the OECD (and have even been falling lately), they are still significantly higher than in almost all OECD countries. As seen in the figure, prices are 14% higher in Israel than on average in the OECD, and 40% higher than in the United States, which is an outlier.

This is shown in the figure where prices in Israel are represented by the 0% vertical axis, and all other bars reflect the percent price difference between the specific country and Israel. A negative number means that the country in question is less expensive than Israel. As the graph shows, the high prices in Israel are not a recent phenomenon, and did not begin with the strengthening of the shekel in 2008, as some have claimed. With this, the gaps are seen to have shrunk for almost all countries.

Percent difference between price levels in OECD countries and in Israel



Note: Significance levels for 2000-2016: *p < 0.10; ** p < 0.05; *** p < 0.01.
 Source: Gilad Brand, Avi Weiss, and Assaf Zimring, Taub Center | Data: OECD STAN

Relative increase in food prices, but decreases in other categories

Examining the changes in consumption prices by categories, it is apparent that while food prices rose significantly relative to other developed countries in 2008, there has been a slight decrease in the past few years. In contrast, in other categories there were drastic price cuts, in particular in those industries exposed to competition from imports in the 1990s (e.g., clothing and home furnishings) and in recreation and culture.

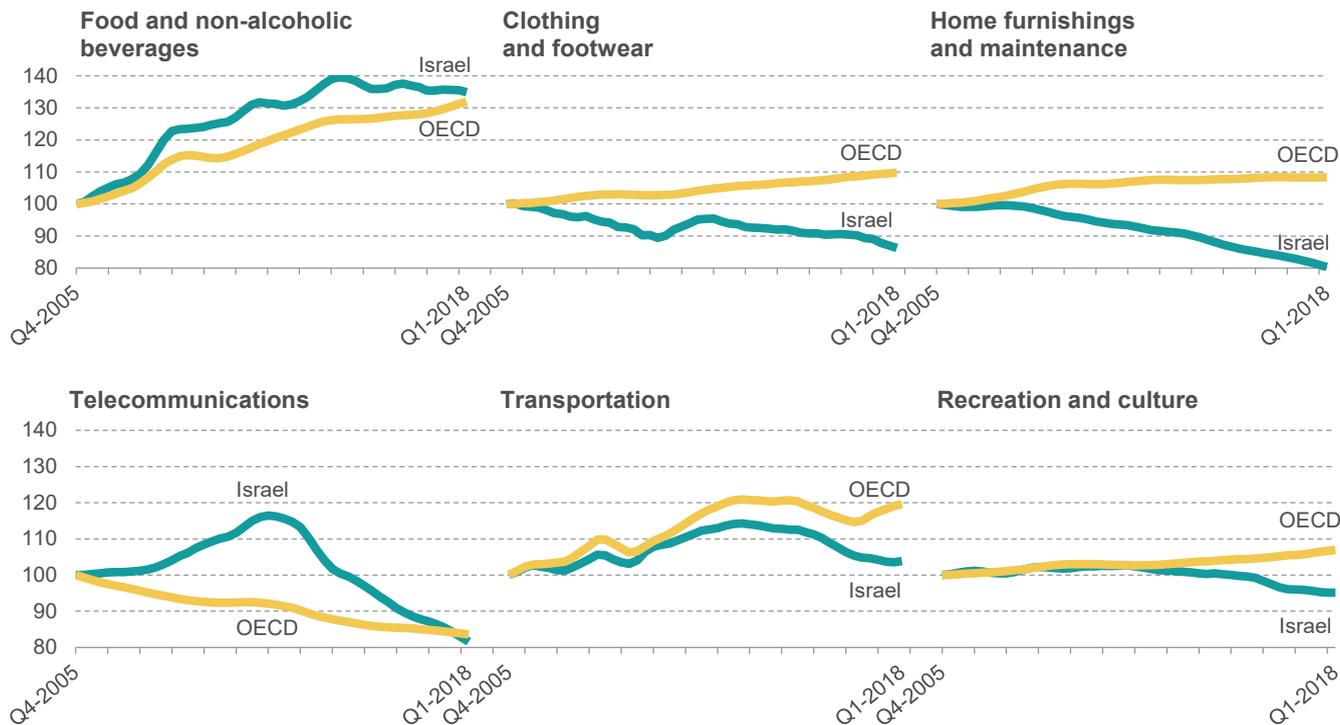
Prices in telecommunications followed an interesting path; while prices in the OECD fell continually since 2000, Israel saw an increase in prices in the mid-2000s. The subsequent decrease came about as a result of regulatory changes allowing number portability in December 2007, and the entry of new low-cost providers since 2011.

Note: The OECD figure is an average of 26 OECD countries.

Source: Gilad Brand, Avi Weiss, and Assaf Zimring, Taub Center | Data: OECD.Stat

Consumer price indices — selected categories

Q4-2005 = 100



The cost of purchasing an apartment continued to rise faster than the rental price, which rose faster than the consumer price index

Since 2008, rental prices in Israel have risen on average 2% faster than inflation per year, signifying that demand continued to increase faster than supply. The purchase price of an apartment, however, rose much faster than rental prices. This can stem from two sources: decreasing interest rates (or expectations of decreasing rates) or expectations of increasing apartment prices in the future. Given that interest rates in Israel have been close to zero since 2015, it is clear that there were no expectations for further decreases in the interest rate. Thus, the more rapid increase in purchase prices than in rental prices signals the persistent belief among consumers that housing prices will continue to rise despite the various plans implemented by the

government to combat these increases. There is some recent evidence that this may be changing, though, as housing prices seem to have stopped rising.

Real change in housing prices for purchase and rental

January 2003 = 100



Note: Reduced by the CPI without the housing component.

* February 2018

Source: Gilad Brand, Avi Weiss, and Assaf Zimring, Taub Center | Data: CBS, CPI

GDP per capita is growing more slowly than in other developed countries

While the standard of living has been increasing relative to the OECD, the same cannot be said for per capita GDP, which has grown at a rate of about 1.3% per annum since 2014, after growing at an average rate of approximately 2% per annum in the preceding two decades. GDP has been growing faster than the OECD average (3.3% in Israel versus 2.5% in the OECD), with the difference between these measures attributable to the markedly higher fertility rate in Israel.

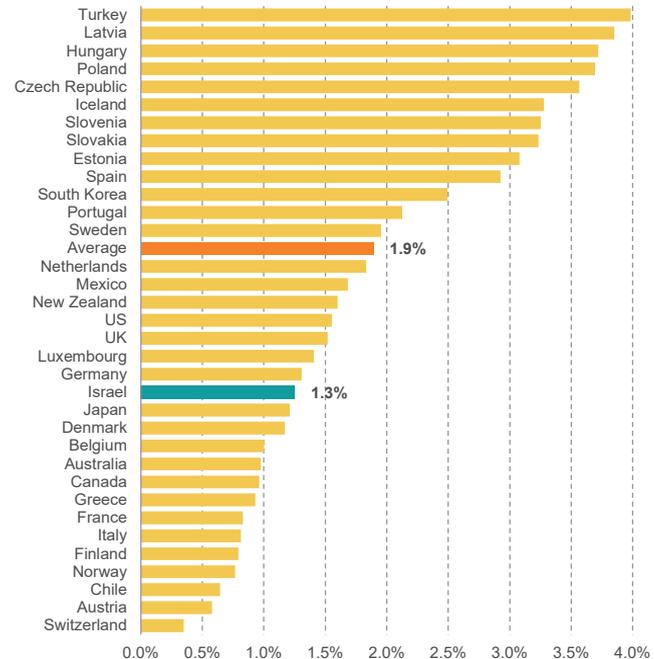
The recent slowdown in growth occurred despite an increase in the employment rate. The positive effect of this increase has been relatively limited because of the fact that it has come mainly from population groups with relatively low levels of human capital and low wages entering the labor market. Improvements in education among these populations could yield a significant source for future growth in Israel.

Note: The average does not include Ireland whose rapid rate of growth during this period is an outlier.

Source: Gilad Brand, Avi Weiss, and Assaf Zimring, Taub Center

Data: IMF, *World Economic Outlook*

Average annual growth in GDP per capita 2014-2017



Growth in productivity in manufacturing industries is divorced from that in other industries

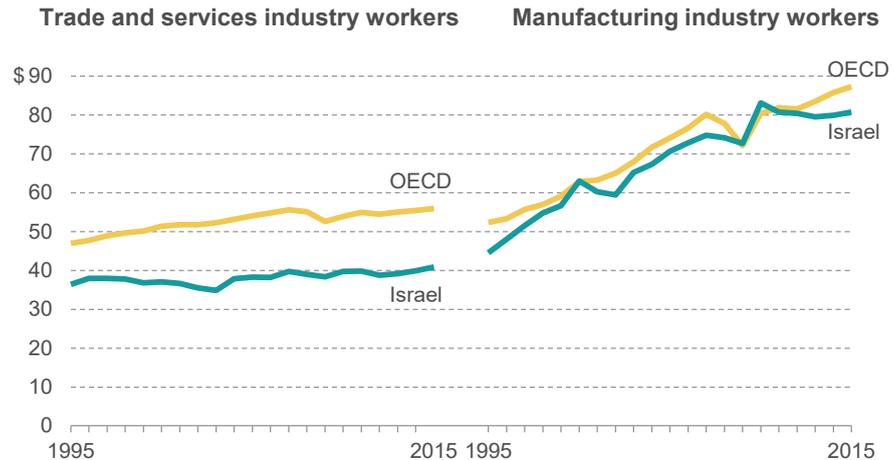
To help understand the relatively slow growth seen on the previous page, we separate between manufacturing and trade and services industries. Productivity in Israel in manufacturing industries has been quite similar to that in the average OECD country for the last two decades. The same cannot be said for the trade and services industries in which productivity is well below the OECD average and growing at a significantly lower rate (0.9% per year in the OECD, 0.5% in Israel).

The slow productivity growth in the trade and services industries stems in part from a positive trend: growth in employment that includes the integration of new workers with low earning capabilities into the market (largely from the Arab and Haredi populations). Another important

reason is the polarization between workers in different sectors, as will be described on the next page.

Productivity per worker by industry group

Fixed PPP dollars



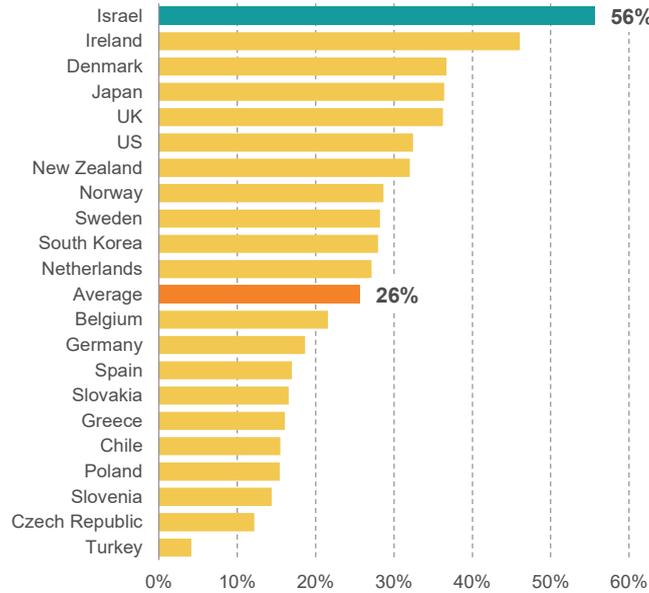
Note: The OECD figure is an average of 21 OECD countries. Trade and services industries include wholesale and retail trade, transportation services, warehousing, postal and courier services, hospitality and food services. Source: Gilad Brand, Taub Center | Data: OECD.Stat

Employment in tradable industries is heavily weighted towards high tech

Industry sectors where a significant portion of production is exported are characterized by both high wages and high productivity since companies that compete in the global market are more exposed to new technologies and to greater competition on the global market. If jobs requiring a limited amount of training were available in these industries, it would be expected that low-wage workers would undergo the necessary training and move to these industries, which would result in increased wages in the sectors that produce mostly for the local market. In Israel, however, employment in the exporting industries is far more heavily weighted toward high tech than in other developed countries, and the amount of training required to move to these industries is unattainable to most workers. This explains much of the productivity gap between workers in manufacturing industries and in trade and services seen in the previous figure, and has implications for wages, as shown in the next figure.

Note: Tradable industries: high tech services excluding telecommunications, scientific research and development, manufacturing (excluding paper and printing and beverages and tobacco), and air and sea transport.
Source: Gilad Brand, Taub Center | Data: OECD Survey of Adult Skills (PIAAC)

Share of workers in high tech out of all workers in tradable industries, 2014

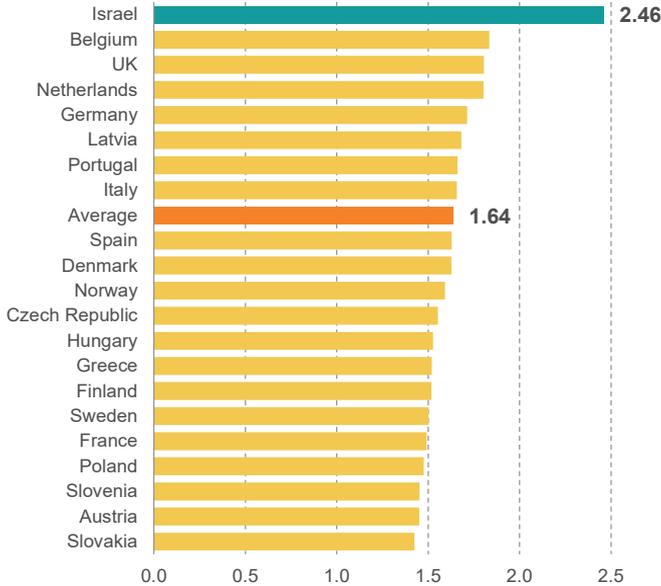


The result — large wage inequality across sectors

Since wages reflect productivity, the large and growing discrepancy in productivity has led to a large and growing wage differential between those who work in the high tech industries (about 8-10% of the workforce) and those who do not, with the former earning on average two and half times as much as the latter. This gap demonstrates clearly the lack of mobility between the sectors shown on the previous pages, resulting from large gaps in ability, training, and education between these groups.

Note: High tech includes pharmaceutical and chemical manufacturing, export of computers, electronic and optic equipment, computer programs and information services, research and development. The remaining business sector excludes water and electricity, agriculture, and mining and quarrying.
Source: Gilad Brand, Avi Weiss, and Assaf Zimring, Taub Center | Data: OECD STAN

Wages in the high tech sector relative to those in the non-high tech business sector, 2013





Welfare

Tackling poverty

The poverty rate in Israel remains high, and the steps being taken by the government seem insufficient to lower it significantly. With this, important steps have been taken that are aimed at assisting some of the disadvantaged populations, such as increased benefits to the elderly and individuals with disabilities, as well as the universal “Savings for Every Child” program which is designed to give children a jump-start in their adult lives.

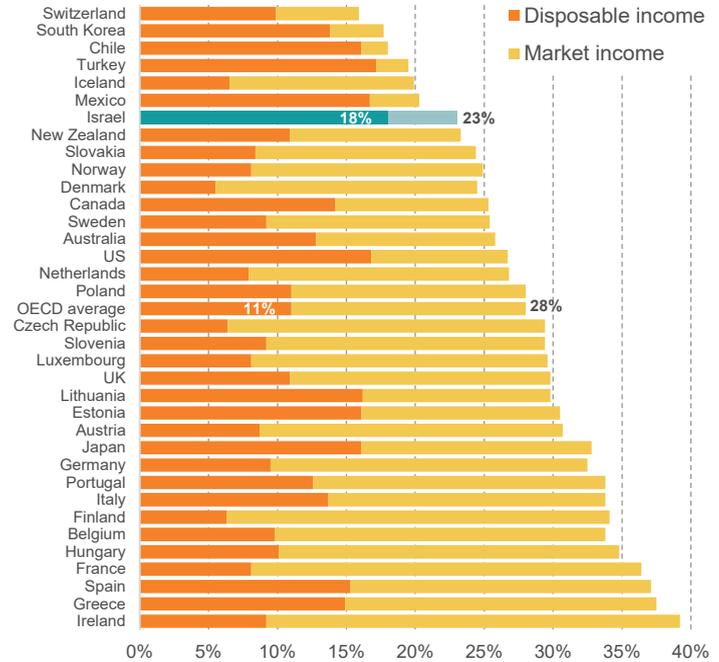
In this section, we will give a general social welfare picture, and we will discuss the effect of the locality “matching” funding system on the weaker localities and populations. We will also present some interesting findings on debt and on local philanthropy in Israeli society.

Disposable income poverty rates have fallen slightly, but are still the highest among developed countries

The poverty rate in Israel, when measured using market income (before taxes and transfers) is actually low relative to other OECD countries, but when measured using disposable income it continues to be the highest in the OECD. With this, in the last year it has fallen by half a percent to a percent. This coincides with increasing employment rates and unemployment rates that are historically low.

The poverty rate is likely to continue to fall slightly in the near future in view of expected increases in cash benefits for the elderly and for people with disabilities. However, the challenge of reducing poverty rates significantly remains enormous, and success will depend to a large extent on improving education levels among Haredi men and Arab Israelis.

Share of individuals below the poverty line 2013-2016

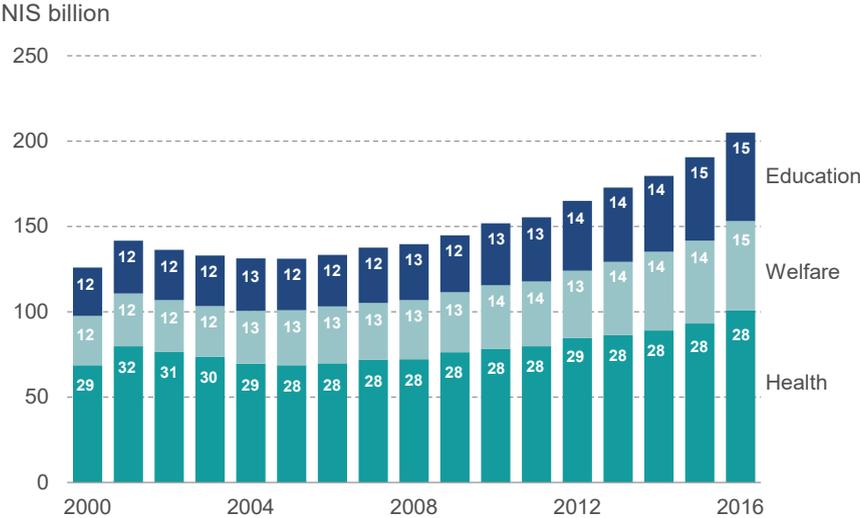


Source: Haim Bleikh, Taub Center | Data: OECD database

The portion of the budget spent on social expenditure continues to rise slowly

The share of the government budget, after paying government debt, spent on social expenditures (welfare, health, and education) continues to rise, albeit very slowly. While the percentage of expenditure on welfare (social security benefits and social services) has remained stable, the portion spent on education and health is increasing. However, as we will show (page 51), the increase in health expenditures has not kept pace with the rising medical needs of the aging population nor with the increasing costs of medical care.

Social expenditure by major expenditure category in NIS billion and as a percent of government expenditure



Source: John Gal and Shavit Madhala, Taub Center | Data: Ministry of Finance, *Budget Execution Data*; NII, *Statistical Quarterly*; *Report of the Committee for the War Against Poverty*

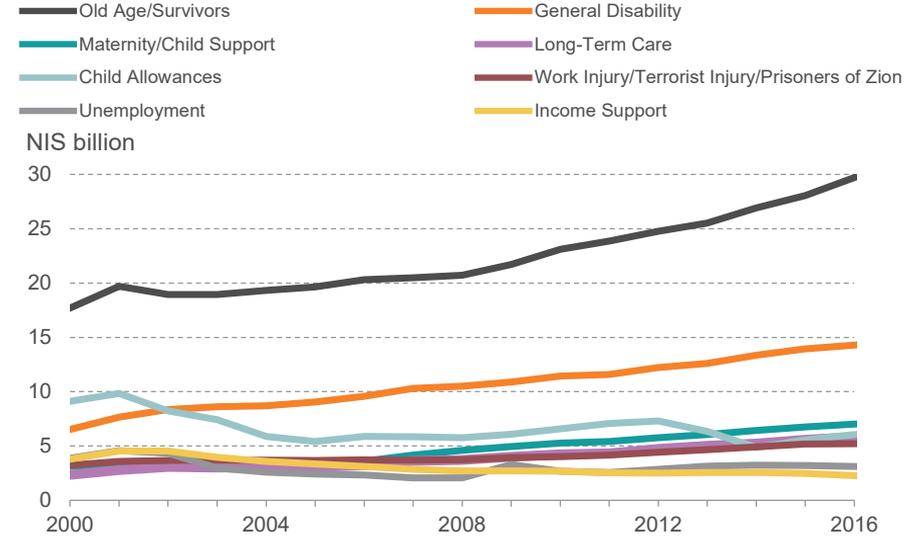
Old-age and disability benefits continue to rise, but spending for other benefits remains low

With the aging of the population comes a significant increase in social security benefits for the elderly. This will place an ever-increasing burden on tax payers which will become even more acute as the percentage of the working-age population continues to shrink. Currently, 43% of social security spending is allocated to benefits for the elderly.

The recent agreement by the government to increase monthly disability benefits from NIS 2,800 to NIS 4,000 over 3 years is expected to cost about NIS 4.3 billion a year once completed, and can be expected to place an additional burden on the social security system, and on the government budget in general.

National Insurance Institute expenditure on benefits by expenditure type

2016 prices



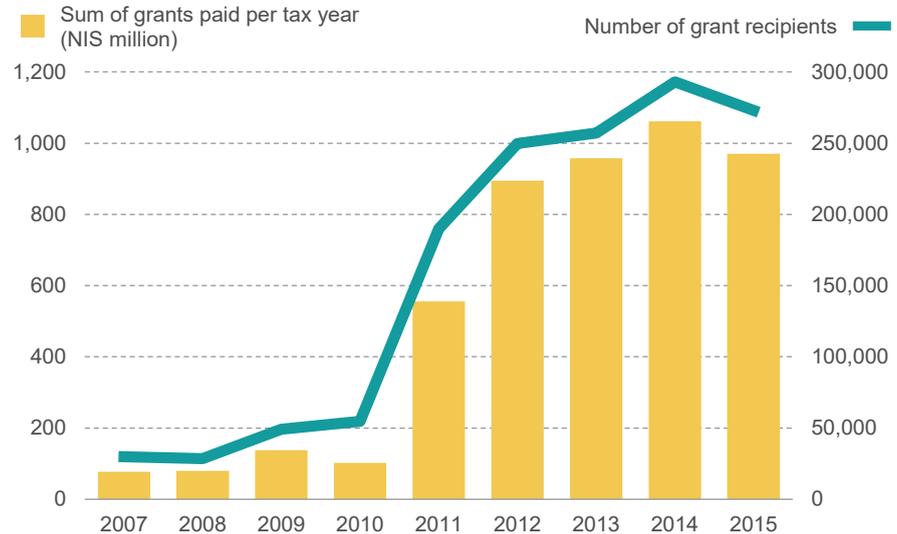
Source: John Gal and Shavit Madhala, Taub Center | Data: NII, Statistical Quarterly

A slight decrease in negative income tax recipients

Negative income tax is a tool used to assist the working poor. Eligibility depends on participation in the labor force, helping low income families without disrupting their incentive to work. The payment is fairly low (less than NIS 400 per month on average), and the take-up rate (the percentage of those eligible who receive the benefit in practice) is only about 70%. Since 2011, the number of recipients and the overall sum paid has risen sharply, but 2015 saw a slight drop in both of these numbers.

Three recent changes will be felt in 2018: an extension of eligibility for single parents – adding in an additional 50,000 potential recipients; an increase in the benefit for men to make it equal to that for women; and an increase in the maximum permissible salary.

Expenditure for work grants and number of recipients



Note: Grant eligibility is determined by a means test in the eligibility year and the grant is given retroactively. The data relate to sums of payments and number of recipients in the eligibility year. Data for 2015 are not final and are correct as of February 2017.

Source: John Gal and Shavit Madhala, Taub Center | Data: Israel Tax Authority, *Annual Report 2016* (2017)

Partial implementation of programs budgeted by the Committee for the War Against Poverty, but "Savings for Every Child" program adopted

In 2014, the Elalouf Committee for the War Against Poverty issued a series of recommendations intended to lower the poverty rate in Israel to the OECD average over a ten-year period. Fulfillment of all the recommendations requires an annual budget of NIS 7.4 billion. In practice, only 31% of the required funds were allocated by the government in 2017, similar to the 2016 rate.

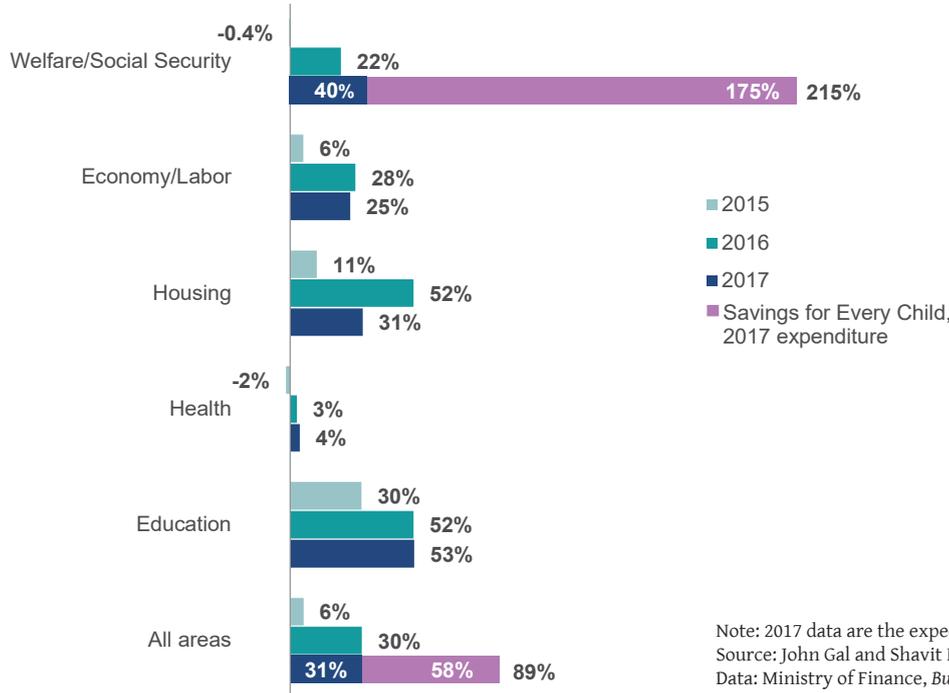
Alongside these proposals, the Elalouf Committee also recommended implementing a "Savings for Every Child" program in which the government would open accounts for every child, and deposit a monthly stipend. The savings account could be used when the child reached adulthood.

The cost of this recommendation was not included in the committee's initial allocation, mainly because it seemed unrealistic to expect it to happen.

Surprisingly, it was adopted and, as of January 2017, NIS 50 is deposited monthly into an account opened for every child. Parents were given the option to contribute an additional NIS 50 per month from their child allowance benefit, and were asked to choose the type of investment (risk level) they prefer. Given a reasonable rate of return, the sum that will accrue for a child born today (including parental contributions) could suffice to pay for a college education. Such programs exist in other countries also, but Israel is the only country in which this benefit is universal.

Actual incremental expenditure for the implementation of the Elalouf Committee for the War Against Poverty recommendations

As a percent of the Committee's recommendations



Note: 2017 data are the expected shares.

Source: John Gal and Shavit Madhala, Taub Center

Data: Ministry of Finance, *Budget Execution Data*; NII, *Statistical Quarterly*;

Report of the Committee for the War Against Poverty

The “matching” system may be harming welfare recipients in weaker localities

Welfare services provided by the local authorities are financed in conjunction with the Ministry of Labor and Social Welfare: 75% is provided by the Ministry and 25% is “matched” by the local authority. That is, for each shekel that the local authority budgets, the Ministry budgets 3 shekels. In the past year, legal claims reaching as high as the Supreme Court have maintained that this method creates inequalities between authorities with stronger and weaker socioeconomic populations.

The data show that expenditure per client is, indeed, greater the higher the locality socioeconomic status. While the average spending in those cities in the Forum-15 (cities that do not take development and balancing grants from the government) is NIS 9,095, in the Arab Israeli localities, the expenditure is an average of only NIS 3,414 per client.

It appears that these gaps have several causes. First, Ministry allocations are unequal to begin with — the gap is detrimental to the weaker authorities, primarily the

Arab Israeli ones. The Ministry claims that the allocation decisions are taken using clear criteria, and that an advantage is given to the authorities with fewer resources. To the best of our understanding, though, these criteria are not transparent to outsiders.

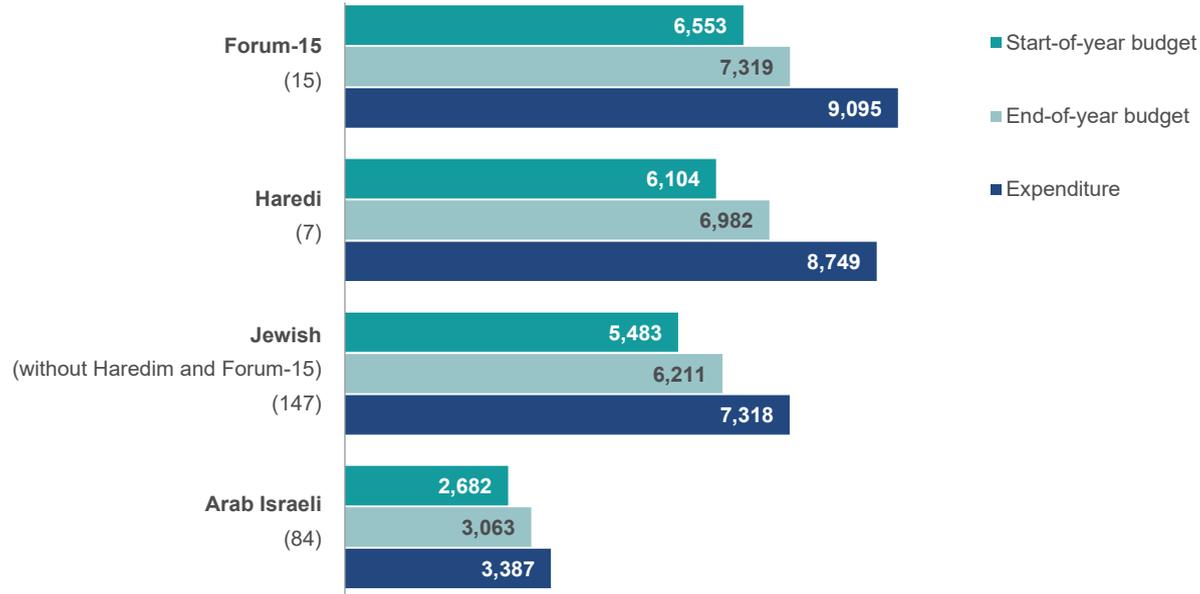
Second, it is possible that the weaker authorities request lower amounts to begin with either because of differences in treatment settings (see page 44) or because they feel that they will be unable to match higher budget requests, and, therefore, ask for less. In fact, the majority of localities (92%) use the full budget allocated to them at the beginning of the year and often receive additional funds — that is, even the weaker localities manage to finance their portion of their requests in practice.

Third, those localities with more resources have the willingness and the ability to allocate independent funds to the welfare needs of their residents, above and beyond those that they request through the matching system.

Budget per client at year's start, year's end, and actual expenditure

2014

NIS



Note: The number of localities in each group appears in parentheses.

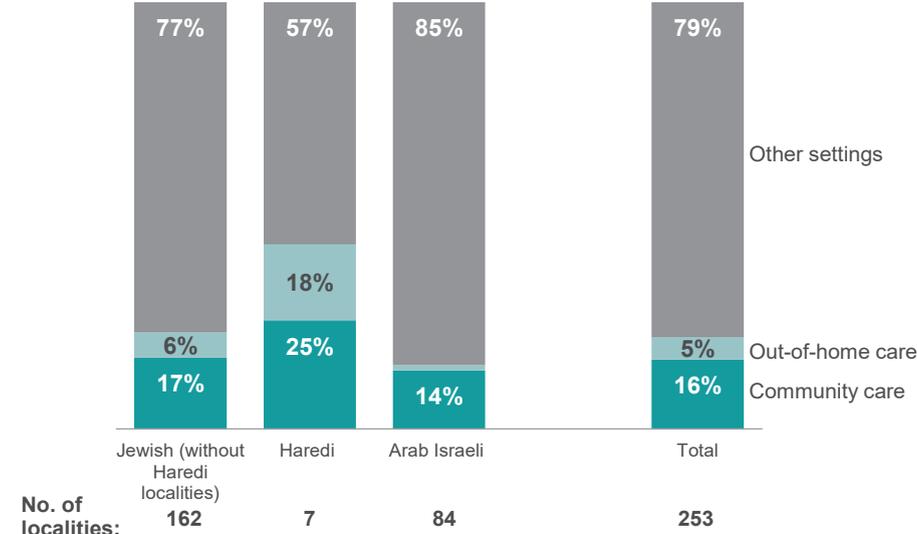
Source: John Gal, Shavit Madhala, and Haim Bleikh, Taub Center | Data: CBS, Local Authority database; Ministry of Labor and Social Welfare data

The required budget of the local authority is greatly affected by the types of service they provide

Welfare services offer a variety of treatment frameworks, and usage patterns explain a good deal of the gap in local authority expenditures (64%). Out-of-home treatment frameworks, which have the highest costs, are largely non-existent in Arab Israeli localities and more common in Jewish localities, particularly in Haredi communities.

The obvious gap between Haredi and Arab Israeli localities in treatment patterns, despite their both being of low socioeconomic status, indicate that budgetary constraints are not the only factor in treatment choice, although they carry some weight. There is a tradition of family and community-based care in the Arab Israeli society. In addition, there is a lack of culturally appropriate care facilities for this sector.

Distribution of clients by treatment settings 2014



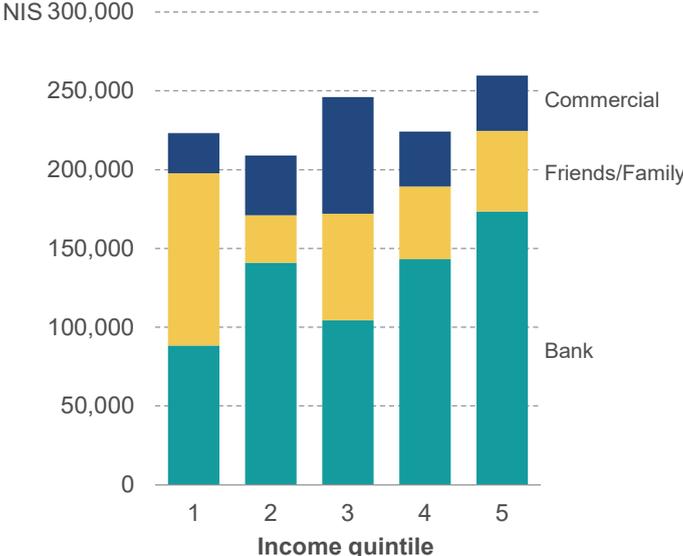
Source: John Gal and Shavit Madhala, Taub Center | Data: Ministry of Labor and Social Welfare

The relationship between level of debt and income level is not clear

Approximately 37% of Israeli households spend more each month than they earn. A priori, the relationship between income level and debt level is not clear — those with lower incomes have needs that outstrip their means to a greater degree, but those with higher incomes may be willing and able to incur larger amounts of debt. The empirical evidence is mixed; among those households that requested assistance with financial planning, the relationship between income and debt is non-monotonic. While debt owed to banks rises with income, the less well-off families make up the difference by borrowing from family members and friends.

Commercial debt, which includes debt to localities, utilities and schools, seems not to be extended to poorer families, and not to be needed by richer families. It is those in the middle who use this credit source the most.

Average debt by creditor type and household income quintile, 2016



Source: Kyrill Shraberman, Taub Center | Data: Paamonim

Israeli philanthropy is on the rise

Compared with populations in many Western countries, Israelis are not viewed as being particularly philanthropic, despite giving *tzedakah* on a regular basis. However, philanthropic patterns have been changing, and donations have quadrupled over the past decade, with a doubling of the number of reported philanthropists and a doubling of the average amount donated. This figure shows some philanthropic tendencies of different parts of the population, where the effects shown are net of any other differences between the groups. For each group there are two bars, with the one to the left showing the average amount donated, and the one to the right showing the average level of generosity — the percentage of income donated.

These are some of the results:

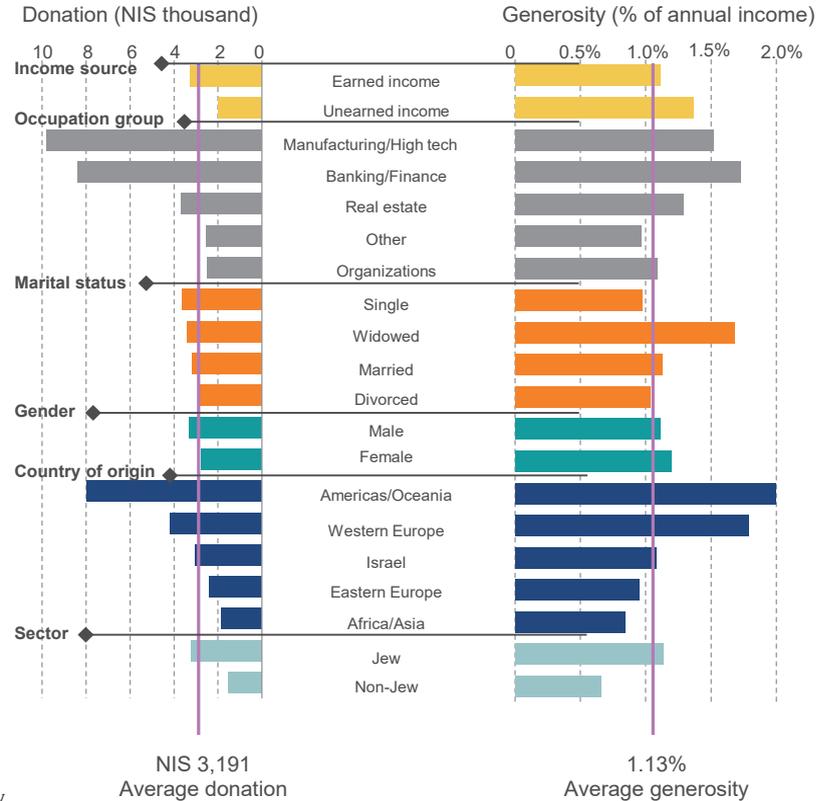
- more is donated from earned income than from other income sources, but a lower percent is donated;
- high tech workers tend to donate more than workers in other industries, but are less generous than workers in the finance industry;
- single people donate more but are the least generous;
- households headed by men donate more, but those headed by women give a larger percentage of their income;
- immigrants from the United States donate the most and are the most generous;
- Jews donate more than Arab Israelis.

Additional patterns not shown include the effect of income — while the size of the donation increases with income, generosity first decreases and then increases as income rises — and the effect of length of time in the country — immigrants tend to donate more than Israel-born individuals, but the longer immigrants are in the country, the more similar their donation patterns are to those of native-born Israelis.

An important caveat: The data used for this analysis come from the Israel Tax Authority, and so, only reflect reported donations. Since filing tax returns in Israel is not mandatory for most citizens (only 24% of Israeli families file), there are presumably many donations that do not appear in the data, meaning that there is certainly a self-selection issue.

Average donation level and generosity by donor characteristics

Multivariate analysis projected values



Source: Claude Berrebi and Hanan Yonah, Taub Center
 Data: CBS, Population and Immigration Authority; Israel Tax Authority



Health and Healthcare

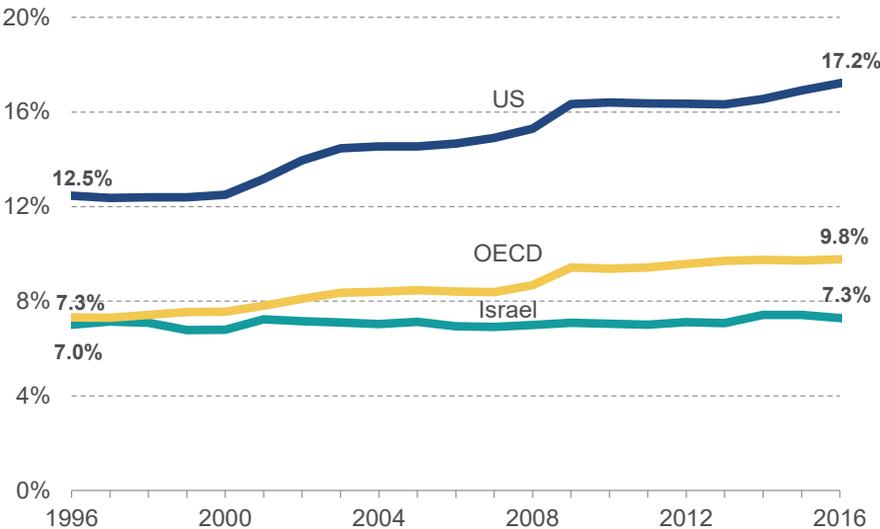
A system in peril

Israelis are considered relatively healthy, as evidenced by their long life expectancy (at least partially due to healthy eating habits), and surveys show that Israelis express high levels of satisfaction with the primary care they receive from their HMOs. Nonetheless, there are concerning signs that the healthcare system may be at risk; it is not ready or preparing for the rapidly aging population and the demands and costs this will place on the health system and on the economy as a whole. In fact, national expenditures on health are declining relative to other countries. In addition, there seems to be a shift from public provision of health services towards more and more private provision through private insurance policies. In this section, we will take a look at these developments.

Public and total health expenditures in Israel have not kept pace with those in other countries

The share of healthcare spending in the nation's GDP has remained fairly constant at about 7% for two decades. This is about 2.5 percentage points below the OECD on average, and 10 percentage points below the average in the United States. More concerning is that the share of GDP being spent in Israel is not growing despite the rising medical needs of an aging population and rising medical costs. One aspect of this is shown in the next figure.

National expenditure on health as a percent of GDP



Note: The OECD figure is an average of 21 of the most developed OECD countries.
Source: Dov Chernichovsky, Taub Center | Data: OECD, Health spending indicator, 2017

Health expenditures have kept up with GDP per capita growth, but not in real terms

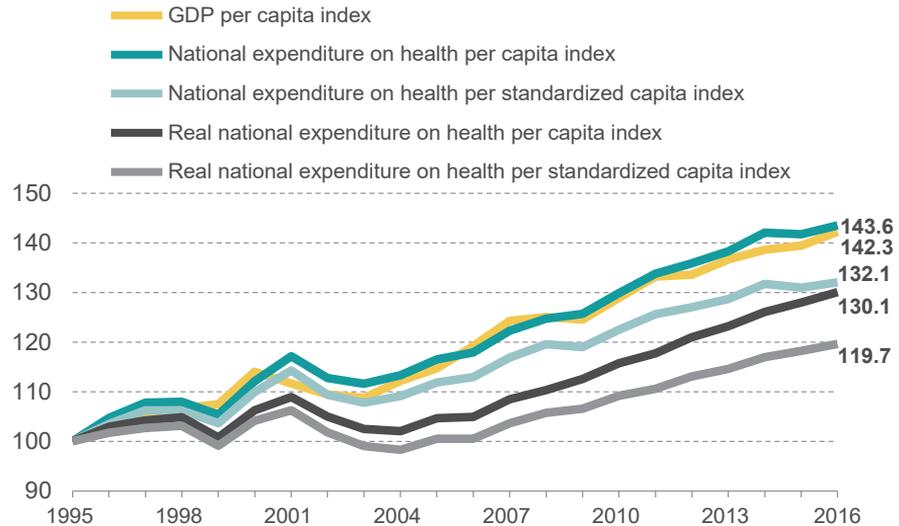
Both GDP per capita and national health expenditures have risen by about 40% since 1995. However, two factors lead to the conclusion that, relative to income, health spending has eroded over the past two decades.

The first is demographic changes of the past two decades: increasing life expectancy and the aging of the population both require more medical care. There has been a decrease in expenditure per standardized person (taking into account the age distribution) of about 10%.

The second factor is the relative increase in medical costs. This factor has also increased health expenditure by about 10% more than the general price level. Combined, standardized health care expenditures have eroded by about 20% relative to per capita GDP.

Expenditure index for healthcare

1995 = 100



Note: The calculation of standardized persons is according to the capitation formula that accounts for gender and age. Real expenditures in the cost of healthcare are adjusted for inflation.

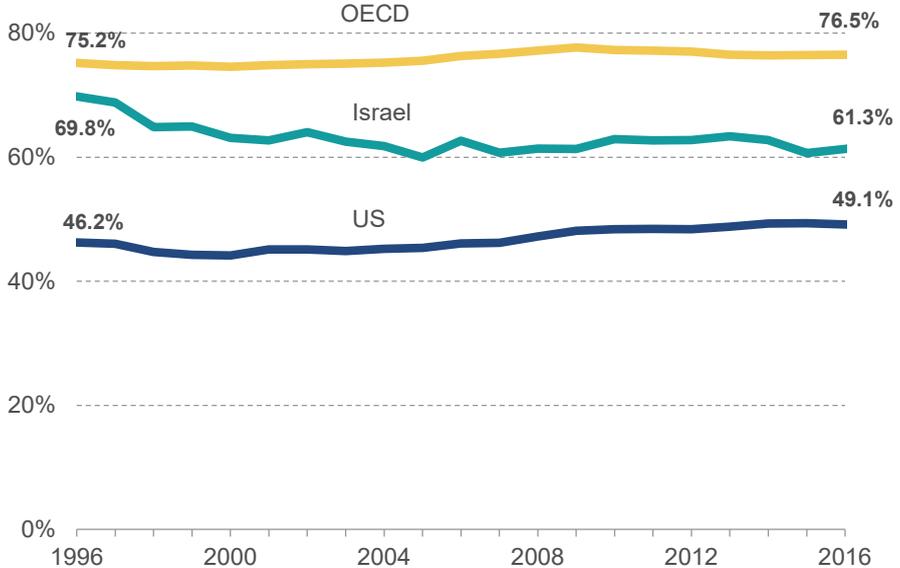
Source: Dov Chernichovsky, Taub Center | Data: CBS, *Statistical Abstract of Israel 2016*

There has been a shift from public financing of healthcare toward more private financing, mainly through insurance

The decreasing portion of GDP spent on public healthcare parallels an increase in privately financed care. In 1996, the gap in the portion of government spending between the OECD and Israel was less than 6 percentage points, however the Israeli government's share fell and the gap grew in the years that followed. Since the start of the decade, both Israel's and the OECD's share in total spending remained fairly constant, but the result of the fall in the late 1990s means that the gap today is almost three times what it was in 1996.

Much of the increase in private expenditures is the result of consumers buying private health insurance, as shown in the next figure.

Percent of public expenditure out of national expenditure on health



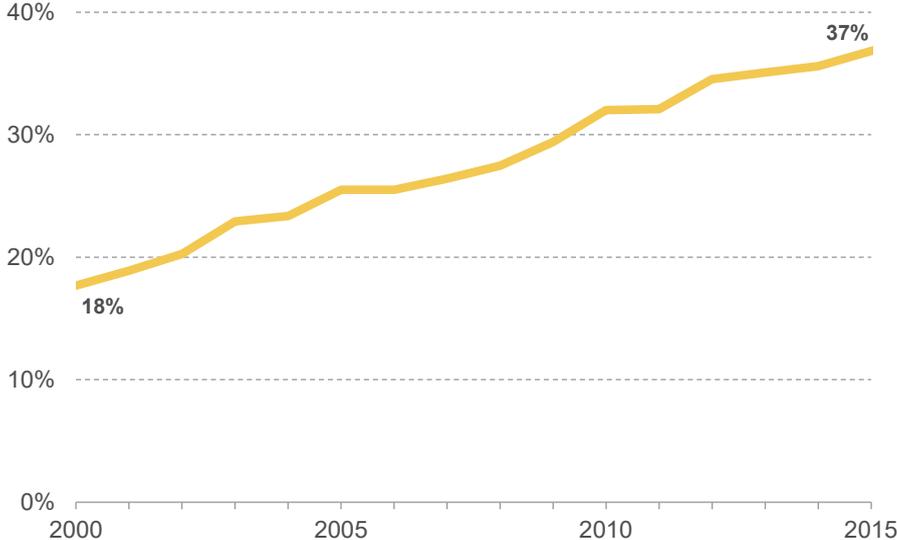
Note: The OECD figure is an average of 21 of the most developed OECD countries.
Source: Dov Chernichovsky, Taub Center | Data: OECD, Health spending indicator, 2017

Private insurance captures an increasing portion of private health expenditure

At least partially in response to the relative decrease in public expenditures on health, households are spending more on healthcare. This is particularly notable when considering health insurance. The portion of private health insurance expenditures out of total household health expenditures has doubled since the turn of the century.

In many instances, it seems, consumers purchased policies covering contingencies for which they were already insured, a fact of which they were unaware. While regulations are in place to prevent this situation, enforcement is rather complicated due to a lack of consumer awareness, on the one hand, and insurer's lack of interest to comply, on the other.

Percent of household health expenditure spent on private health insurance

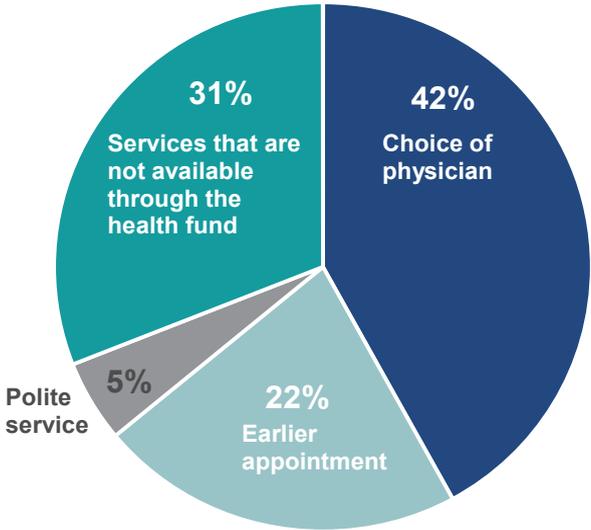


Source: Dov Chernichovsky, Taub Center | Data: CBS, Household Expenditure Survey

The main reason consumers purchase private insurance is to be able to choose their doctor/surgeon

Under the Israeli healthcare system, all citizens are provided with universal healthcare, but one generally cannot select one's surgeon in publicly financed hospitals. There can be long waiting times to see specialists or undergo certain procedures as well. These two elements have become major issues in the publicly funded healthcare system, and the ability to choose your preferred doctor/surgeon and shorten waiting times are the major factors in the decision to purchase private insurance. Less than a third of those who turned to private care did so in order to undergo a procedure not covered under the public system.

Reasons given for private medical services use 2015



Source: Dov Chernichovsky, Taub Center | Data: CBS, *The Social Survey 2015*



Spotlight: Arab Israeli Health

The health characteristics of the Arab Israeli population are, in many ways, quite different from those of the Jewish population. In this section, we investigate different aspects of Arab Israeli health, and, in particular, we look at the differences in life expectancy.

One of the clear causes of gaps between the Jewish and the Arab populations is the differences in their socioeconomic situation. In general, the Arab Israeli population is characterized by low socioeconomic status, and this tends to be accompanied by inferior access to healthcare as well as a poorer understanding of preventive behaviors that are important for healthy living. Treating these underlying disparities requires dealing with the root causes — something beyond the scope of the health system alone. Improvements can be made, though, through means like improved dissemination and accessibility of medical information to these populations.

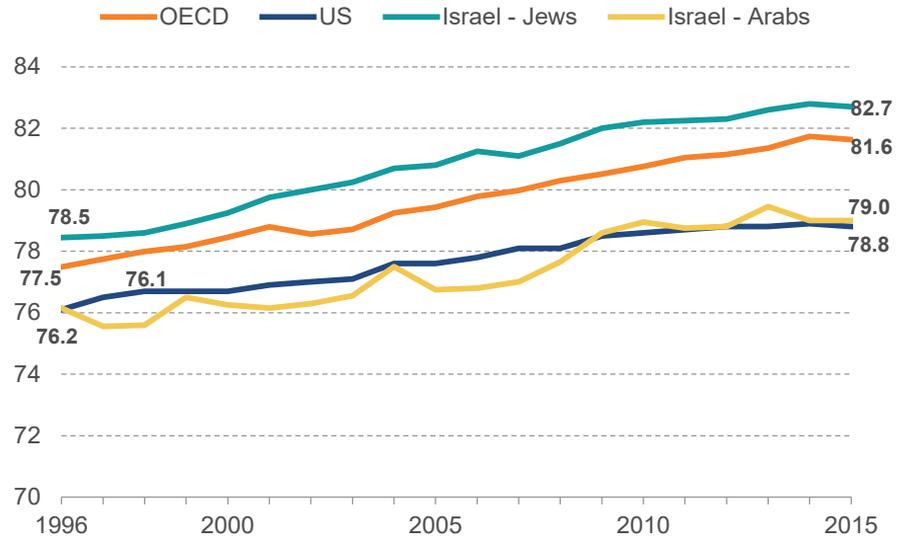
Health differences also have characteristics that can be related to choices that stem from cultural and behavioral factors, and, as such, to lifestyle differences. For instance, a large share of the Arab population choose to live in the North where there are fewer resources (hospital beds and medical specialists) rather than in the center of the country; the average distance from the nearest hospital is 22 kilometers for Arab Israeli localities, compared with 14 kilometers for Jewish localities. Greater investments in healthcare infrastructure and accessibility — including innovative methods such as telemedicine — could improve the overall health of these population groups and help close the health gaps.

Life expectancy of Arab Israelis is lower than for the Jewish population

Life expectancy at birth for Arab Israelis is lower than that of Israel's Jewish population, and falls below the average for the 23 developed countries of the OECD (Israel and the United States excluded). Although life expectancies rose for both Jews and Arab Israelis over the past two decades, for women, the disparity has remained about 4 years, while for men, the gap grew from 1.5 years in 1996 to 4 years in 2015. Part of the reason for this disparity will be discussed in the following pages.

Interestingly, life expectancy of Arab Israelis at birth in 2015 was higher than that of residents of wealthy Arab countries like Qatar, the United Arab Emirates, and Bahrain.

Life expectancy at birth



Note: The OECD figure is an average of 23 of the most economically developed OECD countries.
Source: Dov Chernichovsky, Bishara Bisharat, Liora Bowers, Aviv Brill, and Chen Sharony, Taub Center
Data: CBS, *Statistical Abstract of Israel 2016*; OECD database

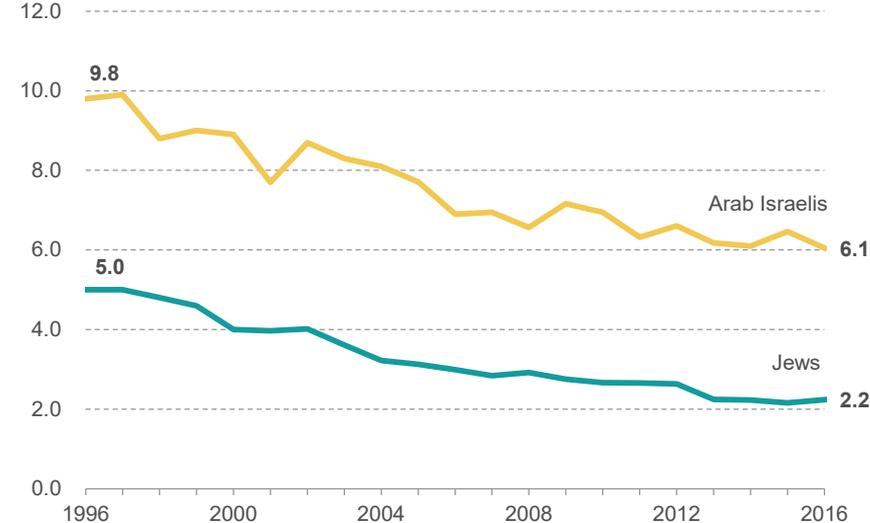
Shrinking infant mortality rates, but a large gap between population groups

Infant mortality is a major factor in determining life expectancy at birth. As with life expectancy, a gap exists between Jews and Arab Israelis, to the disadvantage of the Arab population. The disparity, however, has been decreasing over the past two decades: Arab Israeli infant mortality dropped by 3.7 deaths per thousand live births, while Jewish infant mortality declined by only 2.8 deaths per thousand live births. Despite the rates converging, the Arab Israeli infant mortality rate today is nearly three times that of the Jewish rate.

The relatively high incidence of congenital disorders among Arab Israelis (often related to the cultural practice of marriage among family members) explains a large part, but not all, of the gap between the two populations.

Infant mortality rates in Israel

Per 1,000 live births



Source: Dov Chernichovsky, Bishara Bisharat, Liora Bowers, Aviv Brill, and Chen Sharony, Taub Center Data: CBS, *Statistical Abstract of Israel 2016*

Congenital disorders and road accidents are the main causes of disparities in life expectancy

Life expectancy gaps between the Jewish and Arab Israeli populations cannot be attributed solely to infant mortality. For instance, when we calculate life expectancies at age 30, we find that the 4-year gap shown on page 56 (for both men and women) shrinks to a 3-year gap for men and a 2.5-year gap for women, but not to 0.

In addition to congenital diseases, the causes of death with the most marked disparities between the population sectors (double or more, to the disadvantage of the Arab Israeli population) are road accidents, chronic lower respiratory disease, and diabetes.

Among adults, there are several risk factors that, given their gender-based character, can be linked to Arab Israeli men's shorter life expectancy: road accidents, work accidents, and smoking-related diseases. A Ministry of Health report from 2015 states that the share of smokers among Arab Israeli men is twice that of Jewish men: 44% versus 22%, respectively.

An additional factor is the much higher incidence of diabetes among both men and women in the Arab Israeli population, as seen in the next figure (page 60).

Main causes of death where there is a disparity between Jewish and Arab Israelis, 2014

Rates per 100,000 population, age-adjusted

Cause of death	Jews (1)	Arab Israelis (2)	Ratio: (2)/(1)
Congenital disorders	2.3	7.2	3.13
Road accidents	2.4	7.1	2.96
Chronic lower respiratory disease	7.2	19.4	2.69
Diabetes	14.0	31.5	2.25
Hypertension	4.6	8.5	1.85
Kidney disease	8.8	15.6	1.77
Severe coronary artery disease	7.3	12.3	1.68
Cerebrovascular disease	12.9	21.5	1.67
Ischemic heart disease and other	14.5	23.7	1.63
Lungs, bronchial tubes, trachea disorders	15.4	22.6	1.47
Other heart diseases	13.5	19.0	1.41
Sepsis	10.9	14.0	1.28
Pneumonia	5.6	7.0	1.25
Other diseases	33.4	41.6	1.25

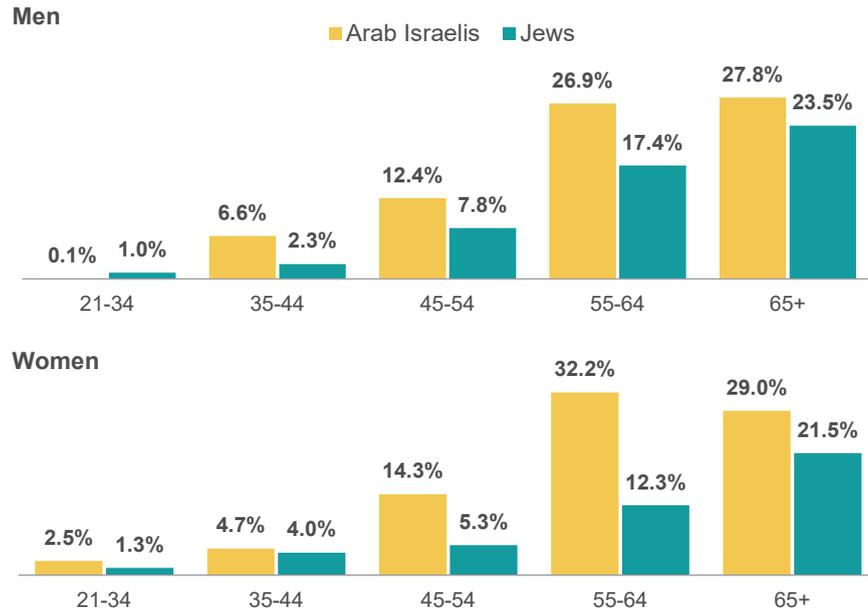
Source: Dov Chernichovsky, Bishara Bisharat, Liora Bowers, Aviv Brill, and Chen Sharony, Taub Center | Data: CBS, *Causes of Death in Israel*

High incidence of diabetes among Arab Israelis, particularly women

In Israel, diabetes is one of the leading causes of poor health — and the disease burden from this condition is growing much faster than in European countries. The portion of Arab Israeli diabetes patients is very high for nearly all age groups. We see that the rates are higher among Arab Israeli women than men in almost every age group, and the disparity between Arab and Jewish women is particularly large.

Incidence of diabetes

2015



Source: Dov Chernichovsky, Bishara Bisharat, Liora Bowers, Aviv Brill, and Chen Sharony, Taub Center Data: CBS, National Health Survey, 2013-2015

The mortality rate differences are mostly explained by socioeconomic differences

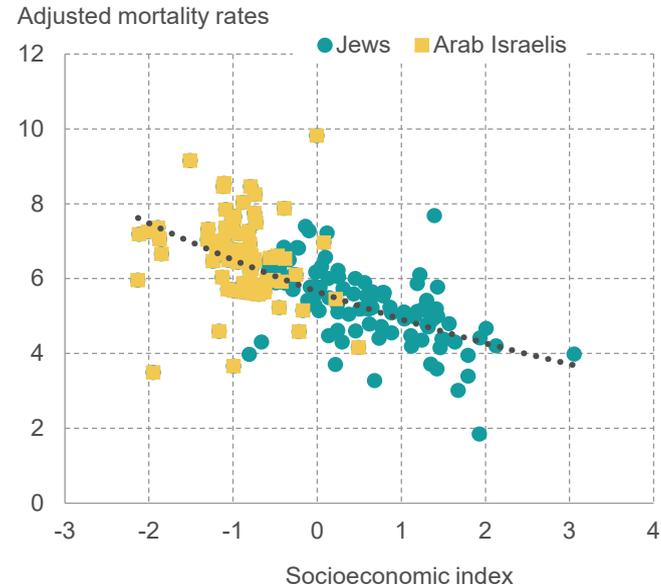
The socioeconomic status of the Arab Israeli population is lower than that of the Jewish population — with less than half of the share of academic degree holders (19 percent versus 41 percent for 25-54-year-olds in 2015) and lower household net income (NIS 9,674 versus NIS 16,539 on average in 2015).

Worldwide, there is a positive correlation between higher socioeconomic status and better health. Beyond economic means, socioeconomic status is correlated with many other factors that affect health: knowledge and awareness, health-promoting behaviors, and utilization of health services. Data on residents of Israel broken down by residential locality show that the higher the socioeconomic level of the locality, the lower the mortality rate. One important finding is that the effects are equal for the two populations, i.e., should the socioeconomic conditions of the populations be equalized, their health levels would be similar as well.

Note: Excluding Haredi localities.

Source: Dov Chernichovsky, Bishara Bisharat, Liora Bowers, Aviv Brill, and Chen Sharony, Taub Center | Data: CBS, *The Socio-Economic Index*

Adjusted mortality rate relative to socioeconomic index, Jewish and Arab Israeli localities 2013





Education and Employment — Part 1

An overview

In the *Explanatory Notes to the Budget*, the last two Ministers of Education, Shai Piron and Naftali Bennett, emphasized similar objectives:

1. Reduce gaps in budget allocations between different socioeconomic strata and population sectors;
2. Reduce the average number of students per class, particularly in primary schools in lower socioeconomic class areas;
3. Increase the percentage of students studying high-level mathematics (five units);
4. Increase the number of students in technical-vocational education and their share out of all students in secondary education.

While there has been some degree of success in attaining these goals, they have not yet been fully achieved.

In addition to evaluating the level of success in carrying out these four goals, this section will consider other life cycle stages: returns to education and recent developments in the labor market.

Goal 1: Small increases in the number of teacher-hours per student; greatest increase in Arab Israeli schools

In Hebrew primary education, the increase in the number of teacher-hours per student was minor. Most of the increase was in schools in the weakest socioeconomic quintile, but even this was very minor. In Arab Israeli education, schools in the three lowest quintiles saw an average increase of 3-5% in the allocation of per student hours, while in the fourth quintile, to which very few Arab schools belong, there was a slight decrease. However, the number of hours per student in Arab education in all quintiles is still much lower than the number of teacher-hours per student in the

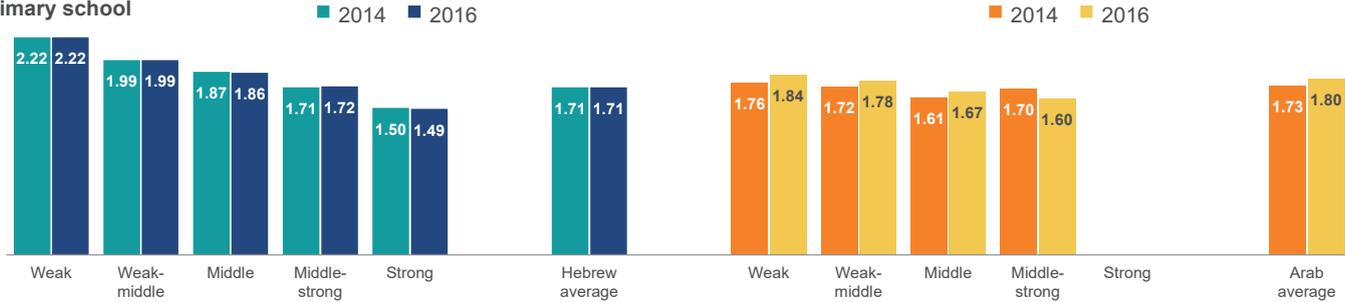
Hebrew system. The increase in teacher-hours in the Arab education sector can be attributed in part to differential budgeting and in part to a slowdown in the student population growth rate and, as a result, a reduction in the number of students per class.

For middle schools, the increase in hours per student was small, but more pronounced in Arab than in Hebrew education. Nevertheless, the gap between the sectors in each quintile remained substantial, especially in the two lowest quintiles where most Arab Israeli schools are concentrated.

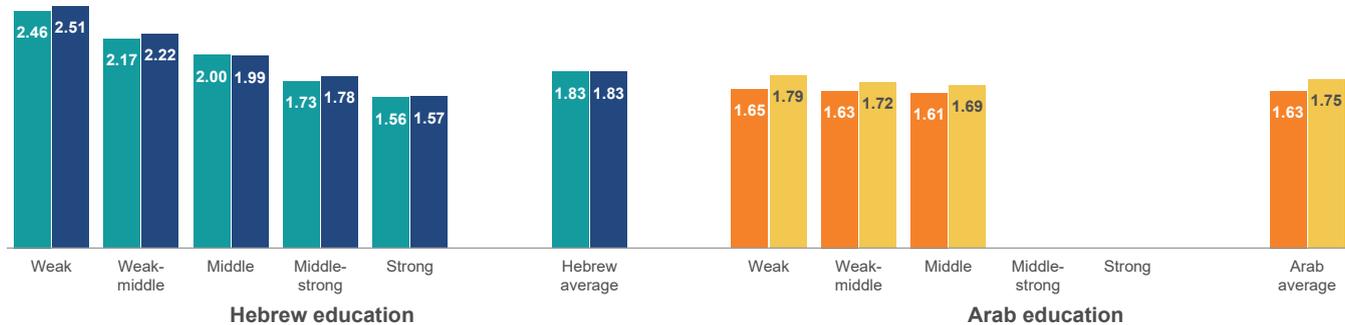
Source: Nachum Blass and Yossi Shavit, Taub Center
Data: Ministry of Education, *Transparency in Education: Budget*

Teacher-hours per student by school Nurture Index grouping

Primary school



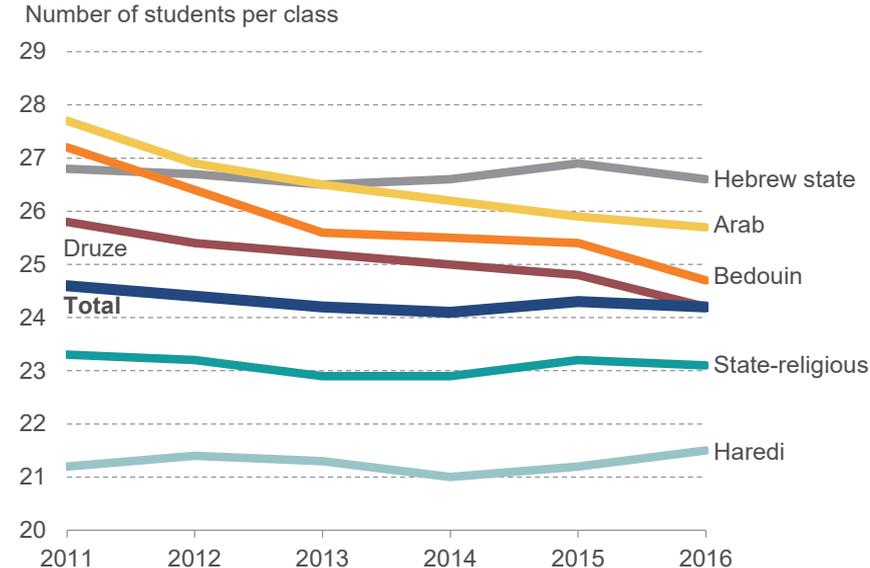
Middle school



Goal 2: There has been a reduction in class size in the Arab Israeli education system, but not in the Hebrew system

The second goal set by the Ministry of Education — decreasing the number of students in primary school classes — has been attained to some extent, but not evenly in all education streams. Most of the decrease was in the Arab system, which started the period with larger classes. In the Hebrew education sector, however, little changed, with a slight decrease between 2011 and 2013, and a slight increase thereafter.

Class size in primary schools
Regular education, by sector and supervisory authority



Source: Nachum Blass and Yossi Shavit, Taub Center | Data: Ministry of Education, *A Broad Perspective*

Goal 3: An increase in the percentage of students studying advanced mathematics

Increasing the share of those qualifying for a bagrut certificate with five-unit level math has been deemed one of the most important goals by both the former and the current education minister. To attain this, math instruction hours and math teacher jobs were added, and the university bonus for students with five units of math was raised to 30 points. To overcome many students' reluctance to study higher-level math, a "safety net" was created to ensure that those who take five units of math and do not pass the test will be considered as having taken the four-unit exam and be awarded an additional 20 points (conditional on having a grade no lower than 35).

The 2016 bagrut exam results indicate that these measures achieved the hoped-for outcome. Between 2013 and 2016, the share of students eligible for bagrut with five units of math rose from 10.6% to 13.8% of all bagrut exam takers. This, however, is still below the 15.5% who took five units of math in 2006.

Percent of students taking math at the 5-unit level out of all those qualifying for a bagrut certificate



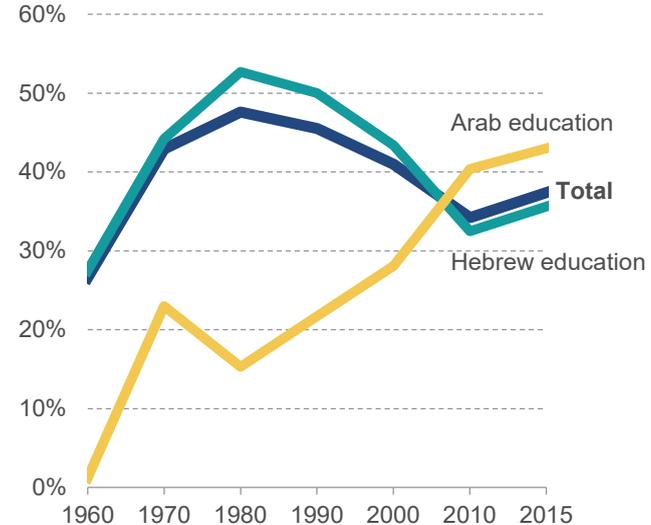
Source: Hadas Fuchs, Taub Center | Data: CBS, *Trends in Math and Science in Upper Secondary Education, 2006-2016* (Press Release)

Goal 4: The portion of students receiving vocational training is on the rise

Due to the changing nature of the labor market resulting from the increasing rate of mechanization and computerization, the Ministry of Education considers it more important than ever for those who do not choose to pursue higher education to have a profession they will be able to use in the future labor market. Such skills can be developed through vocational training.

Technical-vocational education developed differently in the Hebrew and Arab education systems. In the Hebrew sector, its share in secondary education peaked above 50% during the 1990s, but, by 2010, it had declined to 33%. In the Arab education system, by contrast, technical-vocational education grew from 22% in 1990 to 40% in 2010. Since 2010, thanks to serious efforts by the Ministry of Education, the share has risen to 36% in the Jewish sector and to 43% in the Arab Israeli sector, for a total of 37.4% of students in 2015.

Percent of students in vocational training out of secondary education students



Source: Nachum Blass and Yossi Shavit, Taub Center | Data: CBS

Returns to education are higher for women and lower for immigrants

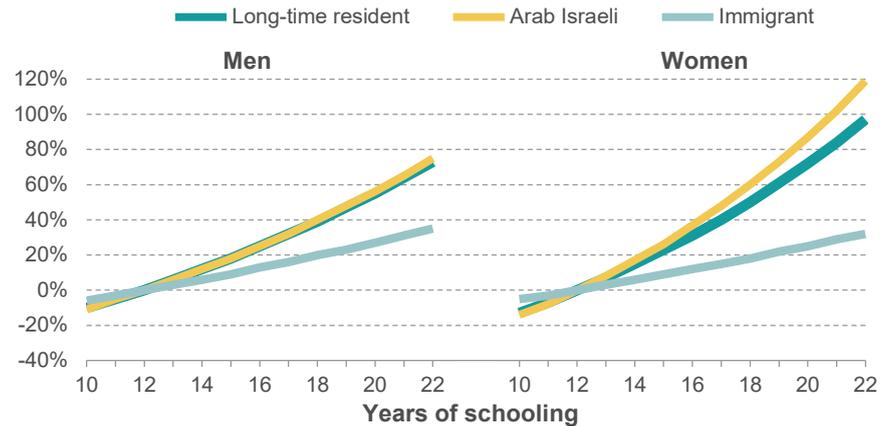
Returns to education for Jewish and Arab populations are similar. However, there are large gender differences, as education is more important for women than for men. Relative to someone with 12 years of schooling, a first degree yielded Jewish and Arab Israeli women increases in expected salary of 22.5% and 26.4%, respectively, while for men the increases were 17.9% and 18.2%, respectively.

Surprisingly, the payoff to higher education is far lower for immigrants than for Israel-born individuals (8.8% for women and 9.3% for men for a BA degree). This, however, may reflect historical trends. Recall that the *aliyah* of the 1990s, mostly from the FSU, was comprised largely of highly educated individuals, few of whom were able to find jobs appropriate to

their skill level. The finding in the figure indicates that even after 25 years, many of them were unable to achieve appropriate positions. This, however, is not an indication of the return that a current immigrant student can expect. Those who immigrated as children (often called “generation 1.5”), show no differences in returns to education relative to those born in Israel.

Change in wage with additional years of education, 2014

Relative to reference group with 12 years of schooling

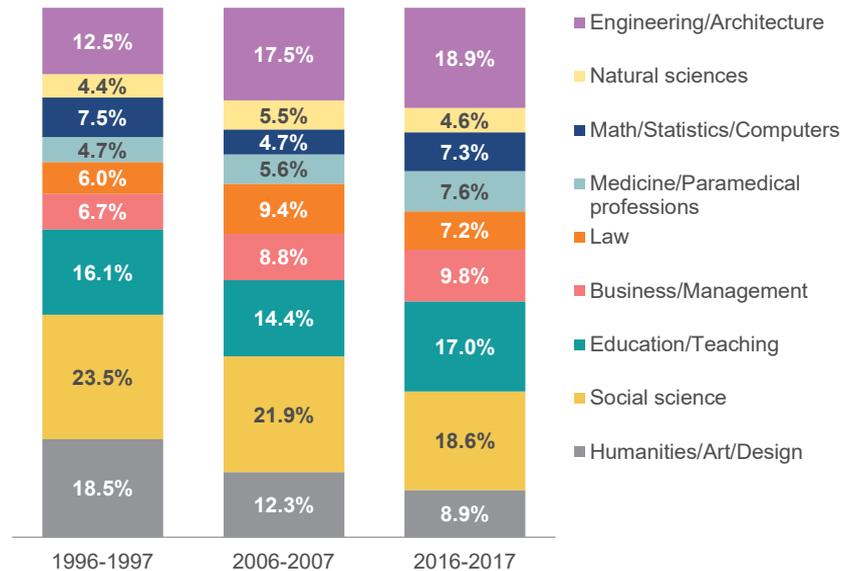


Source: Kyrill Shraberman, Taub Center | Data: CBS, Household Expenditure Survey

A major shift in study majors in higher education

The last two decades have seen a fundamental change in fields of study in Israeli academia. In percentage terms, humanities studies have fallen off by more than 50%, and social studies have fallen to under 20%. The portion of business students has increased by almost 50%, the portion in engineering and architecture increased by over 50%, and in the study of medicine, the increase has been over 60% (however, the percentage remains low). The largest absolute increase was in engineering and architecture studies.

BA students in universities and academic colleges by study major



Source: Shavit Madhala, Taub Center | Data: Council for Higher Education, 2017

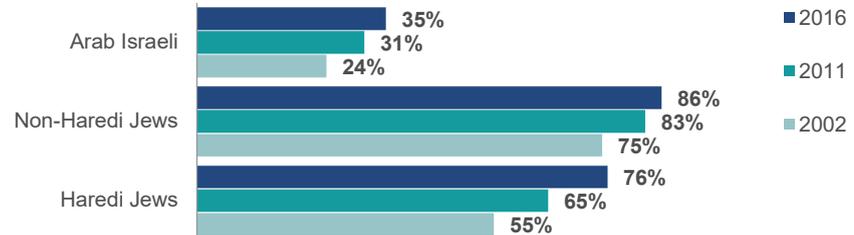
Increases in employment for all population groups

One of the encouraging findings regarding the Israeli economy is that the employment rate has been increasing in all sectors and for both genders, with large increases in the two weakest populations — Haredi men and Arab Israeli women. These increases are significant, and are indicative of changes occurring within these populations.

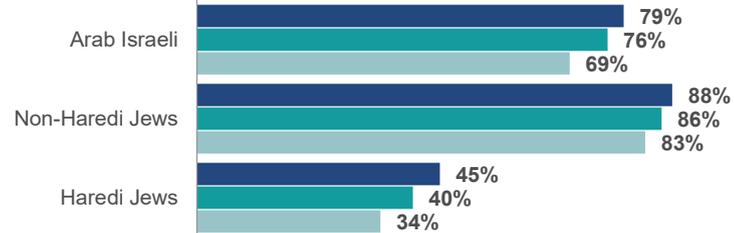
Note: Haredim were identified as those whose last place of study was a yeshiva. Data for 2016 were affected by changes in the survey methodology in 2012.
 Source: Hadas Fuchs, Taub Center
 Data: CBS, Labor Force Survey

Employment rates, 25-54-year-olds

Women



Men





Spotlight: Ostracism in the Israeli Education System

The phenomenon of ostracism (*herem*), which may take on different forms, can be devastating for its victims. Violence and bullying in schools has several faces, from constant mistreatment of those students ranked lowly on the social ladder to the use of brute force. Ostracism is a particular form of bullying that is included in the category of “relational bullying.” Although it may not always have a physical component, students who were victims of ostracism remember the experience even many years later.

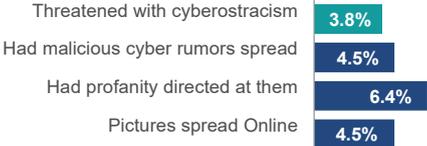
This section examines the connection between the likelihood of experiencing ostracism and other types of bullying and the educational sector and age of students. In addition, changing patterns of ostracism in the education system over time are shown. The findings show that the phenomenon of ostracism is worrying in its dimensions, and harms primarily younger students and Arab Israelis. There is room for optimism, though: over the years the share of students who report experiencing ostracism has declined.

Substantial incidence of bullying and violence in schools

Almost 6% of students reported that in the previous month they had been ostracized, and nearly 4% reported that there had been a call to ostracize them Online. As a rule, these data do not establish whether students are reporting isolated experiences of violence or bullying, but ostracism is an exception since it is violence for which asymmetry and repetition are necessary by definition.

Self-reported rates of school bullying and violence 2015

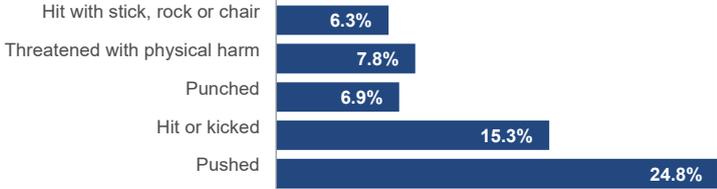
Cyber bullying in the past month



Relational bullying in the past month



Physical bullying in the past month



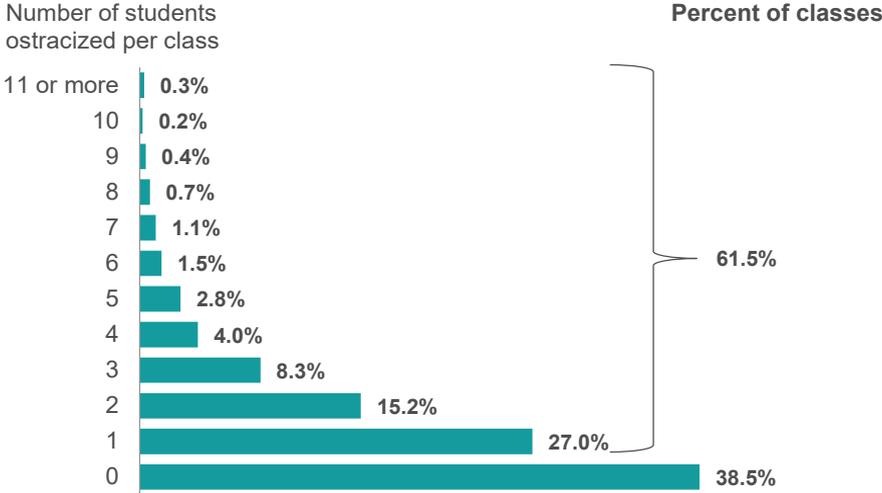
Source: Eran Hakim and Yossi Shavit, Taub Center | Data: RAMA, School Climate and Pedagogical Environment files

In the majority of classes, students have been ostracized

The finding regarding the prevalence of ostracism is quite startling, and demonstrates just how widespread the phenomenon is. Although, as shown on the previous page, only a small percentage of students reported being ostracized, in 2015, there was at least one child who experienced ostracism in over 60% of classes.

Distribution of classes by the number of students ostracized in the class, 2015

As a percent of all classes, 8,657 classes total



Source: Eran Hakim and Yossi Shavit, Taub Center
Data: RAMA, School Climate and Pedagogical Environment files

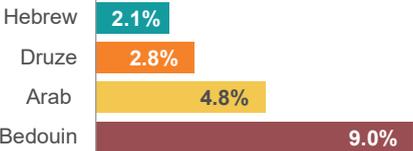
Far more ostracism in the Arab school system than in the Hebrew one

The highest rates of ostracism were found in schools belonging to the Bedouin education sector, followed in descending order by those belonging to the Arab education sector, the Druze education sector, and, finally, the Hebrew education sector.

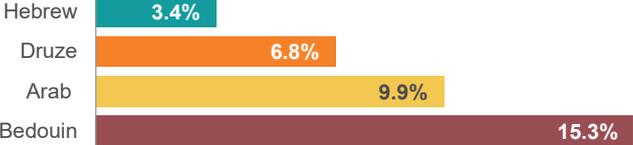
An examination of the level of ostracism by grade (and by age) reveals two opposing patterns; while the general level of ostracism drops with age, levels of cyberostracism rise.

Ostracism and cyberostracism by education stream, 2015

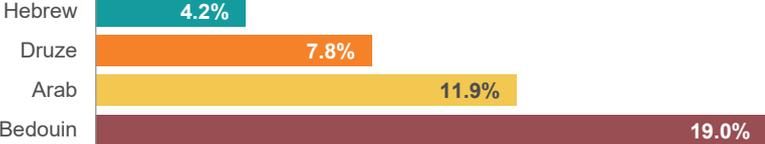
Cyberostracism rate



School ostracism rate



School or cyberostracism rate



Source: Eran Hakim and Yossi Shavit, Taub Center
Data: RAMA Meitzav dataset

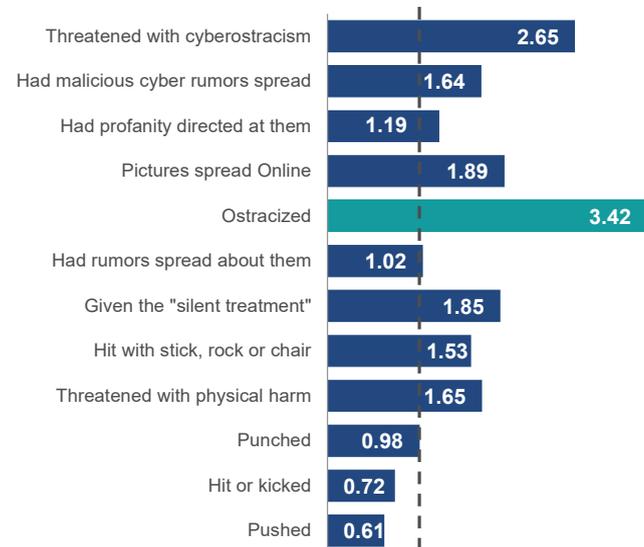
Arab students suffer from most types of violence far more than do Jewish students

The gap between education sectors shown on the previous page raises the question whether similar gaps are prevalent in other such social experiences in the classroom. This figure presents the gaps between students in the Arab and Hebrew education streams in reporting various kinds of violence. The index in the figure represents the likelihood that an Arab Israeli student will be the subject of violence relative to that of a Jewish student. An index score greater than 1 denotes a situation in which Arabs are more likely to report violence than Jews; the higher the index score, the larger the gap between Arab Israelis and Jews.

With respect to reporting ostracism, the ratio between the educational streams is 3.5, which is the highest of all types of violence in school. The second largest gap between Arab Israelis and Jews concerns reports of cyberostracism (2.5). Both of these gaps are particularly high.

Source: Eran Hakim and Yossi Shavit, Taub Center
Data: RAMA, School Climate and Pedagogical Environment files

The ratio between the odds quotient of students in Arab and Hebrew education reporting various types of school violence, 2015



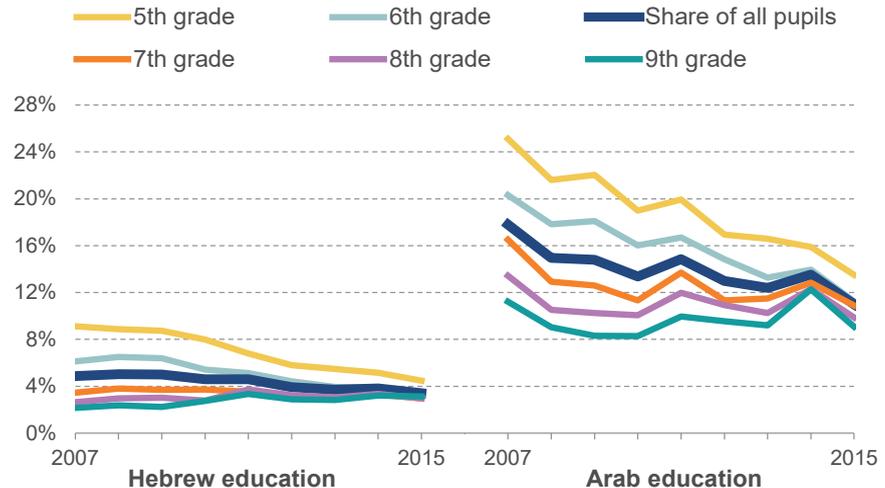
The good news: Ostracism is falling

Between 2007 and 2015, there was an impressive drop in the percentage of students who reported experiencing ostracism: in schools belonging to the Arab education system, the rate dropped from 18% to 11% (a 38% drop), and in the Hebrew education system it dropped from 5% to 3.5% (a 30% drop). Both in the Hebrew and Arab education systems, there was a 50% drop in reports of ostracism among 5th grade students. Among Jews, the drop in reports of ostracism only occurred among 5th and 6th grade students, and among Arabs, there was a drop in other grades also, but the sharpest drop in reports of ostracism occurred in these grades.

This trend is encouraging given that the main victims of ostracism are students enrolled in Arab education, and primary school students. It is

likely that the drop is related to extensive intervention efforts by Shefi – the Ministry of Education Counseling and Psychological Services Division.

Share of students who report being ostracized



Source: Eran Hakim and Yossi Shavit, Taub Center | Data: RAMA, Meitzav dataset



Education and Employment — Part 2

Closing the gaps between Jewish and Arab Israeli students?

For most of the years since the country's establishment, the Arab population has lagged far behind in terms of educational achievements, the attainment of higher education, and employment. Over the past few years, though, it appears that the government is more willing to invest substantial resources in narrowing these historic gaps between the sectors (including through the five-year plan for the advancement of the Arab sector).

An in-depth look at the trends in all levels of Arab education, from preschool to higher education, as well as data from the labor market, show a trend towards rapid and continuous improvement on many of the measures — among them success rates on international exams, bagrut qualification rates, and labor force participation rates. In particular, the achievements of Arab Israeli women stand out. Nevertheless, this success does not translate into optimal integration into the Israeli labor market, and many Arab Israeli women from all the sub-sectors, continue to find employment in the education field at high rates, and, to a lesser extent, in the health field. In addition, it should be noted that Arab Israeli men are not succeeding in closing the gap with Jewish men in a similar fashion.

It is important to note that the road to narrowing disparities between the Jewish and Arab population in education and employment remains a long one. As in the case of health disparities, it appears that the lower socioeconomic status of the Arab Israeli population is a very significant factor in the creation of these disparities and in the difficulties of closing them.

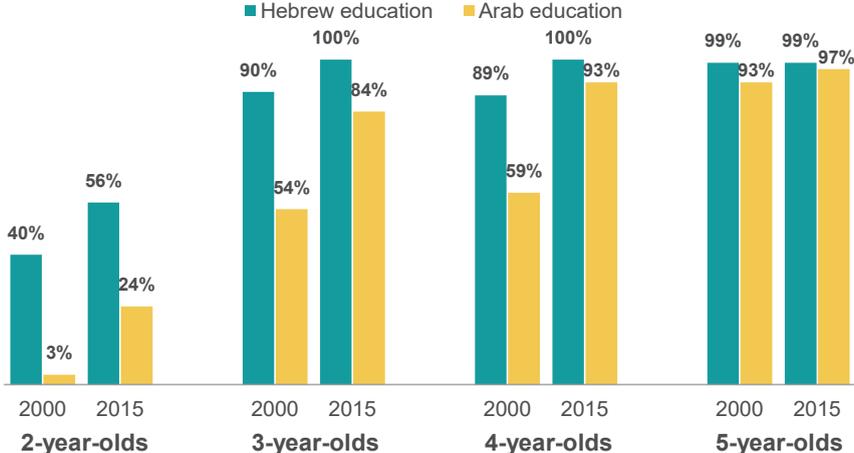
Large increase in pre-primary education, especially in the Arab education system

From 2000 to 2015, there was a large increase in enrollment in pre-primary education. The increase for 3-4-year-olds was a direct result of the changes that occurred following the 2011 social protests and the adoption of the recommendations of the Trajtenberg Committee to provide free education for these age groups. The increase is particularly notable for Arab Israelis, since a very large portion of the Jewish population sent their children to preschool before the law passed.

The more surprising change is for 2-year-olds. This, too, could partially and indirectly be the result of the Trajtenberg recommendations: the ability to send 3-4-year-olds to school for free made employment for parents more worthwhile and also freed up funds to allow families to pay for care for their 2-year-olds. Here the change

for the Arab Israeli population is remarkable. This is particularly encouraging given its important role in early childhood development.

Enrollment rates in pre-primary education



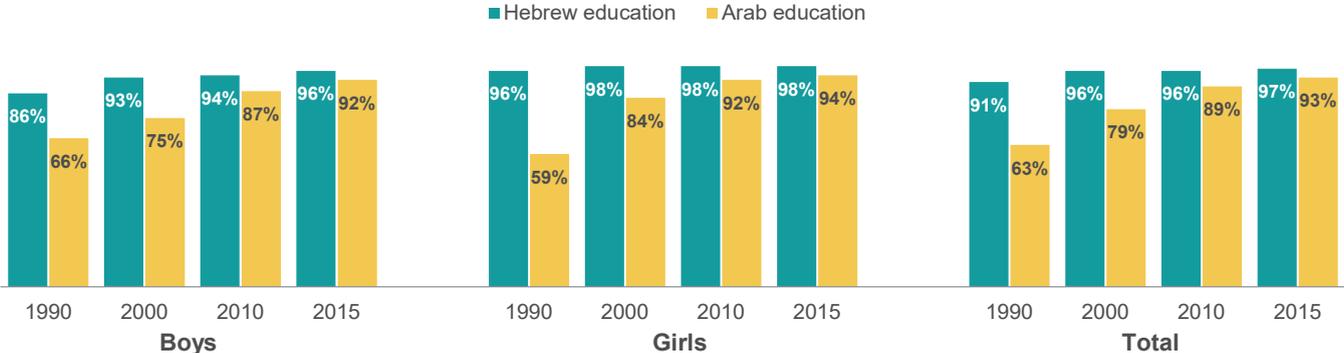
Source: Nachum Blass, Taub Center | Data: CBS, *Statistical Abstract of Israel*

A large increase in the portion of Arab Israeli high-school aged children enrolled in school

The percentage of 14-17-year-olds attending high school has risen for all populations in the past two and a half decades. As was the case for 3-4-year-olds, for the Jewish population, this rise has not been that monumental because the portion enrolled was high throughout the period, particularly for girls.

For the Arab Israeli population, on the other hand, the change has been dramatic. In 1990, 34% of boys did not attend high school, and, by 2015, this had declined to only 8%. For girls, the change was even more striking — from 41% not attending in 1990 to only 6% in 2015, a drop of 85%. Today, the enrollment gaps between the populations are small.

Enrollment rates of 14-17-year-olds

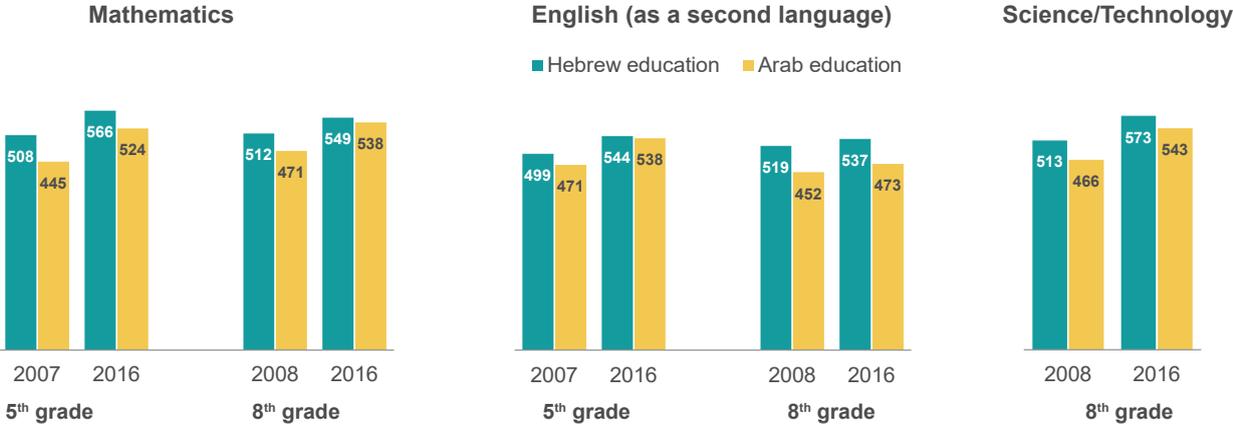


Source: Nachum Blass, Taub Center | Data: Ministry of Education, 2016

Improvement and *closing* gaps on Meitzav tests

The Meitzav tests are national evaluation exams administered in mathematics and English to 5th and 8th graders, and in science and technology to 8th graders throughout most of the education system (aside from boys in Haredi schools). As seen in the figures, scores in all subjects have been increasing both in 5th grade and in 8th grade, and, importantly, the gaps between Hebrew speakers and Arabic speakers have been closing in all subjects and at all grade levels.

Average Meitzav scores by education sector



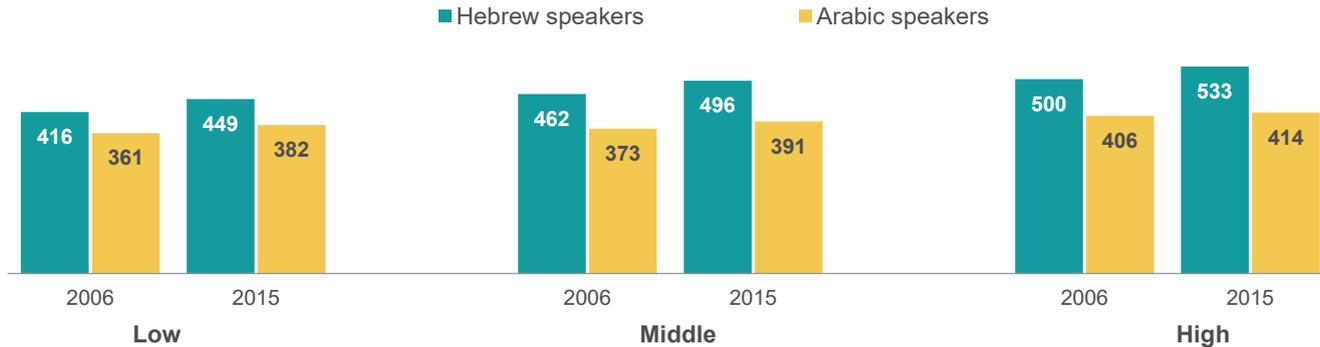
Source: Nachum Blass, Taub Center | Data: RAMA, 2016

Improvement but *increasing* gaps in PISA mathematics exams

The scores of Israeli students on internationally administered mathematics exams have been inadequate and disappointing, especially given Israel's image as the "Start-Up Nation." While there has been improvement in both the Hebrew and the Arab school systems for all socioeconomic levels in the last decade, achievements on these exams continue to be low relative to other countries. This is true both for PISA and TIMSS exams.

As opposed to the shrinking gaps in the Meitzav exams shown on the previous page, gaps in PISA scores between the school systems have been growing over time. This, however, is the exception, as in both the psychometric tests and the TIMSS exams gaps have been narrowing. It is not clear why the PISA results show the opposite trend.

Average score on PISA math tests by school Nurture Index group



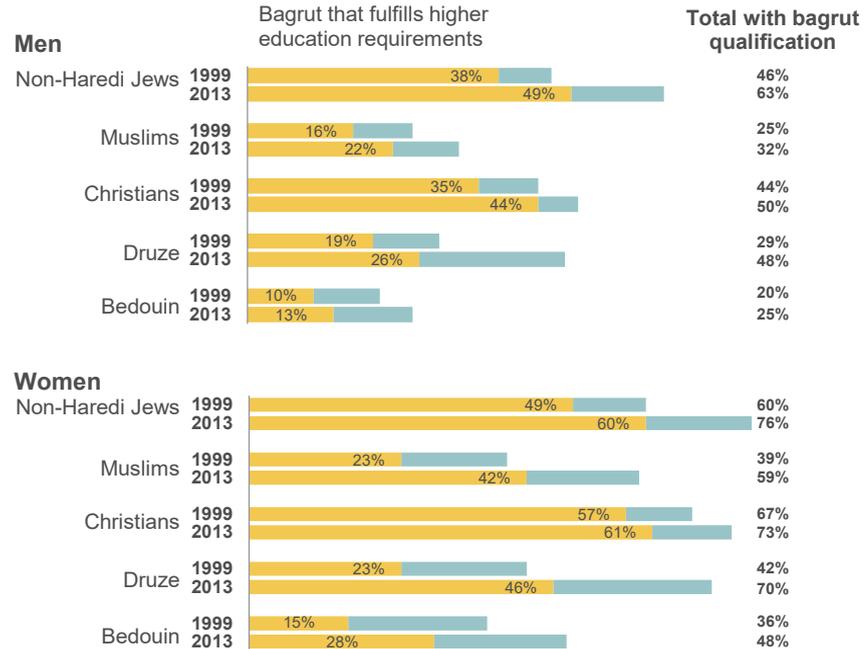
Source: Nachum Blass, Taub Center | Data: RAMA, 2016

Large increase in the percentage of students qualifying on the bagrut exams

As noted previously, the Arab education system has experienced a rapid improvement over the past 20 years, and the gaps between Arab and Hebrew education are closing. This trend is also seen in the share of those attaining a bagrut qualification. However, the improvement is more significant among girls than boys.

In all groups within Arab Israeli society, girls improved their qualification rates, and in particular, their rate of qualifying for a bagrut that fulfills admission requirements for higher education. In contrast, among Arab Israeli boys, the improvement is far less. Except for among Druze youth, the achievement gaps between Arab Israeli boys in all Arab sub-sectors and those of Jewish boys grew.

Share of those with a bagrut qualification out of the sub-sector



Source: Hadas Fuchs, Taub Center | Data: CBS, Administrative datasets

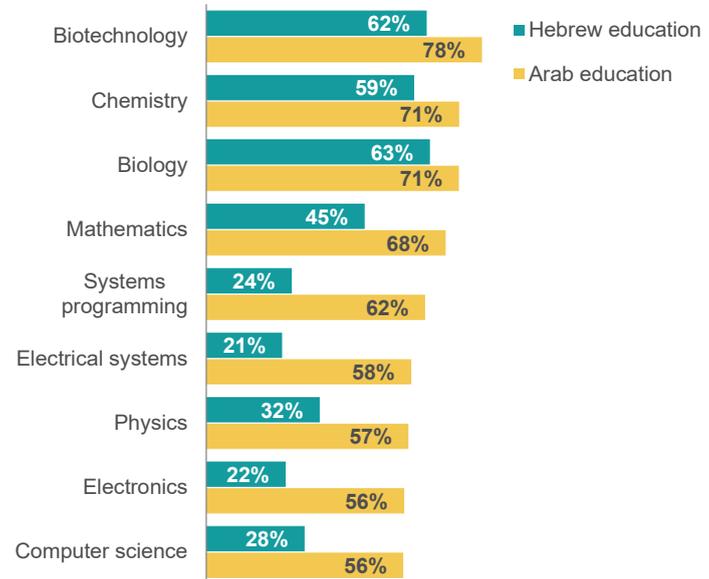
Arab Israeli girls studying sciences

In addition to more Arab Israeli girls attending high school and qualifying for a bagrut, they are also choosing to study advanced-level sciences far more than are Jewish girls. Among the Arab girls, there has been a large increase in the portion studying sciences. While the percentage of girls studying biology and chemistry has been high historically, there has been a large increase in the number studying engineering tracks, including mechanics, computers, physics, and electronics.

These trends are important because studying these subjects can lead to high paying jobs in the marketplace. As we shall show, however, the next step — continuing these studies in college and finding work in these lucrative fields — is not yet occurring to any large degree.

Source: Hadas Fuchs and Guy Yanay, Taub Center
Data: CBS, Administrative datasets

Share of girls out of all students studying science in high school 2016



When they reach college — Arab Israeli women revert to studying education and health

Even though Arab Israeli women have improved their education levels substantially, when they reach higher education, they continue to opt for those study majors that are considered traditionally “female” and not to choose those majors that have the potential for high income. A particularly high share of Arab Israeli women study education, especially among Muslim and Bedouin women.

Many Bedouin men also study education, but in other sectors men study far more health, economics/business, and sciences. The percentage of engineering students out of Druze academics is particularly high; higher even than for Jewish students. Interestingly, study majors at the college level with the lowest share of Arab Israeli women are the

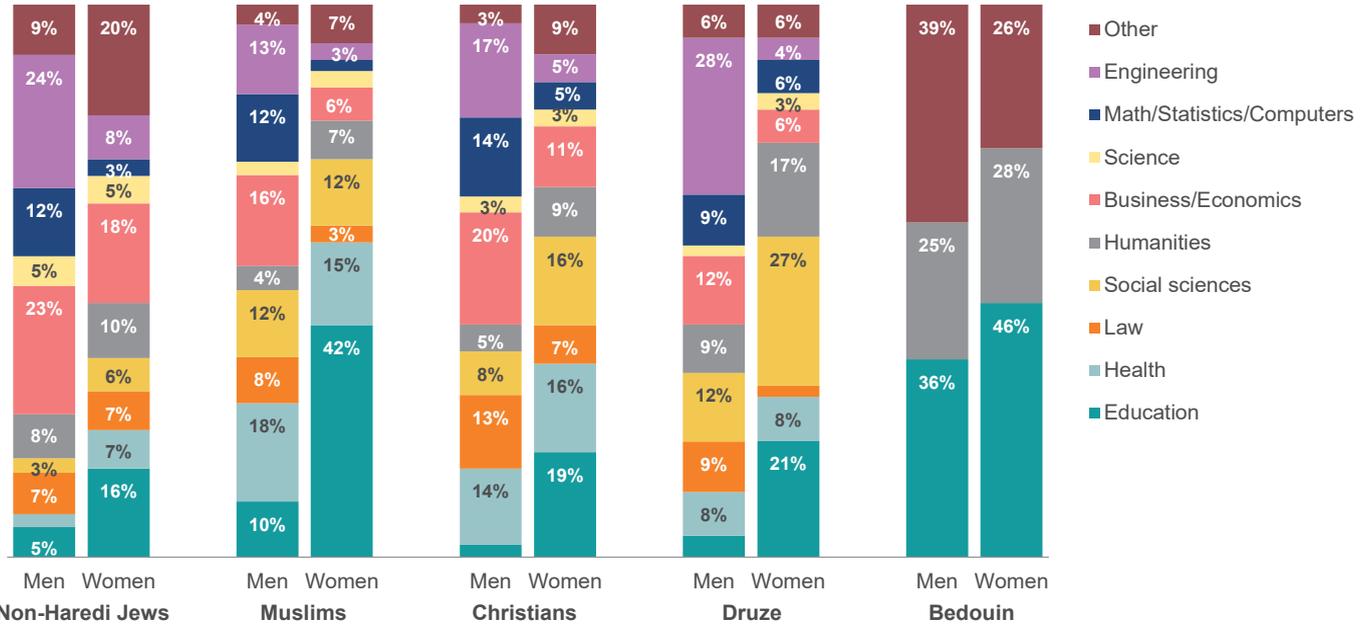
sciences, computers, and engineering. This is surprising considering their study majors in high school. Although the share of Arab Israeli women pursuing degrees in education are trending down, this decline is not resulting in a rise in the share of those studying engineering and computers; rather, there is an increase in the share of women pursuing degrees in the humanities, health fields, and general social sciences.

The data show that while the majority of women who study education find employment, there are signs of a glut of teachers in the sector in the past few years (see page 92). If the number of those studying education does not lessen substantially, this trend is likely to intensify.

Study majors of third year students in higher education

2012-2014

Ages 21-35



Note: Not including students in the Open University. For Bedouin students, categories, with the exception of education and humanities, were combined due to the small number of cases. Computer engineering was combined with mathematics, statistics, and computers.

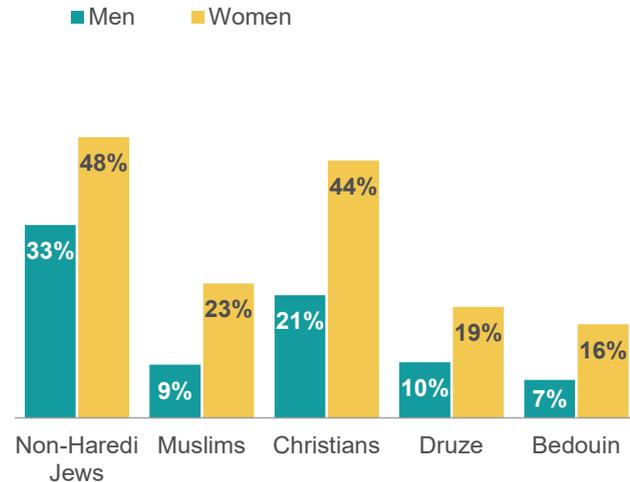
Source: Hadas Fuchs, Taub Center | Data: CBS, Administrative datasets

Large gender gaps among degree holders

The large rise seen in the share of those continuing on to higher education is all but non-existent among Arab Israeli men. What is more, the drop-out rate among them is higher than among women (see *A Picture of the Nation 2017*, p. 69), such that the share of Arab Israeli men with higher education is far lower than the share of Arab Israeli women. This disparity between women and men is seen in all sectors. However, among the Arab groups, the gap between men and women with an academic degree is much greater (100% more) than the gender gap for non-Haredi Jews (about 50% more).

While the share of women with a higher degree is greater than the share of men with a degree across all sub-sectors of the Arab Israeli population, there are substantial gaps among Arab Israeli women by sub-sector. Among Christian women the share of those with an academic degree is almost equal to that among the Jewish population, while among the other sub-sectors the rates are far lower.

**Share of sector with an academic degree
2014**
Ages 30-33



Source: Hadas Fuchs, Taub Center | Data: CBS, Administrative datasets

Large sheepskin employment effect for Arab Israeli women

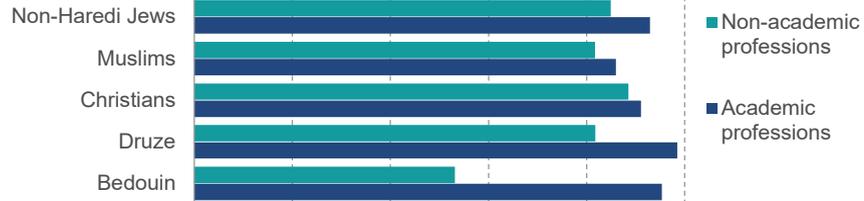
In general, individuals in all population groups with an academic degree are employed at higher rates than those without a degree. This is especially true among Arab Israeli women. Employment rates among Arab Israeli women are low in general, but those with a higher degree – and even those who dropped out prior to completing their degree – are employed at relatively high rates, much higher than those who never studied for a degree.

Among Arab Israeli men, the difference in employment rates between those with an academic degree and those without one is relatively small, and both groups are employed at high rates, except in the Bedouin population. Among Bedouin women, the difference between women with a degree and those without is particularly large.

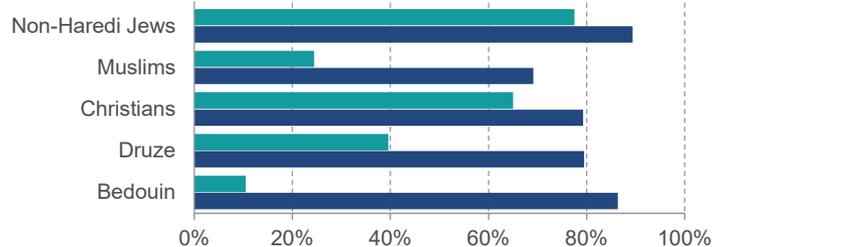
Employment rates, ages 25-54

2013-2015

Men



Women



Note: Bedouin includes Muslims living in the South; Muslims includes the rest of the Muslims and the Bedouin of the North.

Source: Hadas Fuchs, Taub Center | Data: CBS, Labor Force Survey

Arab Israelis continue to be employed mainly in the education and health sectors

Young Arab Israeli women who complete their degrees tend to work in the “traditional” field of education that they studied in college. While one in every five non-Haredi Jewish women with a higher education works in the field of education, for Arab Israeli Christians, it is two out of five, for Muslims and Druze three out of five, and for Bedouins four out of five (male Bedouin academics also work in education in very large proportions). It would seem prudent during high school to try to encourage some of these young women to continue studying STEM subjects in college.

The other area in which Arab Israelis are heavily concentrated is the health field, where a large percentage of men are employed. Interestingly, while among Muslim men the percentage of nurses is particularly high, among Christians, employment is more heavily weighted towards doctors.

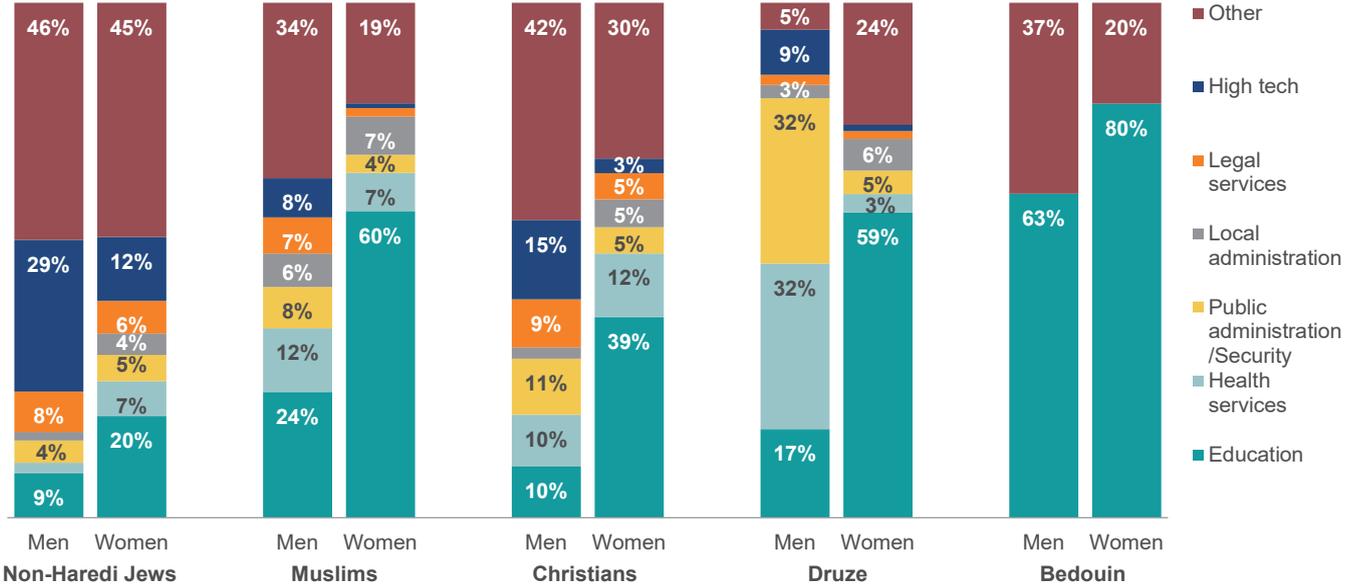
There are at least three very different reasons for women remaining in the fields of education and health. One is cultural: the fields of education and health allow women

to work within their communities, and are considered beneficial for family life. Opening industrial complexes in or near Arab localities or increasing the possibility for working remotely could serve to open new possibilities for this population and a better distribution of occupations.

The second reason is structural: while the transportation infrastructure for Arab localities has improved greatly in recent years, transportation to employment centers is still difficult and time consuming. This, too, can be addressed by opening industrial complexes in or near Arab localities, and also by continuing to improve transportation to them.

Finally, there seems to be some concern among young Arab women that they will have difficulty finding employment in high tech firms in Israel, and this concern leads them to choose to study education instead of computers. To the extent that this concern is justified, its solution may be the most difficult of all since it will involve educating employers, and demonstrating the gain they can expect to get from employing these young women. To this end, employment subsidies may be an effective component of the solution.

Employment branches of those with a higher degree, ages 25-35 2013



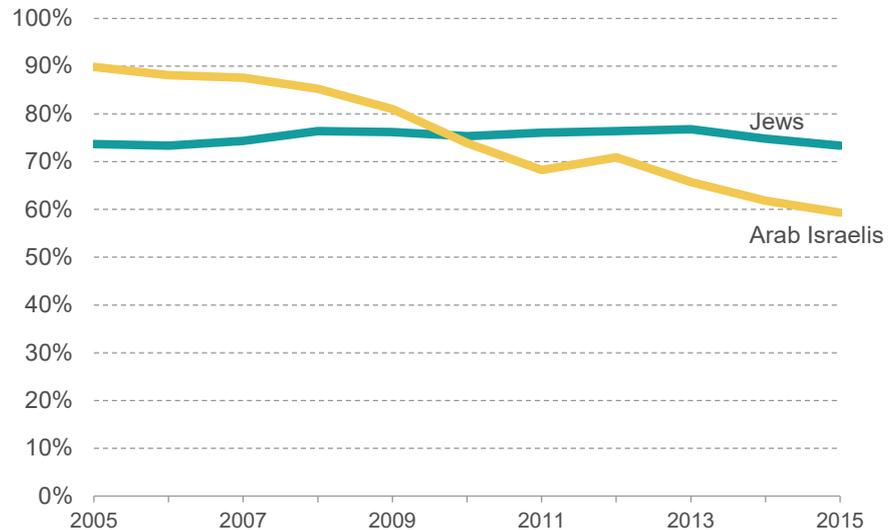
Note: Civilian employees only. For Bedouin, categories were combined with the exception of education due to the small number of cases.
Source: Hadas Fuchs, Taub Center | Data: CBS, Administrative datasets

An increasing percentage of Arab Israelis do not find employment in education

As was shown, a very large percentage of Arab Israeli women study education. Historically, they have all been able to find gainful and full-time employment in the education sector, but this is changing, and an increasing percentage of those who study education do not find suitable employment. This is due not only to the increase in the number of teachers, but also to stagnation in the number of new students in the Arab system (see page 18). Some of those who find employment in education are offered positions that are far from their homes. Specifically, teachers from communities in the North where there is an excess of teachers are offered positions in Bedouin villages in the South where there is still a need for more teachers.

Percentage of teacher-training program graduates working in education

By year of completion of training



Source: Hadas Fuchs, Taub Center | Data: CBS, Teaching Staff in Schools



Education and Employment — Part 3

Zooming in on the Haredi population

In this section, we will focus on some interesting phenomena taking place in Haredi schooling and employment patterns. There is a continuing increase in the percentage of Haredim from all Haredi streams pursuing higher education and entering the labor market, and there is a link between these trends and place of residence. That is, Haredim living in mixed Haredi-secular cities are more likely to work than those living in more segregated communities within cities or segregated towns. An additional trend that has already been written about and discussed widely is the propensity of Haredim to study law and business, making them underrepresented in other occupations that are in greater demand.

Unusual progression patterns in Haredi schools

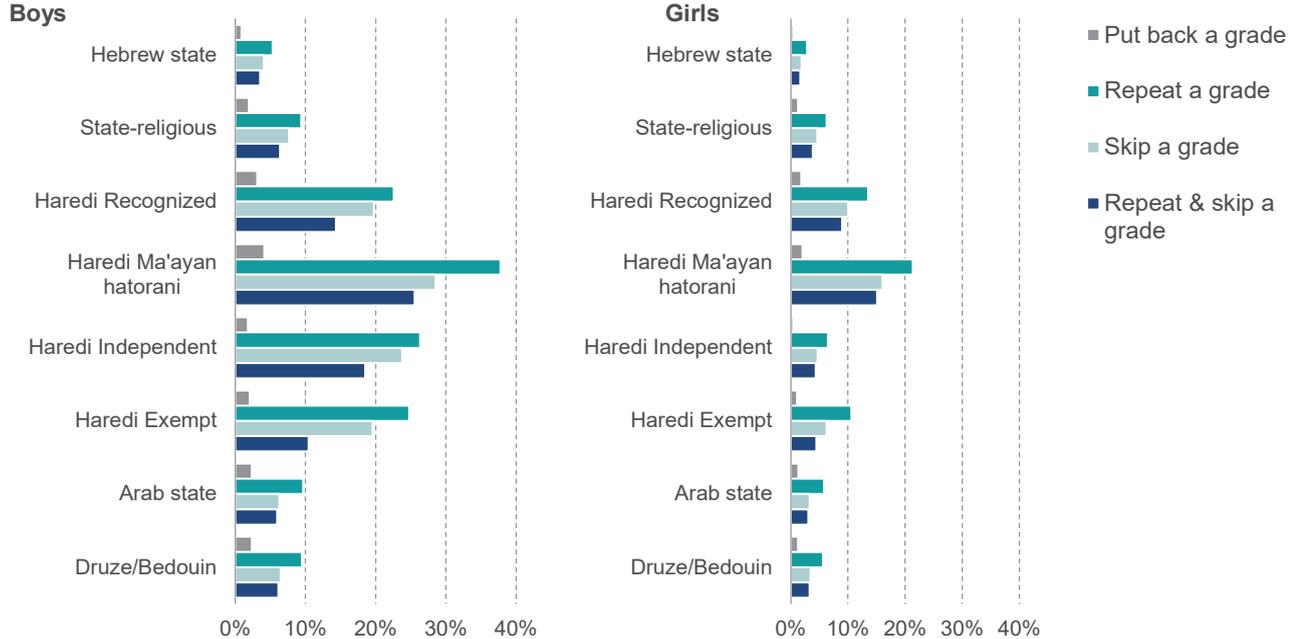
It is not uncommon to hear claims of irregularities in schools' reporting of students' progress, particularly in the Haredi education sector. The data in this figure confirm that between grades 1 and 8, for students born from 1994 to 2000, there are notable differences in educational progression through the grades in the different educational streams. Haredi schools, in particular, have much higher percentages of students who have gone back to a previous grade, repeated a grade, skipped a grade, or both repeated and skipped a grade.

The Hebrew State (secular) sector has the lowest levels of such occurrences. State-religious and the two Arab sectors have only marginally higher rates than the Hebrew State schools. Note that the frequency of repeating and skipping grades are lower for girls than boys, and the differences between sectors are smaller.

Interestingly, the probability of skipping a grade and of moving back or repeating a grade has increased markedly over time in Haredi schools, leading to increasing gaps between the school systems.

Percentage of students with non-standard progression between grades 1 and 8 2001-2015

By progression pattern and school supervisory authority in which student was first observed



Source: Alex Weinreb and Nachum Blass, Taub Center | Data: Ministry of Education, Student database

Haredi children spend more time on average in primary schools than do children in other streams

The different educational trajectories shown on the previous page mean that the actual average length of time it takes a student to complete one year of schooling differs across school systems. This is important not only because it tells us something about children's actual educational progress, but also because it has financial implications for school funding.

The table shows that in the State sector an average boy has to spend 1.015 years in school to satisfactorily complete a year of schooling, i.e., an extra 1.5% for each year of schooling. In religious schools, the required extra time is slightly higher, around 2.5% extra per year. In Arab and Druze schools, it is higher still, requiring an extra 2.9%. As expected, however, the most extra time is required in all four Haredi school streams: an extra 5.5% for boys in Independent and Exempt schools, an extra 6.3% in Recognized schools, and an extra 9.1% in Ma'ayan hatorani schools.

These large gaps raise concerns about irregularities regarding the reported advancement between grades, or, alternatively, that decisions on advancement are not always taken with the best interest of the student in mind.

Number of student-years necessary to complete a year of study

Average for grades 1-8, students born between 1994 and 2000

Education sector	Boys	Girls
State	1.0154	1.0081
State-religious	1.0251	1.0159
Haredi Recognized	1.0625	1.0340
Ma'ayan hatorani	1.0905	1.0483
Haredi Independent	1.0565	1.0135
Haredi Exempt	1.0533	1.0235
Arab	1.0286	1.0165
Druze/Bedouin	1.0290	1.0171

Source: Alex Weinreb and Nachum Blass, Taub Center
Data: Ministry of Education, Student database

Haredi men study law more, while Haredi women study computers and education more

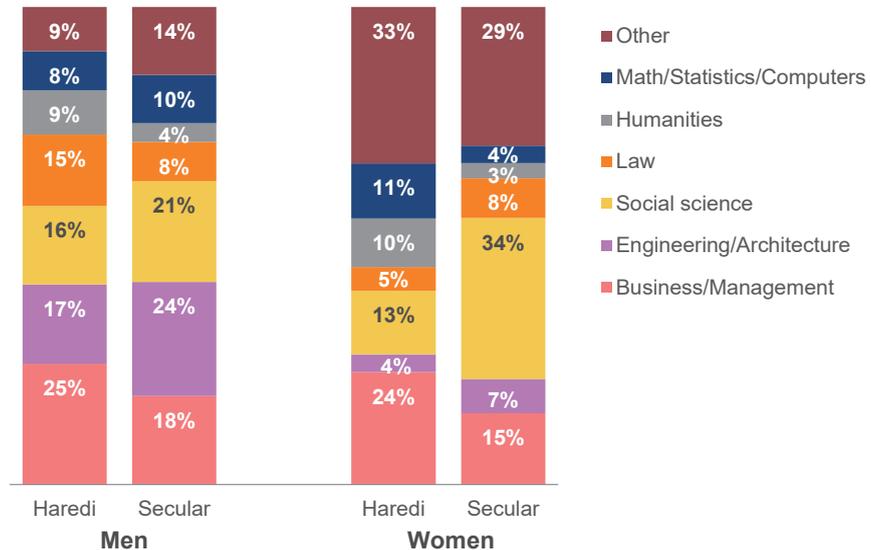
Both Haredi men and women with degrees have a relatively high propensity to study business and management, more than do secular Jews. In other fields, the differences between secular and Haredi Jews are quite different for men and women. Haredi men study law far more than do secular men (partially because of its similarity to the study of Talmud), and study far less engineering, architecture, and computers (probably because they do not study math and science in high school).

Haredi women are concentrated more in education and health fields, but they also study far more math and computers than do secular women. Most Haredi women receive their higher education in seminars (not included here), where the portion studying education is much higher.

Distribution of academic degrees by study major

2014

Ages 20-35



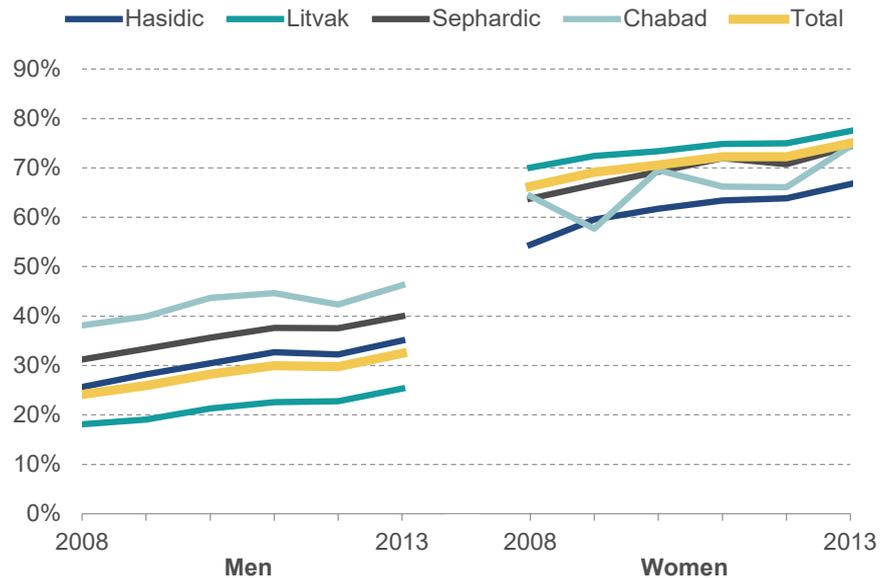
Source: Eitan Regev, Taub Center | Data: CBS, Administrative datasets

Employment pattern diversity in the Haredi sector

It is well known that Haredi employment is on the rise. It is also well known that a greater proportion of Haredi women work than do Haredi men. However, not all parts of the Haredi community have similar work patterns. In the figure we see that the differences between the different parts of the Haredi community are in the level of employment and not in the positive trends which all groups have felt.

Men in the Lithuanian Haredi sector tend to work the least and the women tend to work the most. Hasidic women work the least, and their husbands also do not work in large numbers; they rank second to last in labor force participation. Chabad men work the most, with almost 50% employment for young adults aged 23-30 in 2013.

Haredi employment rates by religious stream, ages 23-30



Source: Eitan Regev, Taub Center | Data: CBS, Administrative datasets

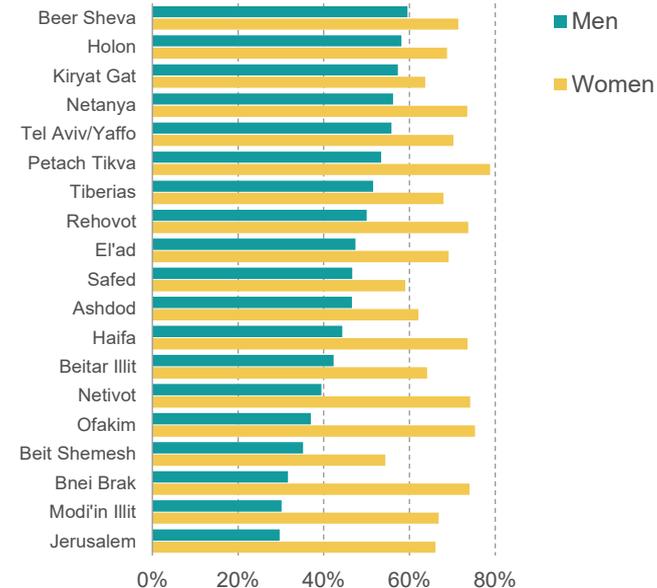
Haredi men living in mixed towns work far more than those in traditionally Haredi towns

The cities with the highest concentration of Haredim are those in which Haredi men work the least, while Haredi men living in mixed cities (Haredi and secular populations), which have a lower percentage of Haredim, tend to work more (this relationship does not exist for Haredi women). Interpretation of this finding, however, must be made carefully. On the one hand, it is possible that living in a mixed city is the cause, and the effect is that Haredi men work more. Under this interpretation, it would behoove decision makers interested in promoting Haredi employment to develop future Haredi neighborhoods within mixed cities rather than create separate Haredi cities.

On the other hand, it is also likely that those Haredim who choose to leave more traditional Haredi cities are the ones most inclined to enter the labor force (thereby explaining their departure). In this case, the location of new neighborhoods is largely irrelevant. The truth is probably that both explanations play a part.

Haredi employment rates, 2014

By residential district, ages 25-35



Source: Eitan Regev, Taub Center | Data: CBS, Administrative datasets

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