

The Herbert M. Singer
Annual Report Series

STATE OF THE NATION REPORT

**Society, Economy and Policy
in Israel**

2010

Dan Ben-David, Editor



TAUB CENTER
for Social Policy Studies in Israel

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Taub Center for Social Policy Studies in Israel

Jerusalem, November 2011

Taub Center for Social Policy Studies in Israel

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Editing: Dalit Nachshon-Sharon

Translation: Oran Moked; Julie Rosenzweig/Sagir International
Translations Ltd.

English editing: Laura Brass

Layout and editing assistant: Ruti Lerner

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

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Foreword

The *State of the Nation Report 2009*, published last year, had an exceptionally large impact. Hundreds of individual articles, series of articles, features and editorials presented, reviewed and expressed opinions focusing on the *Report's* findings. The findings themselves were brought before key policy makers in the government, the *Knesset* and the civil service. Their influence on Israeli public discourse garnered official recognition in Israel's leading media outlets.

The uniqueness of the *State of the Nation Report 2009* emanated from the comprehensive picture that it provided of Israel's socioeconomic trajectories, showing where it has been, where it is today – relative to the past and in relation to other countries – the direction that the country is headed, and the implications together with policy recommendations. This *State of the Nation Report 2010* continues the tradition of presenting a professional overview in a language that is accessible to all.

The past two years have witnessed many changes at the Taub Center. Professor Dov Chernichovsky, head of the Health Policy Program, has been joined by professors Ayal Kimhi, Yossi Shavit, Haya Stier, and Eran Yashiv as Policy Program Chairs in the fields of labor, education, social welfare, and economics, respectively. These appointments highlight yet another facet of the Taub Center, one of professional interaction and interdisciplinary collaboration. The Center's Policy Programs bring together leading scholars, promising researchers at the start of their careers, and past and future policymakers.

This *Report* reflects the wealth of knowledge that such an extraordinary mix of contributors can generate. Each of the Policy Program Chairs took part in its preparation, as did a number of young researchers – Vicki Bronstein, Yariv Feniger and Carmel Blank – with input from high-level policy makers. In one instance, Yarom Ariav, past

Director-General of the Ministry of Finance, wrote a spotlight that appears in the chapter that I wrote on the budget.

One issue that cuts across fields is that of inequality, a topic that comes up in most of this *Report's* chapters. Israel is experiencing widening income, education and healthcare disparities. A primary factor, though not the only one, underlying these inequalities is education. How is education related?

The key to sustainable economic growth is steady productivity growth – that is, a continuous increase in the supply of products and services by a given population. Among other things, this process is heavily dependent on having more and more educated and skilled people, and a smaller and smaller population share of poorly educated and unskilled individuals. Obviously, not everyone can or must be highly educated. But there has been such a steep decline in the relative demand for less-educated workers that it is reflected quite clearly in their incomes and employment rates.

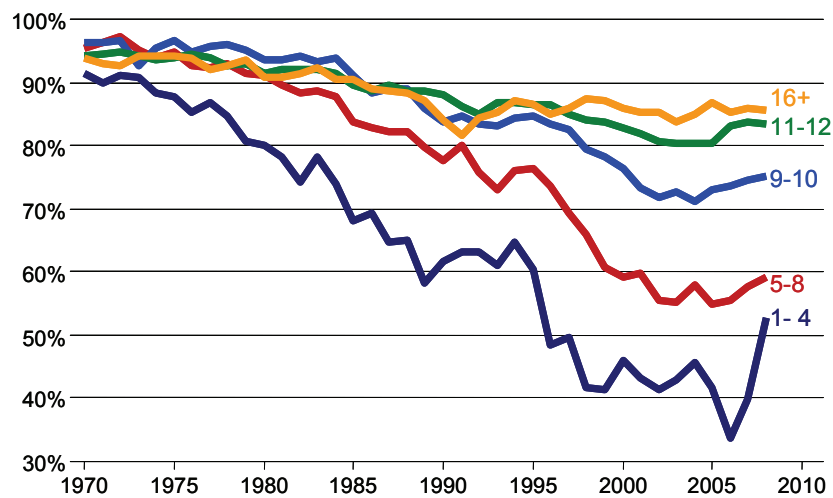
It is uncommon to include graphs in forewords, but a glance at what has been happening to prime working age Israeli men can illustrate a major factor underlying Israel's widening disparities. The figure, which groups prime working age men (ages 35-54) by their educational levels, shows the considerable changes that Israel's society and economy have undergone over the past four decades.

In 1970, Israel was much poorer and its production needs could be supplied by a very large number of workers with low educational levels. At that time, over 90 percent of workers in all education level groups were employed – whether they had less than four years of schooling or more than 16 years of schooling.

Although the number – that is, the supply – of men with relatively low educational attainment has fallen considerably over the years, the decline in demand for such workers has been even more precipitous. The result has been a large and steady decline in their employment rates. In 21st century Israel, the lower the educational level of prime working age men, the more rapid the decline in their employment rates and the lower the

level to which those rates have dropped. If, 40 years ago, over 90 percent of those with 1-4 years of schooling were employed, that rate now approaches 50 percent. Employment among those with 5-8 years of schooling no longer exceeds 60 percent. As the level of education rises, so do employment rates. In fact, the only group not experiencing a drop in employment over the past 15 years is that of individuals with 16 or more years of schooling – who, for the most part, are people with academic backgrounds.

Employment rates, by years of education
as share of 35-54-year-old male population, 1970-2008



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Central Bureau of Statistics.

The highly educated work more and, as shown in last year's report, they also earn more. As a result – and as the various chapters of this report demonstrate – this group enjoys better access to healthcare and medical services (the healthcare chapter by Dov Chernichovsky expands

on this issue), their children's scholastic attainments are higher (the chapters written by Yossi Shavit, Yariv Feniger and myself reflect this), and their poverty rates are lower (as shown in the chapters prepared by Ayal Kimhi and Haya Stier). Moreover, while the current socioeconomic situation in Israel looks relatively good compared with what is occurring in other Western countries that appear to be emerging – although this is still far from a certainty at the time of this writing – from the worst economic crisis since the 1930s, Eran Yashiv paints a highly problematic long-term picture, one closely related to the educational level being attained by a large and growing share of Israel's population. While the various chapters in this *Report* address many other issues, the education that today's children of Israel receive is what will, to a large degree, determine the country's future ability to maintain a First World economy – a necessary condition for its continued physical existence, given the kind of national defense issues that Israel will apparently have to contend with in the foreseeable future.

Considering the sharp and continuing decline in the relative demand for less-educated workers, one might have expected the Israeli government to make concerted efforts to reduce the supply of workers with low educational and skill levels. Such a policy would have meant that the smaller remaining supply of such workers would face less competition from people of similar educational backgrounds – and their prospects of finding work would improve, as would their compensation. However, the government is doing exactly the opposite. It is allowing hundreds of thousands of uneducated non-Israeli workers (according to the Bank of Israel, the latter account for one in seven workers in Israel's business sector) to enter the country, thereby thwarting the possibility of substantial improvements in the employment and wage situation of less-educated Israelis.

Among the main findings in this *Report*:

- **The macro picture**
 - There is a discrepancy between the positive situation suggested by current economic indicators, and the problematic situation implied by underlying long-term factors (see *A Macro Perspective*).
 - Over the past five years, Israel's civilian public expenditures have declined relative to GDP, while in most other Western countries these have risen (see *Public Spending in Israel*).
- **Employment and welfare**
 - Wage inequality in Israel is large compared with the inequality in every other developed country. This is particularly evident with regard to wage gaps between workers of different educational levels (see *Income Inequality in Israel*).
 - The poverty rate for Israel's working population is high and trending upward. Most poor people in Israel today belong to working families (see *Working and Poor*).
 - Israel's single-parent families are very poor, compared both with Israeli two-partner families and with single-parent families in other Western countries (see *Welfare and Employment Among Single Mothers: Israel from a Comparative Perspective*).
- **Education**
 - Following corrections and changes in the definitions of Israeli educational data, it turns out that the comparative situation of Israeli teachers appears to be much better than previously thought. In addition, higher percentages of 12th graders who are not ultra-Orthodox or residents of East Jerusalem are taking matriculation exams, and an increasing share is passing them at a level that enables admission to institutions of higher education (see *Developments in Israel's Education System*).

- Among Israelis born between 1955 and 1981, the socioeconomic gap with regard to matriculation eligibility has narrowed somewhat. However, despite a substantial expansion in Israel's higher education system, a considerable degree of socioeconomic inequality is still evident (see *Education Reform and Narrowing Educational Gaps in Israel*).
 - Data from the PISA 2000 and PISA 2006 international exams indicates that the size of Israel's younger population (an outcome of the country's high birth rates) can statistically explain most of the disparity in scores between Israeli pupils and the international average (see *The Demographic Cost: Birth Rates and Achievement on International Tests*).
 - The international TIMSS 2003 exams indicate that had the discipline levels of Israeli pupils improved and approached the international average, there would have been a substantial narrowing of the disparity in attainments between Israel and the other countries, although the gap would still not have completely disappeared (see *School Discipline and Scholastic Achievement in Israel*).
 - When compared to 25 developed countries, Israeli children displayed the lowest achievement levels in the latest PISA exams. Educational gaps within Israel are the greatest and even the achievements of the country's top pupils were lower than those of the top pupils in 24 out of the 25 Western countries (see *Israel's Educational Achievements: Updated International Comparisons*).
- **Health**

Widening healthcare disparities between central Israel and the country's periphery continue to exist, even after the allocation formula (called "the capitation formula" in Israel) for the distribution of healthcare funds was amended in early 2011. This suggests that the revised formula is insufficient for addressing these gaps. There are

early indications of this in Israel's public health status (see *The Healthcare System*).

- **Public opinion**

Findings of the Taub Center's *Social Survey* indicate that individual income and educational levels are linked, in varying degrees, to differences in people's sense of social confidence and to their attitudes on a variety of social issues (see *The 2010 Social Survey*).

It is not possible to conclude without expressing my gratitude and appreciation toward the Taub Center's very special and dedicated staff. Senior researcher Nachum Blass contributed directly to this report as the author of one of its education related chapters, as well as in the preparation of additional policy and research papers over the course of the year. Researchers Yulia Cogan, Haim Bleikh and Kyrill Shraberman substantially contributed to many of the studies included in the report. They were joined over the course of the year by new researchers Nir Eilam and Eitan Regev. I would also like to take this opportunity to congratulate researcher Sagit Azary on the birth of her son Nadav; she has returned to the Center to complete the innovative project on which she has worked over the past year. Dr. Asher Meir, a research fellow who joined the Center over a year ago, assists in the preparation of the Center's quarterly *e-Bulletin*, which highlights findings of special interest and current events. Dalit Nachshon-Sharon is not just the editor of this *Report's* chapters and other Center publications, she also joined forces with Nachum Blass to write the *Social Survey* chapter. Ruti Lerner invested considerable efforts in preparing and designing both this *Report*, and other Center publications. Hedva Elmackias and Laura Brass ensured that the Center's administrative activities and public relations were conducted with extraordinary smoothness. Laura is also responsible for the *Report's* translation into English. Kasanesh Ambao and Aharon Cohen are in charge of maintenance, and we are very grateful for their efforts.

Professor Ayal Kimhi, Deputy Director of the Center and Chair of the Labor Policy Program, is my main partner in determining the Center's areas of focus and in its management. He is a strategic asset. We were recently joined by Naomi Krieger in the expanded role of Director of Operations and Strategy – a position whose title reflects the new directions planned for Center activity. Naomi replaced Yuval Erez, who left the Center this year for a worthy purpose – the completion of his doctoral dissertation. One can only be proud of the responsibility, dedication, mutual esteem and the friendships that have come to characterize the Taub Center. We have a wonderful staff that is continually developing. I am deeply grateful to all.

I am proud to present the *State of the Nation Report: Society, Economy and Policy 2010*.

Prof. Dan Ben-David
Director of the Taub Center
Jerusalem, November 2011

I. THE MACRO PICTURE

A Macro Perspective

Eran Yashiv*

Abstract

The current chapter surveys macroeconomic developments in Israel in 2010. It examines the discrepancy between Israel's good situation, as reflected in various macroeconomic indicators, and its worrying long-term economic problems. Current data indicate respectable growth in terms of GDP and employment, relatively low unemployment, current account surpluses, and reasonable inflation. The long-term problems include relatively low investment, lagging physical infrastructure, and numerous labor market problems, which negatively affect the quality of human capital and labor productivity in Israel. The chapter concludes with a discussion of the considerable problems that stand in the way of attempts to modify Israel's fiscal policy in order to resolve these problems.

The current chapter surveys macroeconomic developments in Israel, distinguishing between current developments, and long-term processes and structural problems. The data point to one key message: while the current macroeconomic indicators are good, or even very good, the Israeli economy suffers from considerable structural problems. In terms of real growth, employment, inflation, and current account

* Prof. Eran Yashiv, Chair, Taub Center Economics Policy Program; Department of Public Policy, Tel-Aviv University; Research Fellow, CEPR, London.

I am grateful to Nir Eilam for his extensive help in gathering and analyzing the data.

surpluses, Israel's economy is strong both in historical perspective and in internationally comparative terms. It suffers, however, from fundamental long-term problems which, if left unresolved, could impact its future performance. The current chapter discusses the obstacles standing in the way of fiscal policies which may help resolve these long-term problems. Section 1 discusses current developments in Israel's economy; Section 2 addresses the long-term problems; Section 3 discusses government policy; and Section 4 offers a brief summary of the entire discussion.

1. Current Developments in Israel's Economy

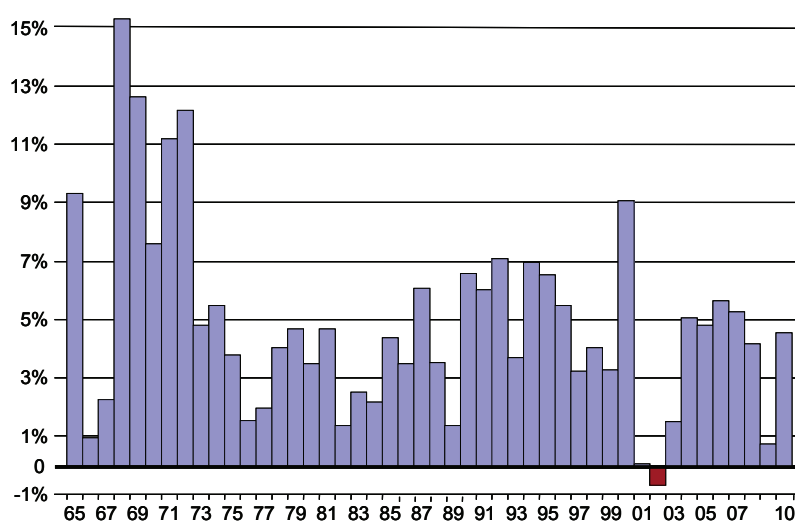
Israel's economy is exceedingly open to international trade in goods, services, and financial capital. Although all macroeconomic indicators worsened in the last quarter of 2008 following the global financial crisis set off in September of that year, Israel's economy rebounded during 2009 and 2010 and is presently in good macroeconomic condition. The main current developments are surveyed below.

1.A. Real Economic Activity

As Figures 1 and 2 show, growth slowed down in 2009, with total GDP and business sector GDP growing by only 0.8 and 0.1 percent, respectively. They significantly increased in 2010, with total GDP and business sector GDP growing by 4.6 and 5.3 percent, numbers almost identical to the average annual growth rate of 4.5 and 5.3 percent, respectively, for the period between 1987 (after inflation was stabilized) and 2007 (see Appendix Table 1). GDP per capita grew by 2.7 percent in 2010 after having dropped by one percent in the preceding year. In other words, Israel's economy recovered rapidly from the global crisis, returning quickly to a reasonable trajectory of growth. Interestingly, Israel's economy shrank only twice in its 63 years of existence, in 1953 and in 2001-2002. The local economic recession of the early 2000s was deeper, then, than the globally induced one of 2009. The growth of GDP

uses¹ in 2010 reflects the considerable growth of exports and investments, a phenomenon that bodes well for the future.

Figure 1
GDP growth
 annual percent changes in real GDP, 1965-2010



Source: Taub Center for Social Policy Studies in Israel.

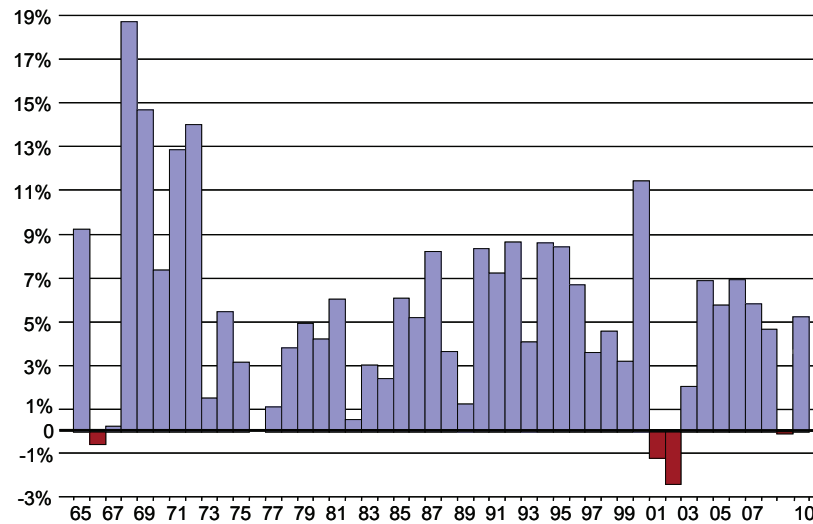
Data: Central Bureau of Statistics and Bank of Israel.

¹ GDP uses are the sum total of private consumption, public consumption, investments, and exports.

Figure 2

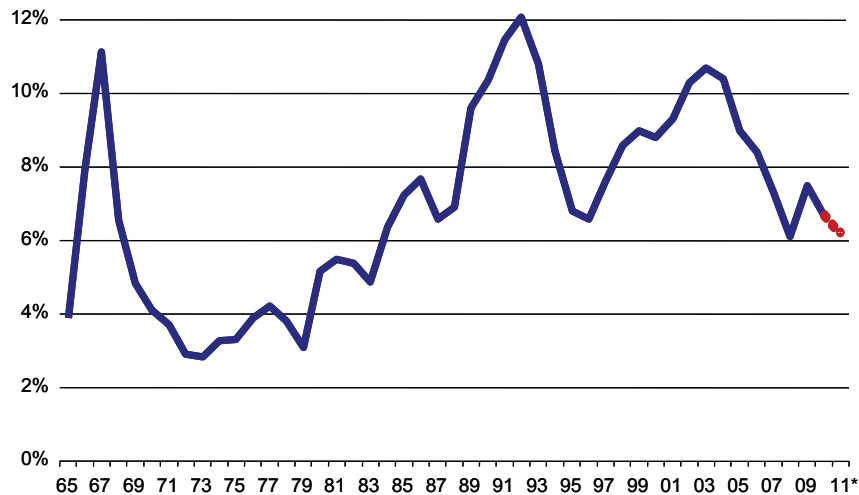
Growth in business sector GDP

annual percent changes in real business sector GDP, 1965-2010

**Source:** Taub Center for Social Policy Studies in Israel.**Data:** Central Bureau of Statistics and Bank of Israel.

As Figure 3 indicates, the temporary economic downturn impacted the labor market, with the rate of unemployment rising to 7.5 percent in 2009 but returning to 6.7 percent in 2010. In comparative international terms this is a reasonable unemployment rate, lower than the eight to ten percent rates (and beyond) currently afflicting the United States and many European countries due to the global economic crisis.

Figure 3
Unemployment rates
1965-2011



* projection for 2011.

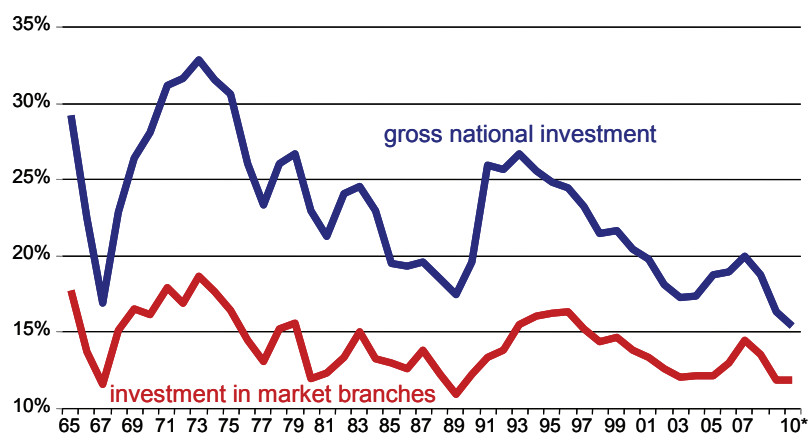
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics and Bank of Israel.

One related indicator, which admittedly fares worse, is gross domestic investment, reflecting capital purchases (equipment, machinery, buildings, etc.) and construction. As Figure 4 shows, gross domestic investment as a share of GDP has declined over the years – from 33 percent in the early 1970s to roughly 15 percent at present, with a five percent decrease in the last decade alone. It has not increased more in the recent past according to the latest data. Investment in equipment and structures (excluding construction) has followed a similar trend. Private savings have also fallen in recent years, from 24 percent of GDP four years ago to 18 percent at present, and is not high in international terms.

Though investments in a developed economy need not be as high as they ought to be in developing ones, their current levels appear to be too low. The current investment rate is lower than the 20 to 24 percent of GDP level typical of the world's most developed economies (the United States, the Eurozone countries, Japan). Given Israel's lagging physical infrastructure and outdated (labor- rather than capital-intensive) production methods (both of which are discussed in the next section), the low investment rate is a cause for concern.

Figure 4
Investment
as a percent of GDP, 1965-2010



* projection for 2010.

Source: Taub Center for Social Policy Studies in Israel.

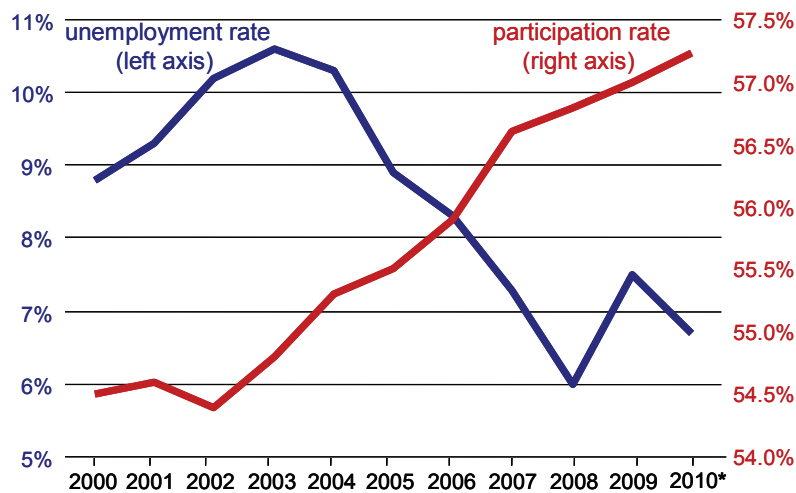
Data: Central Bureau of Statistics.

In this context, it is worth noting Goldman Sachs' December 2010 Growth Environment Score [GES] (Goldman Sachs, 2010), which predicts with fair reliability GDP per capita growth given an initial level of income. One of the GES's variables is the rate of investment. At 57th (out of a total of 182 countries), Israel is ranked fairly low, below, for

example, Poland, Chile, Hungary, and the Czech Republic, and well below its 42nd place ranking in 1997.

In the labor market, the period from 2007 to 2009 witnessed growing labor supply and falling labor demand. On the demand side, the decrease was due to lower foreign demand for Israeli goods and services in the wake of the global crisis. On the supply side, rising labor market participation rates (see Figure 5) were related to long-term trends of entry into the labor market among different population groups. These developments reduced the number of job vacancies (see Appendix Figures 1 and 2), slowed employment growth, and reduced the total number of work hours (see Appendix Table 2).

Figure 5
Unemployment and labor force participation
2000-2010



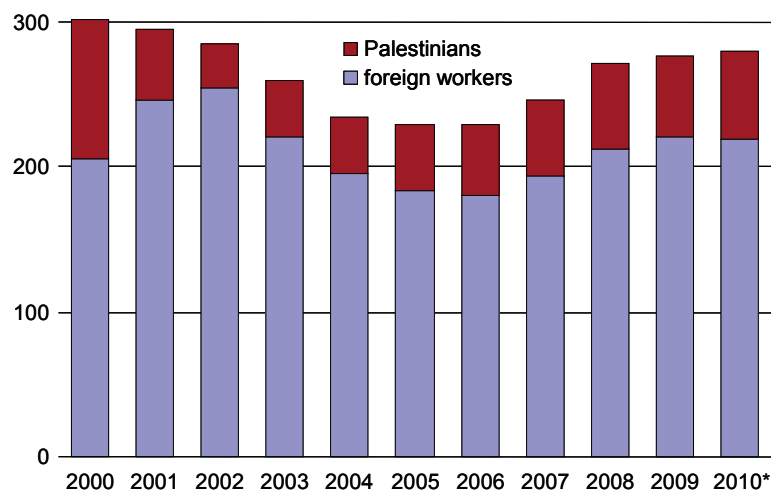
* January-September, 2010.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics and Bank of Israel.

They also slowed the growth in the number of foreign and Palestinian workers (see Figure 6). These declines are consistent with the slowed growth in GDP and in business sector GDP during this period. Growing labor supply and falling labor demand depressed real wages (see Appendix Figure 3) and increased unemployment. The government-set minimum wage also fell in real terms, as did labor productivity growth rate (i.e. the growth rate of GDP per worker). In 2010 there was an increase in global demand for Israeli goods and services and consequently an increase in labor demand. With the exception of the labor force participation rate and the minimum wage, all the aforementioned variables rebounded as well.

Figure 6
Non-Israeli workers
thousands, 2000-2010



* January-September, 2010.

Source: Taub Center for Social Policy Studies in Israel.

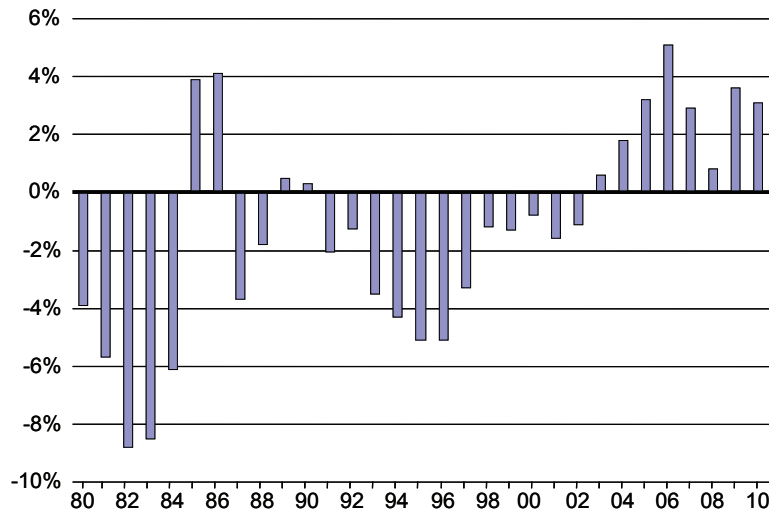
Data: Central Bureau of Statistics and Bank of Israel.

The data for 2009 and 2010 indicate several problematic trends in the Israeli labor market (for a more extensive discussion, see the following section). The public sector is relatively large, approximately 42.5 percent of the size of the private sector in terms of the number of workers. Foreign workers also constitute a large share of the labor market – eleven percent of all private sector employees. About 34 percent of the population is below the poverty line prior to transfer payments and taxes, though a relatively high level of transfer payments per capita (approximately NIS 7,000 per capita annually) lowers the poverty rate to approximately 25 percent. None of these problems have seen improvement in recent years; on the contrary, the above data indicate some deterioration.

1.B. Foreign Trade

Figure 7 presents Israel's current account, which represents the total value of exports minus the total value of imports plus foreign transfers to Israel (e.g. U.S. foreign aid). The account total represents the scope of Israel's foreign trade. Current account deficits and surpluses represent Israel's total debts and assets relative to foreign economies. As the data indicate, Israel's current account has seen improvement in recent years. The current account surplus resumed its growth in 2009 after falling in 2008. This improvement is especially striking given the increase in imports and decrease in exports due to the appreciation, both nominal and real, of the Israeli currency (New Israeli Shekel, NIS) in recent years. It is worth noting that Israel's economy maintained a current account surplus for most of the last decade, after twenty years of mostly deficits. Thanks to the surplus, and because differences between interest and yield rates in Israel and abroad have favored financial investment in the country, Israel has attracted large flows of foreign currency, which sustained the appreciation of the NIS relative to the dollar and the Euro.

Figure 7
Balance of payments, current account
 as a percent of GDP, 1980-2009

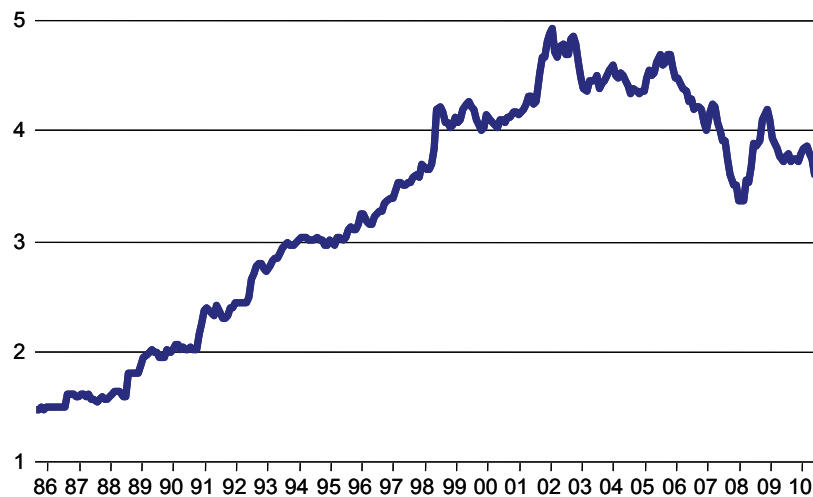


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics and Bank of Israel.

Figure 8, which presents NIS/dollar exchange rate, shows that until the early 2000s, as long as inflation was higher in Israel than in the U.S., the NIS tended to depreciate. After Israeli inflation was stabilized at rates comparable to the U.S., depreciation stopped and was replaced for several years by fluctuations within the 3.5 to 4.5 NIS-per-dollar range. From 2006, however, the NIS has tended to appreciate; this is consistent with the aforementioned current account flows and interest rate differentials.

Figure 8
Dollar-Shekel exchange rate
1986-2010



Source: Taub Center for Social Policy Studies in Israel.

Data: Bank of Israel.

The Bank of Israel's intervention in the foreign exchange market has probably restrained the NIS's appreciation to some extent, increasing the Bank's foreign currency reserves from less than \$30 billion in the first quarter of 2008 to \$71 billion in late December 2010. The Bank of Israel purchased \$12 billion worth of foreign currency in 2010 alone. The intervention has occurred in spite of studies – some noted in the Bank's own research (e.g. Lavi and Friedman, 2006) – showing that the real exchange rate has relatively little influence on Israeli exports.

There are indications, however, that not all is well with Israel's economy with respect to foreign financial markets. For example, Israel's default risk premium as reflected in the credit default swaps (CDS) market is relatively high. Credit default swaps serve as insurance

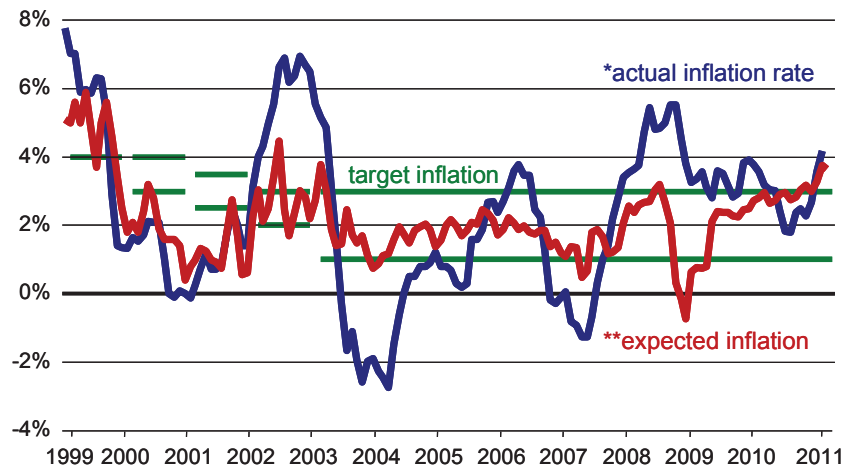
protection against government bond defaults, where, in case of default, CDS holders are compensated by the issuer. As of March 2011, Israel had a higher risk premium than China, Thailand, Malaysia, South Korea, Chile, Brazil, and Panama, among others. Although Israel is ranked higher than many other countries in this regard, estimates circulating in the financial markets indicate that the premium may have been at about a third of its current level if not for the widespread perception of Israel as a relatively high-risk country due to its geopolitical (rather than macroeconomic) circumstances.

1.C. Inflation, Interest Rates, and Financial Markets

Israel's monetary and financial indicators are fairly good. As Figure 9 shows, the rate of inflation has remained within the inflation target range (one to three percent annually) in recent years, as have the financial market's inflation forecasts. It should be noted, however, that the inflation rate frequently exceeded the inflation target range during this period, partly due to the steep rise in housing prices (35 percent in the last two years alone), and has been particularly high in the last months of 2010.

Figures 4 and 5 in the Appendix present changes in the Bank of Israel's interest rate and in two market interest rates – the yield for *SHAHAR* (a NIS government bond), and the overdraft interest rate – which serve here as indicators for a range of credit interest rates. The first figure spans the fifteen-year period between 1995 and 2010, the second, the period since 2008. The apparent trend is one of steadily falling interest rates, in tandem with falling inflation rates and lower inflation forecasts. The Bank of Israel raised its interest rates in 2009 as the economy was emerging from the global crisis; the increase has been gradual and moderate, however, so that real interest is still negative. As the two figures show, the overdraft interest rate and the five-year yield for *SHAHAR* have followed the Bank of Israel's interest policy.

Figure 9
Inflation
 1999-2011



* inflation rate in the last 12 months (monthly averages).

** expected inflation for the next 12 months (monthly averages).

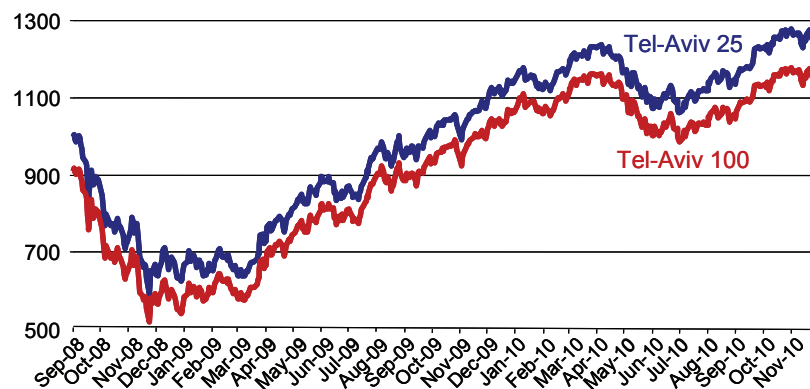
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics and Bank of Israel.

As Figure 10 and Appendix Figure 6 show, Tel-Aviv's stock market and corporate bond indexes have sustained their post-March 2009 increases despite the rising interest and yield rates, reflecting (among other things) investors' trust in Israel's economic trajectory. The markets seem to be more responsive to real economic activity and to corporate profits than to rising interest rates (the cost of capital). We can thus conclude that Israel's monetary policy has contributed to the expansion of real economic activity.

The latter policy has been shaped by a balance of conflicting considerations. On the one hand, the aforementioned economic expansion has been reflected (according to some assessments) in a closing of the GDP gap (the difference between potential and actual output); and the steep rise in housing prices requires higher interest rates. On the other hand, interest rates around the world are currently low, with any interest differential in favor of Israel encouraging more capital to flow into the Israeli economy. High demand for the NIS leads to its appreciation, however, which may be detrimental to Israeli exports. The moderate increase in interest rates represents an effort to respond to these conflicting pressures.

Figure 10
Tel-Aviv stock market index
 September 2008 – November 2010



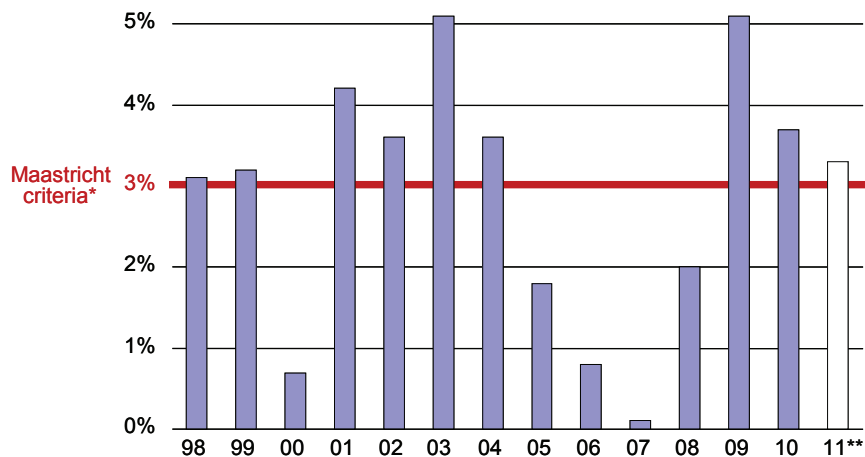
Source: Taub Center for Social Policy Studies in Israel.

Data: Tel-Aviv Stock Exchange.

1.D. Fiscal Policy

The decline in economic activity during economic crises tends to decrease government tax revenues at the same time that it aggravates social ills through higher unemployment and falling incomes, requiring that the government increase its social support. During the recent crisis, the difference between government revenues and spending – i.e. the budget deficit – increased to 5.1 percent of GDP in 2009. It fell back to 3.7 percent of GDP in 2010, however, and is expected to fall further to 3.3 percent in 2011 (Figure 11).

Figure 11
General government deficit
as a percent of GDP, 1998-2011



* Using the Maastricht criteria from 1991 of the European Union, the debt is not to exceed 3 percent of the GDP. This agreement became accepted worldwide as a reasonable debt ceiling.

** Bank of Israel projection for 2011.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics and Bank of Israel.

In other words, Israel's fiscal (as well as its monetary) policy has been expansionary. Most changes in the deficit have been due to tax revenue fluctuations following the fluctuations in economic activity. The government itself initiated few changes – which, as will be discussed in Section 4 – is typical in Israel. In fact, in stark contrast to the expansionary fiscal policy measures undertaken in many other developed nations, including the United States and the Eurozone countries, the Israeli government did not initiate any active counter-cyclical policy measures during the crisis. In retrospect, the actual indicators show that no such measures were needed.

In May 2010, the *Knesset* enacted a new fiscal rule for the calculation of spending limits, based on the current deficit ceiling as set by the Budget Deficit Reduction Law. The new rule aims to strike a balance between two objectives: the continued reduction of public debt, and the maintenance of adequate levels of spending on public services. This dual objective seems to be sound in its non-dogmatic approach to spending increases. It contributes, however, to the recent trend of frequent revisions to fiscal rules, which diminish their reliability.

In October 2010, the government submitted to the *Knesset* a bi-annual budget (its second so far) – another step with both advantages and disadvantages. On the positive side, bi-annual budgets allow the Ministry of Finance to draft the budget more carefully and encourage longer-term stability. On the negative side, bi-annual budgets make it harder to adjust the budget in response to emerging economic developments.

2. Structural Problems in Israel's Economy

As noted at the outset, Israel's economy suffers from long-term structural problems despite its relatively good current macroeconomic indicators. Described below are two central clusters of problems – problems in the labor market, and problems concerning physical infrastructure – followed by an account of the macroeconomic implications. The Israeli economy suffers from numerous other problems as well (in education, welfare, health, etc.), but these are discussed in the Report's other chapters; the current chapter's exclusive focus is on macroeconomic issues.

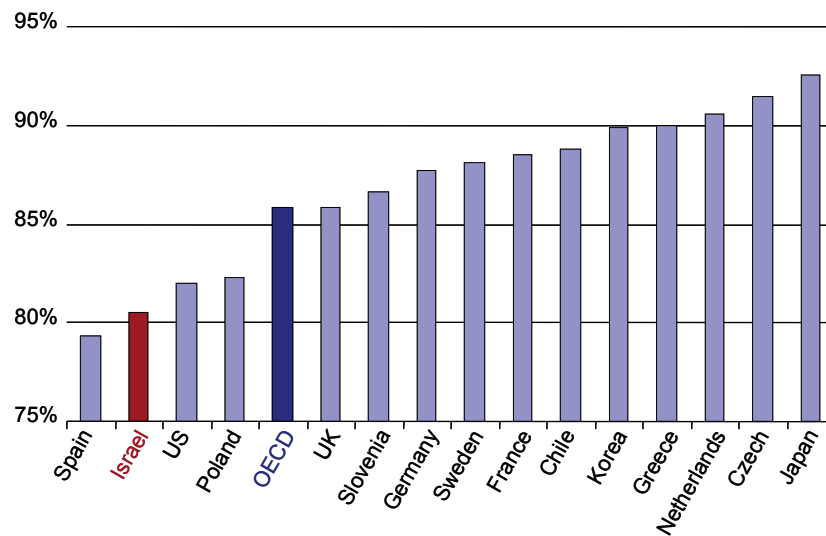
2.A. Structural Problems in the Labor Market

The Israeli labor market suffers from numerous fundamental problems, some of the most important of which are outlined below:

- The **rate of employment among males** in Israel is low relative to other Western countries. As Figure 12 shows, the rate of employment among Israeli males in the prime working age group (35-54-years-old) is 80.5 percent, lower than the 85.8 percent OECD average. Despite some improvement in recent years – from 2006 to 2009, the rate of employment among males increased by 1.2 percentage points in Israel (Figure 13) while dropping by 2.6 percentage points in the OECD – Israel has a long way to go before reaching Western standards. The main reason for the low rate of employment among males is the low rate of employment among ultra-Orthodox males, a problem discussed extensively in Ayal Kimhi's chapter on the labor market (see "Income Inequality in Israel" in this volume).
- The **large-scale employment of foreign workers** (see Figure 6) is problematic in several respects: it harms the employment and pay of less skilled local workers, perpetuates outdated production methods reliant on cheap labor, and creates various social problems, thereby putting a burden on the welfare system. The appalling conditions to which many

foreign workers are subject have negative implications for all workers, foreign and local alike, by lowering the labor market's general standards. As indicated earlier, foreign workers constitute one-ninth (eleven percent) of all private sector employees in Israel, a high percentage in internationally comparative terms.

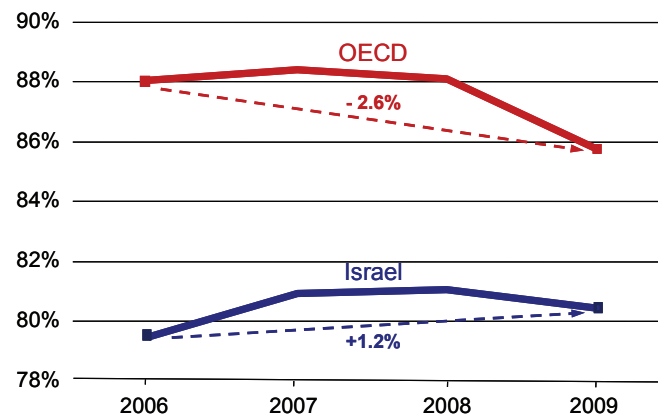
Figure 12
Employment rate, 2009
 among prime working age men (35-54)



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

Figure 13
Employment rate, 2006-2009
among prime working age men (35-54)



Source: Taub Center for Social Policy Studies in Israel.
Data: OECD.

- There is widespread use of **employment agencies** for the employment of temporary workers. Since the phenomenon is relatively new, reliable data have yet to be compiled. Table 1 presents existing data from the Central Bureau of Statistics.

Table 1. **Temporary workers receiving salary through employment agencies and contractors, 2001-2009 (thousands)**

	Temporary workers who receive salary through employment agency*	Temporary workers through contractors**	Total	Share of all employees in the labor market
2001	48.3			
2002	36.8			
2003	36.9			
2004	41.5			
2005	45.4			
2006	46.6			
2007	50.0	112	162.0	6.1%
2008	41.8	119	160.8	5.9%
2009	32.2	124	156.2	5.7%

* **Source:** Central Bureau of Statistics, Income Surveys, 2003-2009.

** **Source:** Central Bureau of Statistics, Income survey results document, 2007-2009.

Two types of temporary employment may be distinguished: workers employed through employment agencies (see Column 2 in Table 1) are paid by the agency but supervised by the workplace in which they are placed, whereas workers employed by contractors (Column 3) are both paid and supervised by the contractor. According to the Central Bureau of Statistics, workers of the latter sort are largely employed in “security and cleaning” and “home care.”

Because of lack of data from earlier periods and for part of the last decade, the table offers only a partial view of the topic. Nevertheless, according to Column 5, the share of temporary employees in the total number of workers is very high, ranging from five to six percent.

While temporary work offers employers the advantage of hiring flexibility, its massive use, with the attendant high employee turnover, hinders the accumulation of human capital by making it difficult for workers to gain experience and skills.² Temporary work also enables firms to maximize profits at the expense of worker compensation, increasing economic inequality. Although comprehensive and reliable data on the issue have yet to be compiled, several reports show that the hiring practices in question exploit workers and involve infringements of labor rights.

- The Israeli labor market is a **dual market**. It comprises a primary labor market of skilled workers (most prominently hi-tech employees) who enjoy employment stability, and a secondary labor market of unskilled, low-wage workers, sometimes earning less than minimum wage, who suffer from low employment stability and from significant barriers to entry into the primary labor market. The secondary market includes certain groups – Arabs, foreign workers, Ethiopian Jews, and so forth – whose social vulnerability manifests itself *inter alia* in the relative absence of unionization.

The dual structure of the labor market encourages the use of outdated production methods in construction, traditional manufacturing, agriculture, etc., sustaining and deepening economic inequality and making it increasingly difficult for the children of the country's most vulnerable workers to acquire human capital. As a result, output per hours worked in Israel is \$34.5 (PPP based), compared with the OECD average of \$41.8 (for a fuller comparison, see Figure 14).

Demographic trends, in particular the growing share of the Arab and ultra-Orthodox populations, along with government policies in recent decades have exacerbated these problems. Though the share of economically disadvantaged groups in the total population is expected to grow, no large-scale policy steps seem to be taken to resolve these

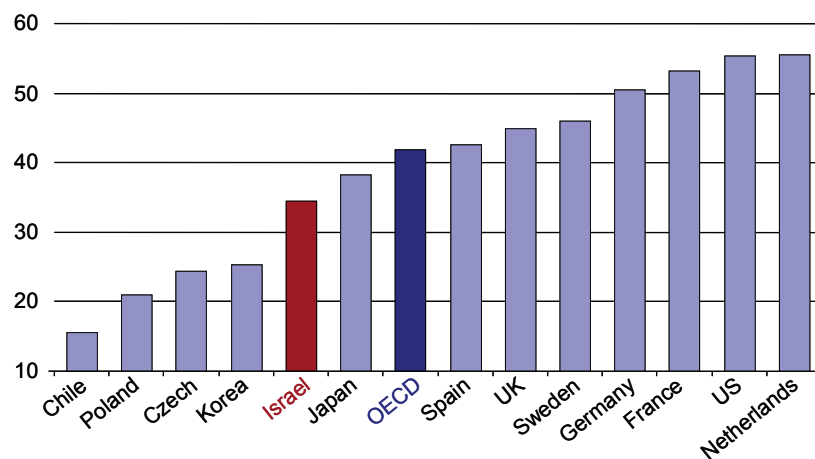
² Low-skilled employees, e.g. cleaning workers, may gain relevant work experience even when employed through an agency or a contractor.

problems. Though public awareness of the problems has increased, and though the government has delineated a social economic agenda aimed at their resolution, its plans are rather limited in scope and their slow implementation has been even more limited.

Figure 14

Labor productivity

GDP per hour of work, dollars, PPP adjusted, 2008



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

The above-listed problems all have negative implications for Israel's human capital and labor productivity. GDP depends not only on the quantity of workers but on their quality as well. By lowering this quality, processes like those described above are detrimental to economic growth.

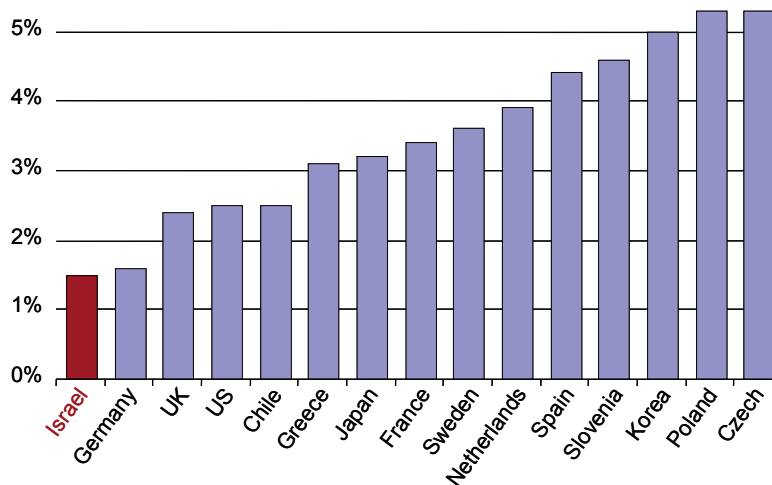
2.B. Physical Infrastructure

Israel lags behind the rest of the developed world in many infrastructure issues, in particular with regard to physical infrastructure: transportation,

electricity, water, sewage, rescue and firefighting services, and anti-pollution technologies. The extent of the resources devoted to infrastructure is indicated by Israel's 2011 budget, in which NIS 12.5 billion (out of a total of NIS 271 billion, excluding debt repayments) are allocated to investment. In other words, only 4.6 percent of the budget and 1.5 percent of the GDP are devoted to infrastructure investments.

Due to inconsistent definitions, international comparisons of infrastructure investment are difficult to make. The OECD publishes data on physical capital growth including data for the public sector (see Figure 15). The data reveal that government investment in Israel is low, even very low, not only compared with the world's most highly developed nations (West European countries, Japan) but also compared with such less highly developed countries as South Korea, Chile, Greece, and various other southern and eastern European countries.

Figure 15
**Gross growth in the physical capital
in the government sector**
as a percent of GDP, 2009*



* Israel (2010); US and Korea (2008).

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

2.C. The Macroeconomic Implications of Israel's Structural Problems

- The damage caused by the structural problems described is likely to be reflected in living standards, for example as measured by GDP per capita. Most, if not all, of the problems listed are expected to reduce growth in living standards, preventing Israel from narrowing the gap with the world's most developed countries. Thus, for example, Israel's GDP per capita has been around 60 percent of US GDP per capita for years. If these problems persist, the proportion will not grow and may even diminish.
- Some of the problems described increase economic inequality. Substantial economic inequality lowers welfare and aggravates conflicts between different population groups.
- If the problems cross a certain critical threshold, this may well have negative implications for investment incentives, including by foreign investors. For example, if Israel's physical or human infrastructure lag too far behind those of other countries this is likely to have implications for investment by foreign investors.

Finally, it should be noted that these long-term problems need not affect negatively such macroeconomic variables as inflation, interest rates, the foreign sector balance, or even unemployment rates or job openings. Therefore, even if the long-term problems have the negative implications indicated, the current macroeconomic indicators may still be sound.

3. *Fiscal Policy*

Israel's fiscal policy has to contend with a somewhat high public debt. Public debt was 76.4 percent of GDP in 2010, significantly lower than 2003's 100 percent, and similar to the OECD simple average of 76 percent (the OECD weighted average, which takes into account country size, is 97 percent). This level of public debt is nevertheless higher than that of many countries comparable to Israel, including Spain, South Korea, and the Czech Republic. Although Israel's public debt has not increased as a result of the global financial crisis (as has been the case in Greece, Portugal, Ireland, and Iceland), its current level makes it difficult to allocate more public resources to treating the economy's structural problems.

It is worth noting that at 43 percent, government spending as a share of GDP is lower than the OECD average of 47 percent, and significantly lower than the 50 to 60 percent of Europe's welfare states. When defense spending is excluded, Israel fares even worse on this measure.

Admittedly, the relation between government spending and economic growth (and consequently living standards) is not clear-cut and may well be relatively weak. Nevertheless, given the above-listed structural problems (see Section 2), increasing government spending in such areas as education, labor market policy, physical infrastructure, etc. ought to be considered favorably. For example, government spending on active labor market policies is 0.2 percent of GDP in Israel, compared with the OECD average of 0.54 percent, and 0.6 to 1.3 percent of GDP in East and North European countries.

Attempts to modify Israel's fiscal policy face several structural obstacles:³

- Introducing fundamental changes to the budget's priorities is a difficult task. Budgetary modifications are usually done at the margin,

³ Some of what follows is based on ideas expressed by members of the Taub Center Economics Policy Program in discussions held from September 2010 to January 2011.

in the annual incremental changes to the budget, falling far short of a wholesale reevaluation of the budget. The budget's allocation is thus subject to a great deal of inertia, more so than in many other countries. Bureaucratic obstacles hinder changes even within the given budget of individual government departments.

- Israel's government structure exerts strong pressure on the size and allocation of the budget, in the cabinet as well as the parliament (*Knesset*). Budget reform is hindered by Israel's coalition government structure as well as by the absence of significant forces of reform.
- The budgetary process in Israel is highly centralized, usually controlled by the Ministry of Finance's Budget Division. To some extent, this is a reaction to the immense political pressures exerted by ministers and *Knesset* members. The relatively short terms served by recent Israeli governments and parliaments have only exacerbated the problem. Though in theory individual government departments could enjoy a greater amount of budgetary autonomy, it is not clear whether current circumstances allow this. For one thing, there is a dearth of experienced and professional civil servants capable of addressing budgetary issues in the individual government departments. For another, the individual departments lack clear methods for setting budget priorities, accountability mechanisms, etc.
- No attempts are made to reevaluate criteria for budgetary change or to reprioritize budgets. There is no clear planning for budgetary change, neither where budgets depend on population size and makeup (education, health) nor where they do not (defense). Budget allocation lacks clear connection to government objectives with regard to employment, inequality, etc.
- The Economic Arrangements Law, first enacted in 1985 as an emergency ordinance, has become a regular appendage to the annual budget. It is largely used to enact economically significant laws appended to the annual budget but not formally included in it. The very existence of this type of law reflects the problems noted above.

- Israel's large defense budget – total net defense consumption was 6.5 percent of GDP in 2009 – becomes a battleground between the defense establishment and the Ministry of Finance each year as budget preparations unfold. Coordination between the two parties has long been lacking, with the Ministry of Finance having only limited influence on changes in the allocation of the defense budget. The defense budget's dominance makes it difficult to introduce even small changes into the rest of the national budget. The multi-annual defense spending framework suggested by the Brodet Committee in 2007⁴ was supposed to partly resolve this problem; since then, however, defense budgets seem to have strayed considerably from the suggested framework.

4. Conclusion

Israel's economy is in good macroeconomic shape as far as the current macroeconomic indicators are concerned. This is due in part to Israel's adoption of sound monetary and fiscal policies (within the limitations of the latter). At the same time, Israel suffers from long-term labor market and physical capital problems which limit its capacity for economic growth, hinder its ability to advance to the living standards of the world's most developed countries, and may even cause its economy to regress. Furthermore, these problems are closely related to the increase in economic inequality which is detrimental to social welfare, perpetuates Israel's long-term problems, and causes social strife between different population groups. The *de facto* obstacles to fiscal policy reform, due in part to Israel's government structure, do not bode well, however, for Israel's ability to adopt the policies necessary to handle these problems.

⁴ In May 2007, the Brodet Committee, headed by David Brodet, submitted its detailed and comprehensive report on the management of the defense budget.

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Appendix

Appendix Table 1. **Changes in GDP and its components, 1987-2010**
rates of change*

	1987-2007	2007	2008	2009	2010
Gross domestic product (GDP)	4.5	5.3	4.2	0.8	4.6
Private consumption (excluding durable goods)	4.9	5.1	1.8	2.6	4.2
Investment in fixed goods	4.0	14.7	3.9	-5.8	12.4
Investment in housing	1.0	2.4	10.2	5.5	11.7
Public consumption	2.5	3.1	2.6	2.5	3.1
Exports excluding diamonds	8.8	10.3	11.3	-10.0	10.9
Imports excluding diamonds	7.0	13.5	6.2	-12.5	9.3

* Rates of change relate to the real variables (fixed prices).

Source: Central Bureau of Statistics and Bank of Israel calculations.

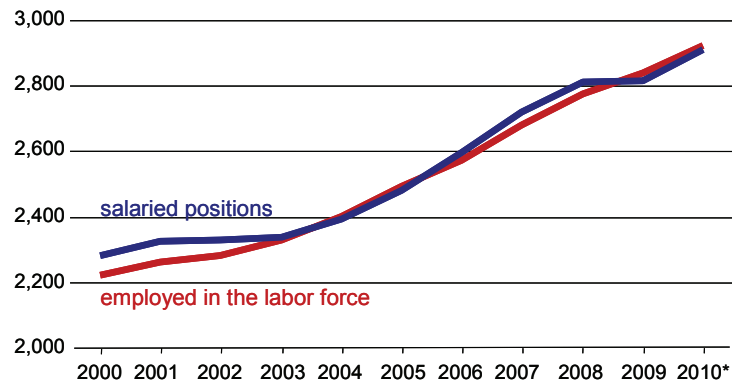
Appendix Table 2. **Labor market – various indicators, 2007-2010**

	2007	2008	2009	2010
GDP (rate of change – %)	5.3	4.2	0.8	4.6
Business sector GDP (rate of change – %)	5.8	4.7	0.1	5.3
Business sector employees (thousands, Israelis)	1,926.4	1,998.2	1,993.5	2,052.6
Public sector employees (thousands, Israelis)	808.6	833.4	847.5	871.8 *
Average weekly work hours in the business sector (Israelis, hours)	39.3	39.1	38.8	38.4 *
Wages in the business sector (Israelis, rate of change – %)	1.4	-1.1	-2.5	4.5 **
Labor productivity in the business sector (GDP per hour worked, Israelis, foreign workers and Palestinians, rate of change)	0.2	0.3	-0.1	3.8 **
Business sector unit labor cost (rate of change)	2.9	1.1	-5.0	-
Participation rate	56.6	56.8	57.0	57.2 *
Unemployment rate	7.3	6.1	7.5	6.7
Gini coefficient (by net money income per standard person)	0.382	0.384	0.389	-
Poverty incidence before transfer payments and direct taxation (persons)	32.5	32.7	33.9	-
Poverty incidence after transfer allowances and direct taxation (persons)	23.8	23.7	25.0	-
Policy variables				
Monthly minimum wage (NIS, 2010 prices)	4,082.0	4,010.0	3,953.0	3,850.0
Number of foreign workers (including those from the territories, thousands)	246.3	270.2	275.9	278.0 *
Total transfer payments to the public through the National Insurance Institute, per person (NIS, 2010 prices)	6,923.0	6,993.0	7,284.0	7,476.0 ***

* Average, first three quarters of 2010. ** Initial estimates of the national accounts for 2010, Central Bureau of Statistics, December 2010. *** January–November, 2010 data, annual calculation.

Source: Central Bureau of Statistics and Bank of Israel calculations; National Insurance Institute – Gini index and the incidence of poverty.

Appendix Figure 1
Employed and salaried positions
 Israelis only, thousands, 2000-2010

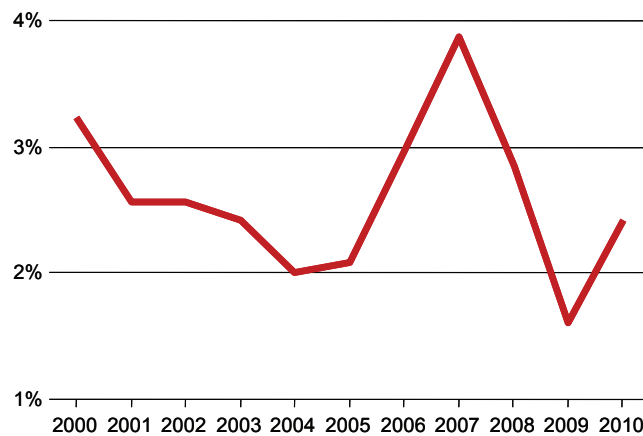


* January-September, 2010.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics and Bank of Israel.

Appendix Figure 2
Job vacancy rates
 as a percent of all posts, 2000-2010



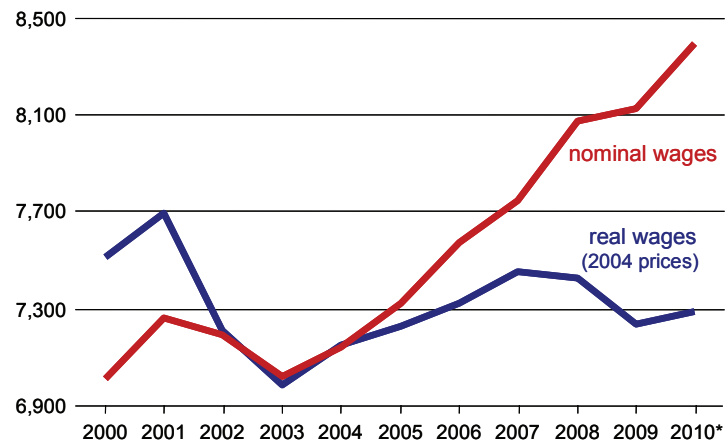
Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Industry, Trade and Labor, Research and Economics Division.

Appendix Figure 3

Wages

Israeli only, thousands, 2000-2010



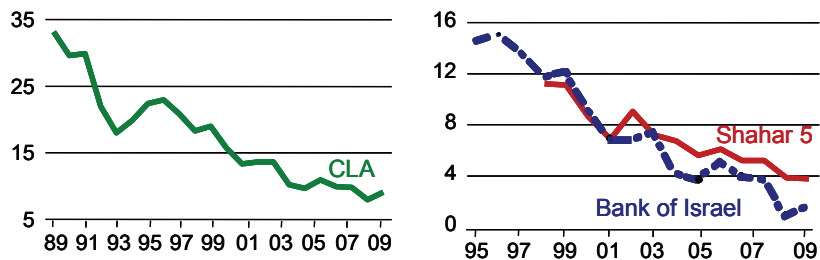
* January-November, 2010.

Source: Taub Center for Social Policy Studies in Israel.**Data:** Central Bureau of Statistics and Bank of Israel.

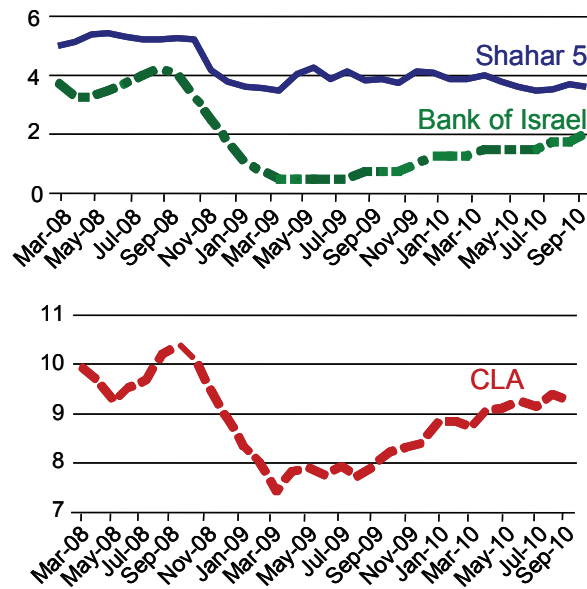
Appendix Figure 4

Israeli market yields

1989-2010*

* average Bank of Israel and CLA interest rates (annual average) and *Shahar* for five years.**Source:** Taub Center for Social Policy Studies in Israel.**Data:** Bank of Israel.

Appendix Figure 5
Israeli market yields*
 March 2008 – September 2010

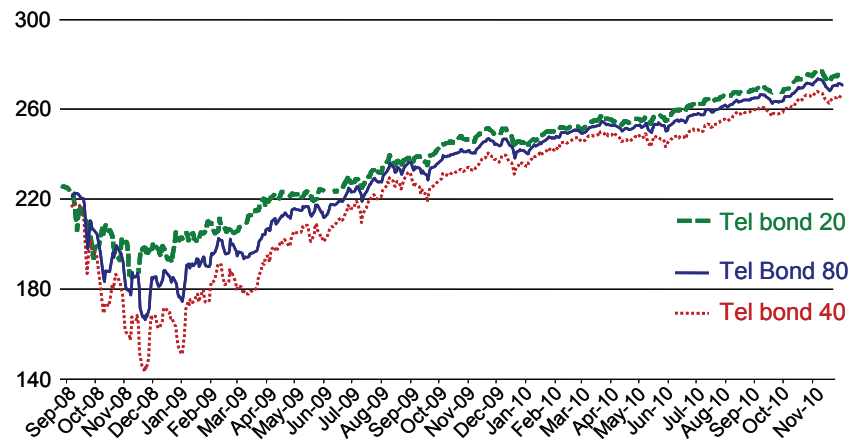


* average Bank of Israel and CLA interest rates (annual average) and *Shahar* for five years.

Source: Taub Center for Social Policy Studies in Israel.

Data: Bank of Israel.

Appendix Figure 6
Tel-Aviv corporate bonds index
September 2008 – November 2010



Source: Taub Center for Social Policy Studies in Israel.

Data: Tel-Aviv Stock Exchange.

Public Spending in Israel over the Long Run

Dan Ben-David*

Abstract

One particularly notable finding characterizing Israel's civilian government expenditures (i.e. excluding defense spending and interest payments) over the past couple of decades is their fairly remarkable stability, in historical perspective as well as in comparison with other countries. While Israel has undergone some fairly seismic events during this period, government after government has managed to maintain considerable stability in civilian spending. Israel's uniqueness stands out especially over the past five years where the ratios of expenditures to GDP have fallen slightly while they have risen in most of the West. But fiscal responsibility of this kind requires very judicious use of the available budgets and in this realm Israel has been far less successful. It has one of the worst education systems in the industrialized world and it provides welfare assistance and subsidies on a scale that enables one of the highest rates of male non-participation in the labor force.

* Prof. Dan Ben-David, Executive Director, Taub Center; Department of Public Policy, Tel-Aviv University; Research Fellow, CEPR, London.

I would like to thank Yulia Cogan and Haim Bleikh for their invaluable assistance in the compilation and preparation of the data in this chapter as well as for their insights and comments. Many thanks also to Ayal Kimhi, Yossi Shavit, Nachum Blass, Kyrill Shraberman, and Nir Eilam for their observations and suggestions.

If one were to try and conjure up an image that could best reflect the dynamic history of the State of Israel, it would probably be that of a pinball machine game, with the country seemingly ricocheting from one major event to another since it attained independence in 1948. This unique historical attribute can make an analysis of its government budget something of an art form. The choice of start and end points can often produce substantially different perspectives on ostensible trends.

Critical events seem to occur at a rate of about one or two – sometimes more – each decade. In the 1970s, the country was completely surprised when Egypt and Syria launched an all-out attack in the 1973 Yom Kippur War – only to experience a sea-change in its regional fortunes when it signed a peace treaty with Egypt at the end of the decade. The 1980s proved no less eventful. The 1982 war in Lebanon highlighted the shift to a new national security paradigm of warfare with non-state entities engaged in terrorism. This was coupled with hyperinflation in the first half of the 1980s – surpassing 20 percent per month at times. The two crises brought the country to the economic brink. A major stabilization plan prevented the freefall in 1985 while the intifada at the end of the decade provided a sign of things to come.

In the 1990s, a massive influx of poor although often highly educated immigrants from the former Soviet Union increased Israel's population by about one-fifth in just half a decade. Later that decade a prime minister in the midst of a major peace process with the Palestinians was assassinated. The first decade of the new millennium heralded an unprecedented wave of terror on Israel's civilian population, plunging the country into its deepest recession since the 1960s and bringing it once again to the economic brink with spiraling devaluations of its currency and severe difficulty in securing loans from abroad to help finance its debt. A number of major policy changes were enacted to avert the freefall and by mid-decade the country's recovery yielded rates of economic growth above those in most industrialized countries. The latter part of this past decade witnessed a major recession in the Western world. Though not immune to this severe downturn, Israel's economy emerged from the

global recession more quickly and in much better condition than most other countries.

With such a chaotic timeline, it is more important than ever to take a step back and look at the big picture, to distinguish between returns to trend and systemic changes – and to see what trends, if any, emerge from the substantial fluctuations. One very clear change in Israel's economic growth occurred in the 1970s, when the country moved from a steep high-growth path to a much shallower, and surprisingly stable (despite some sharp fluctuations around it), slow-growth long-run path that has caused the country to fall steadily farther behind the leading Western economies (more in Ben-David, 2010a).

The *State of the Nation Report 2009* provided a long-term perspective of Israel's budgetary expenditures since 1970, how they evolved over the decades and how the internal distribution shifted from defense towards social expenditures (Ben-David, 2010c). This year's examination continues in this vein using both historical as well as international comparisons to illuminate the big picture.

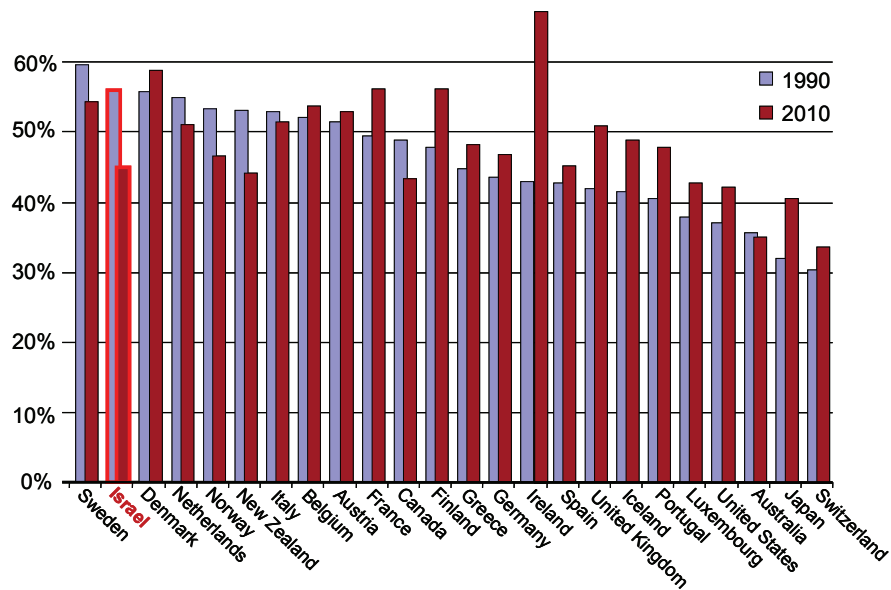
1. Israel and the OECD on Crossing Paths for Two Decades

Although total public expenditure in Israel began to fall in the 1980s after the signing of the peace treaty with Egypt and the inflation stabilization plan in mid-decade, Figure 1 shows that in 1990 total public expenditures still reached 55.9 percent of Israel's GDP, a spending share greater than in 22 of 23 OECD countries that year (only Sweden spent more).¹ By the year 2000, Israel had moved from second place to fifth as its spending fell to 51.5 percent of GDP. As the country emerged from its deep recession at the beginning of this past decade, the share of its public expenditures to GDP had dropped to 49 percent in 2005, moving the

¹ Data from the OECD's December 2010 Economic Outlook.

country down the ladder to seventh place. By 2010, as much of the Western world was still deep in a major recession that led to increases in spending to GDP ratios, Israel's fell further – to 45 percent, placing it below 16 of the 23 OECD countries (Figure 1).

Figure 1
Total public expenditures
 as a percent of GDP, 1990 and 2010

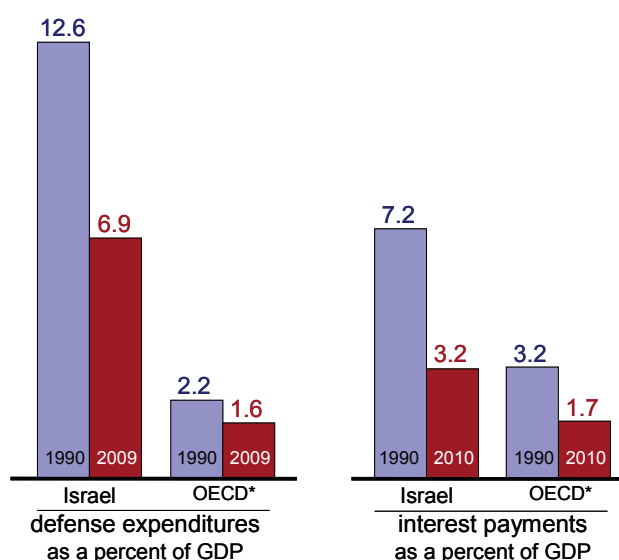


Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: OECD.

The primary source of the decline in the expenditures to GDP share was sharp reductions in the rate of increase of defense expenditures relative to the rate of increase in GDP. While GDP rose by an average of 4.5 percent a year between 1990 and 2010, defense spending rose by 1.6 percent a year during this period. As a result, the share of defense expenditures in GDP (Figure 2) fell from 12.6 percent of GDP in 1990 (compared to 2.2 percent on average in the OECD) to 6.9 percent in 2009 (1.6 percent in the OECD). This drop of 5.7 GDP percentage points translates into NIS 46.3 billion (or 12.4 billion dollars) out of Israel's GDP in 2010 that would have been spent on defense had priorities not changed.

Figure 2

Defense expenditures and interest payments
as a percent of GDP, 1990 and 2010



* 23 OECD countries.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: OECD and World Bank.

A large portion of this reduction in expenditures (relative to GDP) went towards reducing the overall public spending share while some of it was shifted towards social expenditures – whose share out of the total budget increased substantially (see Ben-David 2010c, “Public Expenditures – A Look at Israel’s National Priorities” for details). The decline in the share of overall public expenditures to GDP enabled Israel to sharply reduce its debt-GDP ratio from 284 percent of GDP in 1984 to 76 percent in 2010. This compares with movement in the opposite direction by the average of 23 OECD countries during the same period, from 57 to 82 percent of GDP – with Israel and the OECD switching places this past year.²

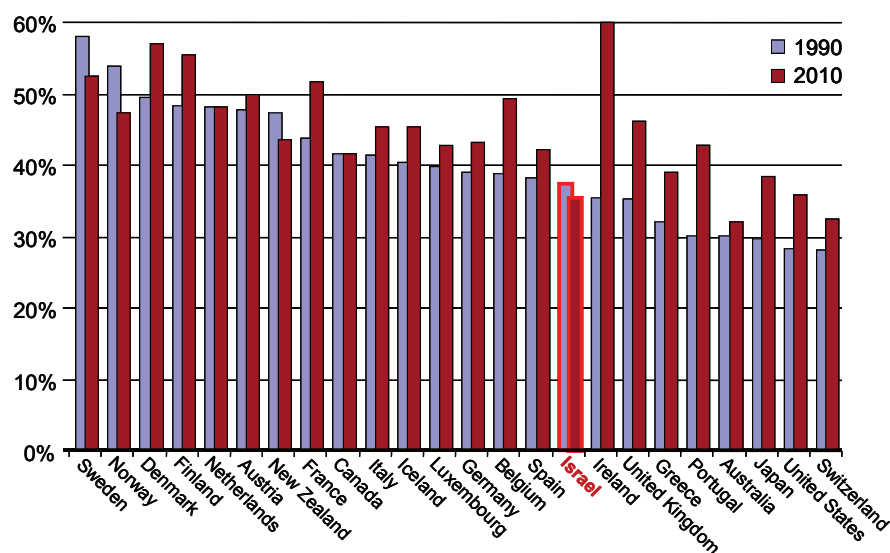
The sharp drop in borrowing (needed to finance the debt) caused net interest payments on the national debt to fall from 7.2 percent of GDP in 1990 to 3.2 percent of GDP by 2010 (Figure 2). Israel is now where the OECD was in 1990 in terms of interest payments on its debt, while the OECD’s interest payments have since fallen to 1.7 percent of GDP by 2010.

2. Two Decades of Stability in Israeli Civilian Expenditures Versus Fluctuations in the OECD

Removing defense expenditures and interest payments from a country’s general public expenditures yields its remaining civilian expenditures. In Israel, the share of these expenditures to GDP was above eight of the 23 OECD countries in 1990 (Figure 3). Though this share fell slightly in Israel over the next 20 years, it rose in 19 of the 23 OECD countries. By the year 2010, civilian public expenditures in Israel stood at 34.9 percent of GDP, below all but two of the 23 OECD countries (Switzerland and Australia, at 32.5 and 32.1 percent, respectively).

² Data from Bank of Israel Report 2010 and OECD Economic Outlook No 88 (December 2010).

Figure 3
Civilian public expenditures
 not including defense expenditures and interest payments, as a percent of GDP
 1990 and 2010



Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: OECD, World Bank and Bank of Israel.

In light of the very volatile events (wars, hyperinflation, massive immigration, political assassination, etc.) that have characterized Israel over the past several decades, the relative stability of its civilian public spending – compared to what took place in the West over the same period – might come as a surprise. The 34.9 percent share of GDP in 2010 was similar to the 37.3 percent spent on civilian public expenditures in 1990.

In fact, this stability in spending was fairly unique compared to the other OECD countries (Figure 4a – top panel). During the decade and a half between 1990 and 2005, civilian expenditures (as a share of GDP) in the OECD countries exhibited some major fluctuations. These ranged from increases of 37, 23 and 21 percent in Portugal, Japan and Belgium to spending cuts of 21, 20 and 14 percent in Norway, New Zealand, and the Netherlands, respectively. In contrast, the share of civilian expenditures to GDP in Israel was the same in 2005 as it was in 1990.

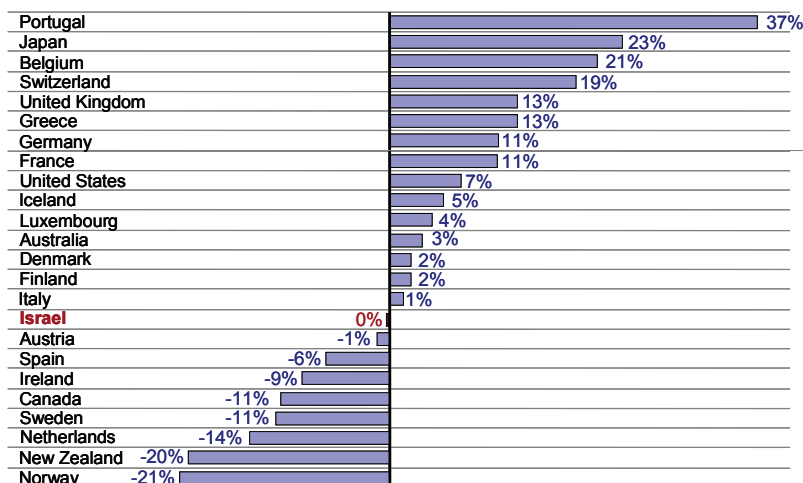
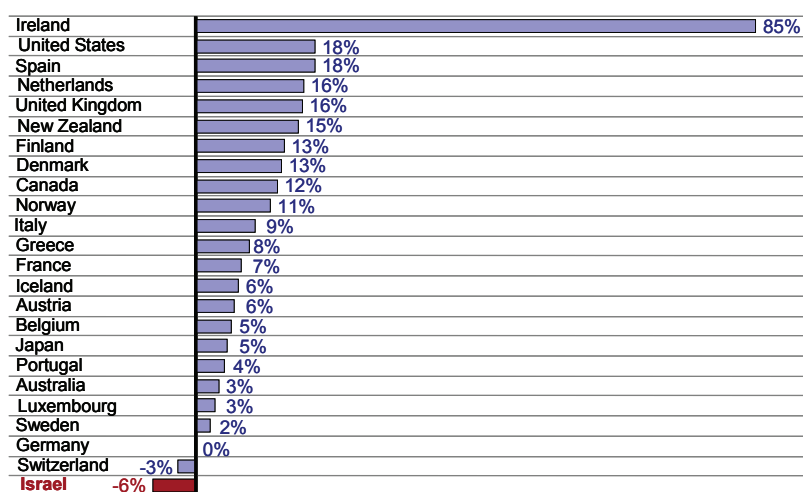
The past five years have been characterized by a major global recession that affected many countries quite severely. As a result, civilian public expenditure rose in all but one of the 23 OECD countries, with an average increase of 12 percent between 2005 and 2010 (bottom panel of Figure 4). Having experienced its major recession at the beginning of the last decade rather than at its end like most other countries, Israel reduced its civilian expenditures by six percent, standing out – together with Switzerland – as the only countries that cut their spending share in 2005-2010. As a result, Israel's civilian public expenditures in 2010 are below 21 of the 23 OECD countries.

With such low amounts of public funds available for civilian needs, Israel needs to make very judicious use of its expenditures. There is relatively less available from the overall pot in Israel for special interests and sectoral demands. In a region that is undergoing considerable unrest since the beginning of 2011 – and in light of its history of experiencing several critical events each decade – Israel needs to preserve the precious few degrees of freedom that it has available in its budget and spend them wisely.

Figure 4

Changes in civilian public expenditures

not including defense expenditures and interest payments, as a percent of GDP

4a. Changes in 1990-2005**4b. Changes in 2005-2010***

* subtracting defense expenditures in 2009 as estimate for 2010.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.**Data:** OECD, World Bank and Bank of Israel.

3. Government Spending – A Closer Look at the Trajectory

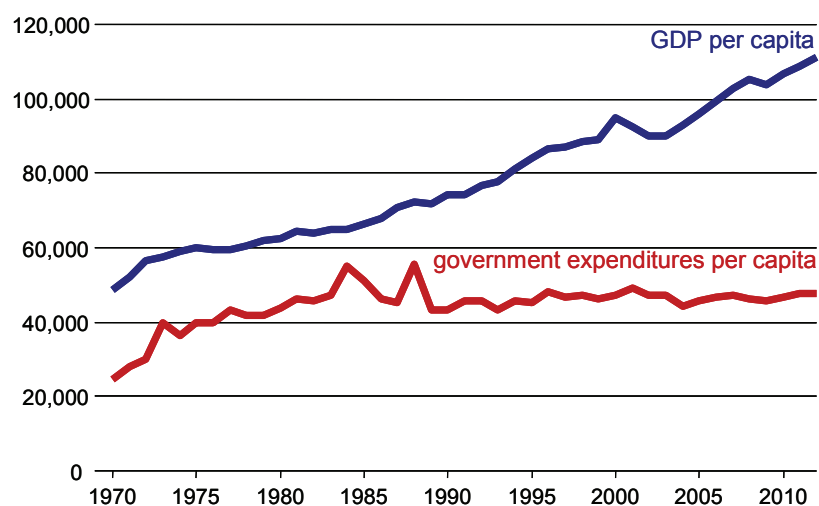
The common practice of examining public expenditures as a share of GDP has many important attributes and benefits. However, there is also one distinct disadvantage that can lead to confusion about changes in expenditure that are in relative versus absolute terms. A fast-growing country may witness a decline in its ratio of expenditures to GDP even if it increases its expenditures. It is sometimes useful to distinguish between the behavior of its expenditures and the behavior of GDP in order to understand better the changes that evolve over time in each.

GDP per capita is the common measure for a country's average standard of living. While it has its drawbacks, it is, nonetheless, a key tool because it is easily compared over time and between countries.

With regard to expenditures, the focus in the following analysis will be on the central government budget, which comprises the bulk of public expenditures. All budget numbers through 2010 reflect actual expenditures while the numbers for 2011 and 2012 reflect the budget passed by the government for these years. Expenditures may rise for a variety of reasons – for example, inflation, population changes, emergencies and political decisions that alter budget composition and overall totals. Focusing on changes in national priorities requires controlling for “natural” changes such as changes in population and inflation. Hence, real expenditures per person provide an indication of the annual public expenditures that “net out,” or discount, inflation and account for population increases.

Figure 5 shows how Israel's standard of living and its government budget evolved over the past four decades, since 1970. Until the mid-1980s, both GDP per capita and expenditures per person exhibited growth – more so in expenditures than in GDP. Since 1990, the picture has changed markedly: while GDP per capita continued to rise, spending per person stabilized and has remained relatively constant since then.

Figure 5
Total government expenditures and GDP per capita
 1970-2012, in 2010 NIS



Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: Finance Ministry and Central Bureau of Statistics.

Not only have the two periods differed from one another in terms of the long-run increases in output and expenditures, there has also been a change in relative volatility along each of the long-term paths. Until 1990, growth in GDP per capita was relatively steady (aside from the change in long-run growth path that occurred in 1973)³ compared to the fluctuations in expenditures per person. The 1973 Yom Kippur War and its aftermath, the hyperinflation of the early 1980s and the subsequent Stabilization Plan, along with a large debt repayment in 1988 account for the notable spikes in expenditures during these periods. Since 1989

³ For an analysis and a graphic depiction of the change that occurred in Israel's long-run growth path in 1973, see Ben-David, 2010a.

however, expenditures per person have been subject to fewer large changes than has GDP per capita. Furthermore, while the country's standard of living has been steadily rising over the past two decades, real government expenditures per person have hardly changed, growing at 0.4 percent a year between 1990 and 2010.

Since children and the elderly require a disproportionate share of government spending – on schools for the former and on healthcare for the latter – it is interesting to compare expenditures over time after controlling not only for increases in prices and population, but also after accounting for the changing composition of the population. One way to do this is by weighting the population each year by the annual ratios of children (1-17-years-old) and the elderly (65+) to the 18-64-year-old population – a form of dependency ratio.⁴ Discounting total expenditures in constant prices by this standardized measure of the population yields a slight decline in real government expenditures per person, by 0.4 percent a year between 1990 and 2010.

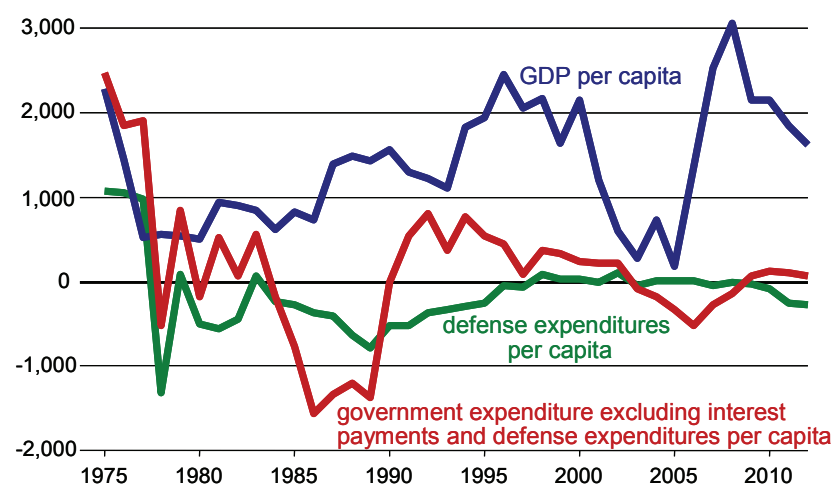
Taking into account the fact that higher living standards are generally reflected in higher wages, the relative steadiness in spending since 1989 is all the more interesting. It would appear to be a sign of a concerted fiscal effort to control costs, an effort that exhibits long-run perseverance that is rather remarkable in light of the political instability that has characterized Israel over these years.

Figure 6 breaks down the long-term trends into annual changes (depicted in five-year moving averages) in living standards and spending per person. Relatively steady growth in percentage terms is reflected in increasing annual increments. This is the case with GDP per capita, with the severe recession of the early 2000s clearly visible in the graph. Nonetheless, the trajectory depicting growth in living standards is always positive, indicating that these have been steadily rising over time.⁵

⁴ The formal dependency ratio is defined as the ratio between 0-14 and 65+ year-olds to 15-64-year-olds.

⁵ Note that these are five-year moving averages. There were a few individual years in which GDP per capita actually fell.

Figure 6
Annual changes in government expenditures and in GDP per capita
 1975-2012*, in 2010 NIS



* five-year averages.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

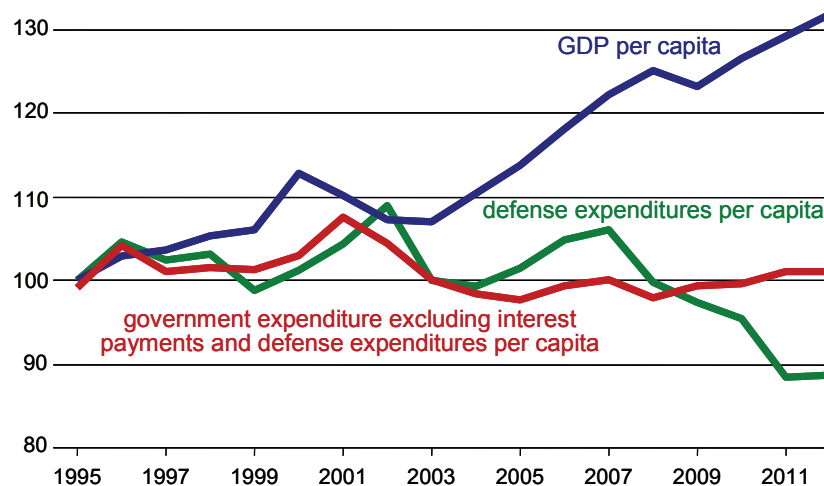
Data: Finance Ministry and Central Bureau of Statistics.

Defense expenditures per person, on the other hand, have either been falling or have remained unchanged since the latter half of the 1970s. Interest payments per person (not depicted in the graph) exhibited rising increases until the mid-1980s Stabilization Plan. Since then, with the exception of parts of this past decade, interest payments have been falling.

The removal of defense expenditures and interest payments leaves civilian expenditures per person. For the most part, these exhibited increases in the 1970s and first half of the 1980s – sometimes very substantial ones. The effects of the 1985 Stabilization Plan targeted at eliminating the hyperinflation can be seen in the cuts in civilian spending during the latter part of the decade. Civilian spending per person fell substantially until the large wave of immigrants arrived from the former Soviet Union. The related expenditures led to overall spending increases that are evident in the figure. Since the latter half of the 1990s, there have been very few substantial departures from the long-run spending path per person – with counter-cyclical spending that rose during the recession of the early 2000s, fell during the high growth rebound, and rose again during the recent global recession.

As a result, a comparison of cumulative changes since 1995 (Figure 7) shows that while living standards rose by over 30 percent, defense spending and government civilian expenditures per person remained relatively steady throughout – with the former falling by over ten percent in the defense budgets planned for 2011 and 2012 (barring any unexpected consequences of the general turmoil that began throughout the Arab world in early 2011). Real civilian expenditures per person are expected to be just two percent greater in 2012 than they were in 1990.

Figure 7
Government expenditures versus GDP per capita, 1995-2012
 in constant prices, base year is 1995



Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: Finance Ministry and Central Bureau of Statistics.

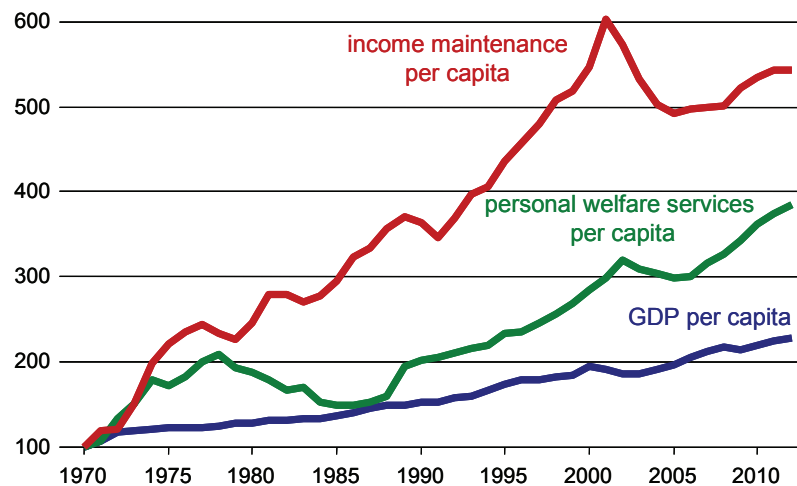
4. *Changes in the Composition of Government Spending over Time*

The relative steadiness in civilian expenditures per person over the years – compared to GDP per capita – has coincided with changes in the allocation of the government budget. When it comes to social expenditures, such as welfare, health and education, not all areas of government spending remained relatively frozen in time.

4.A. Social Welfare Expenditures

Figure 8 depicts the cumulative changes in income maintenance payments as well as personal welfare services expenditures per capita. These are compared with GDP per capita. The base year in the graph is 1970. The fact that GDP per capita rose to just over 200 means that living standards in Israel slightly more than doubled. At the same time, personal welfare services per person rose 3.6 fold while income maintenance per person is over 5.3 times what it was in 1970.

Figure 8
Government welfare expenditures versus GDP per capita, 1970-2012
 in constant prices, base year is 1970



Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: Finance Ministry and Central Bureau of Statistics.

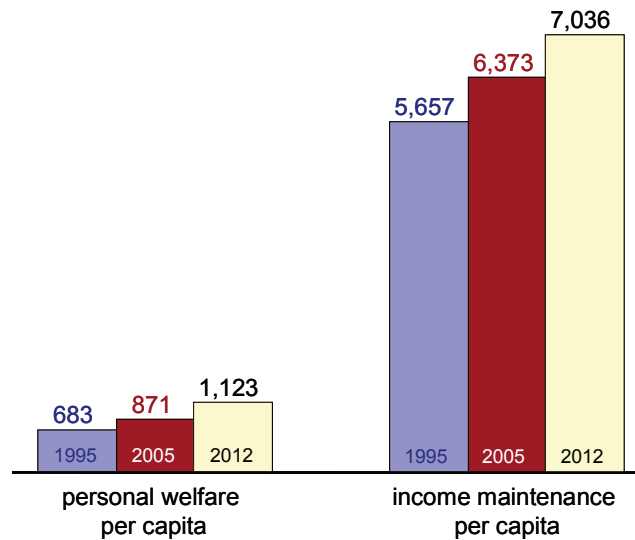
These increases, primarily the latter, are intended to counteract the high and rising – over the long-run – rates of poverty and income inequality in Israel. A large share of families would have lived under the poverty line had they not received assistance – approximately one-quarter of Israel's families in the late 1970s and almost one-third today. With welfare assistance, the share of families under the poverty line was 19 percent⁶ in 1979 and is only slightly higher, at around 20 percent, in recent years. This means that welfare assistance has had to increase substantially over the decades just to prevent rates from rising further without effectively reducing the actual poverty rates in gross incomes.

Even since 1995, the changes in transfer allowances have been substantial (Figure 9). In monetary terms, personal welfare services reached NIS 683 per capita in 1995 (all numbers are in terms of 2010 NIS). These rose by 28 percent over the next decade, reaching NIS 871, and a further 29 percent rise is expected through 2012, with expenditures reaching NIS 1,123 per capita.

Income maintenance payments are substantially higher, averaging NIS 5,657 per capita in 1995. The long-term rising trend since the seventies was so steep that in just six years, between 1995 and 2001, the payment increased by 38 percent, reaching NIS 7,809 per person. The tremendous economic and fiscal strains brought on by the wave of terrorism from the *intifada* in the early 2000's required substantial cuts in welfare payments, with reductions of 18 percent per person by 2005, and payments falling to NIS 6,373. These have subsequently rebounded somewhat and are expected to rise by ten percent by 2012, to per person payments of NIS 7,036. When the sharp ups and down are accounted for since 1995, income maintenance payments per capita increased cumulatively by 24 percent over these 17 years.

⁶ 1979 data adjusted to new series that includes non-salary workers and East Jerusalem residents.

Figure 9
Social expenditure per capita
 1995-2012, in 2010 NIS



Source: Dan Ben-David, Taub Center and Tel-Aviv University.

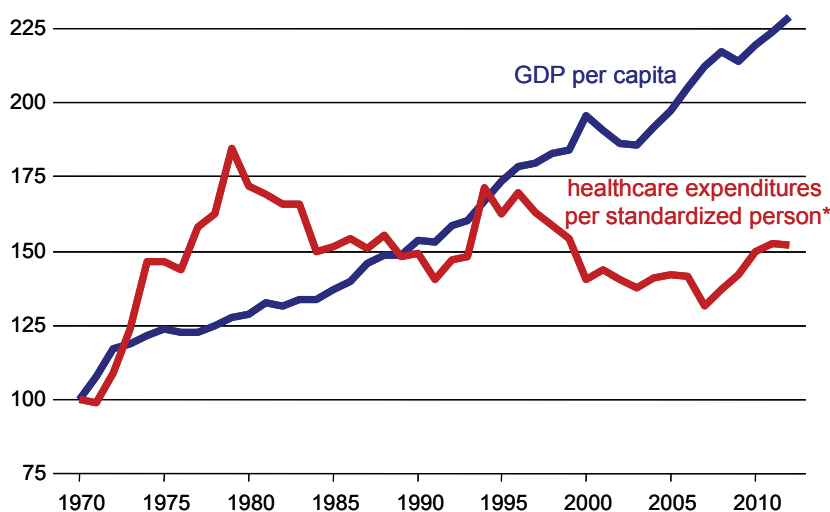
Data: Finance Ministry and Central Bureau of Statistics.

4.B. *Healthcare Expenditures*

The healthcare expenditure picture is substantially different. Using Israel's capitation formula for standardizing the population according to age groups, it is possible to calculate how healthcare spending per standardized person has changed over time. Government expenditures per standardized person grew by 84 percent in real terms between 1970 and 1979 (Figure 10). From that point on, government healthcare spending per person has been falling over much of the past three decades. The primary exception to this long-term trend was with the implementation of systemic healthcare reform in Israel in the mid-1990s. Healthcare

spending jumped from NIS 2,671 per person 1991, by 16 percent to NIS 3,090 in 1995, at the height of the immigration from the former Soviet Union.

Figure 10
Health expenditure per capita versus GDP per capita, 1970-2012
 in constant prices, base year is 1970



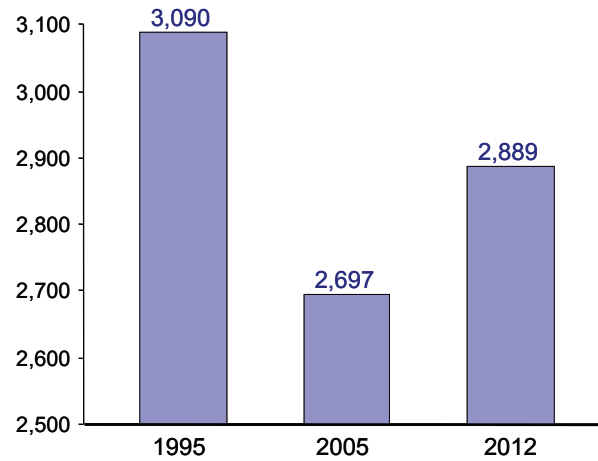
* population groups weighted by capitation formula.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: Finance Ministry and Central Bureau of Statistics.

After implementation of nationwide healthcare reform and the increase in spending that accompanied it, real healthcare expenditures per person fell by 13 percent to NIS 2,697 by 2005 – roughly where it had been prior to the reform in the mid-1990s (Figure 11). Since then, healthcare spending has rebounded somewhat, and is expected to rise by seven percent to NIS 2,889 per person – still six percent below 1995 levels.

Figure 11
Health expenditures per standardized person*
1995-2012, in 2010 NIS



* population groups weighted by capitation formula.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: Finance Ministry and Central Bureau of Statistics.

As Chernichovsky (2010) has shown, these cuts in public healthcare spending have gradually shifted Israel towards an American-type distribution between private and public health expenditures, and away from the mix that is common in other OECD countries. Work by Chernichovsky and Navon (2010) indicates that the brunt of this shift away from public expenditures is borne by the poorer segments of society.

4.C. Education Expenditures

Education spending over the past three decades has been anything but uniform across different school levels and different periods. Spending per pupil in pre-primary schools has always been at the bottom of the education list, and this continues to be the case today. Next are primary school education expenditures per pupil, and above these are secondary school expenditures per pupil. At the top are higher education expenditures per student.

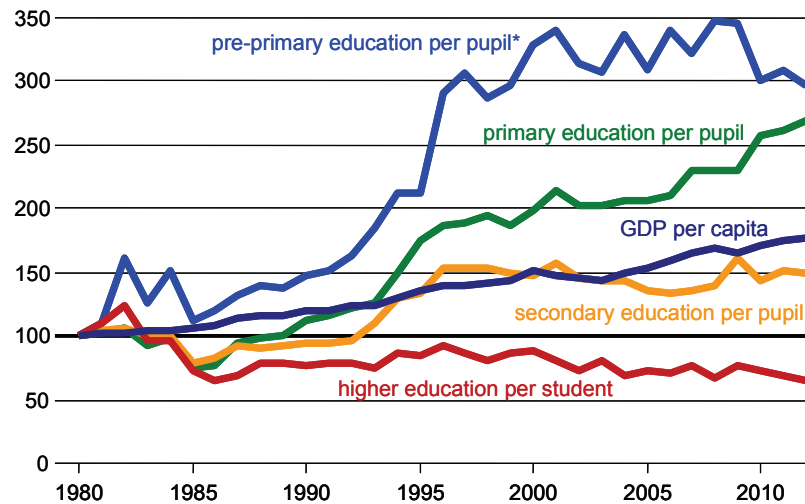
Figure 12 shows how education expenditures developed since 1980, with respect to one another, and with respect to Israel's standard of living. Over the entire time span, pre-primary, primary and secondary education spending per pupil have grown in real terms, although secondary education spending has not kept up with growth in GDP per capita.

At the two educational extremes, higher education and pre-primary education, government spending has gone in completely different directions since 1980. Pre-primary education spending per pupil in 1985 was twelve percent greater in real terms than it was in 1980. In the mid-1980s, these expenditures took off. By 2008, they had risen by an additional 258 percent. That said, pre-primary school expenditures per pupil were still far below spending in primary education, secondary education and higher education. Since 2008, government expenditures on pre-primary schools have fallen and with the passing of the 2011 and 2012 budgets, they are expected to be 23 percent lower by 2012, though they are still over 200 percent more than they were in 1980.

The watershed year in Israeli education was 1992. In June of that year, Yitzhak Rabin was elected prime minister. Among the fundamental changes in national priorities that he tried to implement before his assassination in November 1995 was a major change in direction with regard to the funding of education in Israel.

Figure 12

Education expenditures per student versus GDP per capita, 1980-2012, in constant prices, base year is 1980



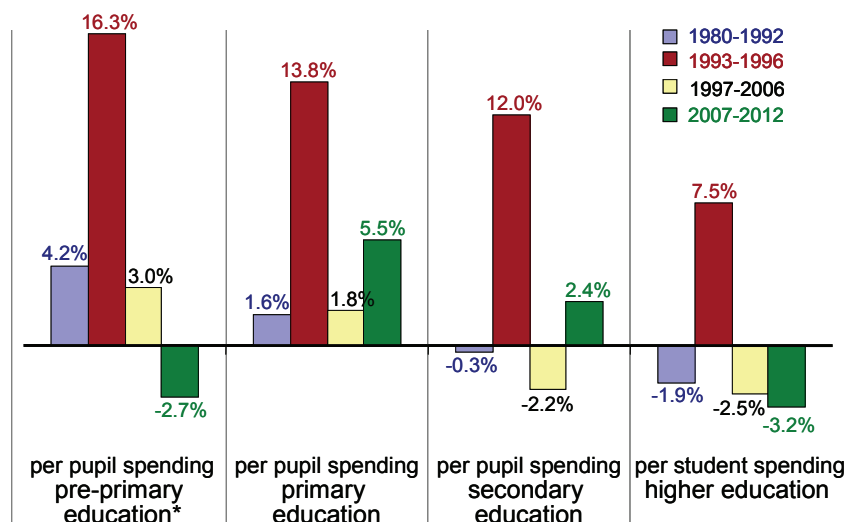
* prior to 1998 the number of pupils in pre-primary education included 2-year-olds.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: Finance Ministry and Central Bureau of Statistics.

The years in which the Rabin administration determined the government budget were 1993 to 1996. The increases in education spending per pupil across all education levels during this period stand out (Figure 13). In primary and secondary education, real changes in government spending had been minimal between 1980 and 1992, with primary education expenditures per pupil rising by 1.6 percent a year on average, while secondary school spending actually fell slightly (by 0.3 percent on average) during this period. During the Rabin budget years of 1993 to 1996, primary school expenditures per pupil rose by 14 percent a year in real terms while secondary school expenditures rose by 12 percent a year.

Figure 13
Annual changes in education expenditures per student
 1980-2012



* for pre-primary education groups, the years are 1999-2006. Prior to 1998, the number of pupils in pre-primary education included 2-year-olds.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: Finance Ministry and Central Bureau of Statistics.

Unfortunately, these massive increases in spending were an opportunity lost. They were not accompanied by a similarly extensive systemic reform, and as is shown in Spotlight A, the achievement levels of Israeli pupils have consistently been below all 24 OECD countries since 1999.⁷

⁷ It is not possible to conduct any meaningful comparisons of Israel's pupils prior to 1999 because of sample selection problems, although earlier international exams comprising only non-*haredi* Jewish students in the mid-1990's showed that their achievement levels were below average OECD levels.

**Spotlight A: Changes in Educational Achievement
Versus Changes in Expenditure**

Dan Ben-David

The lack of an ability to utilize increased education spending for systemic improvements is not unique to Israel. Focusing on five European countries (Belgium, France, Germany, Italy, and the United Kingdom) as well as on Japan, Australia and New Zealand, McKinsey (2007) shows that substantial increases in real education expenditures per pupil were accompanied by almost no changes at all – just minute positive and negative changes – in student achievements between 1970 and 1994.

In the United States, real expenditures per pupil in primary and secondary public schools rose by 90.2 percent between 1980 and 2008. Since most of this expenditure goes towards salaries, and since these salaries are tied in one way or another to increases in the country's standards of living, then a possibly more accurate gauge of changes in expenditure per pupil is reflected in the measure after it is discounted by GDP per capita. Real education expenditure per pupil reduced by GDP per capita has increased by 20.1 percent since 1980 (Figure 14).

The increase in public spending per pupil has been accompanied by only slight improvements in mathematics and reading achievements. According to National Assessment of Educational Progress (NAEP), while 9-year-olds in public schools showed an improvement of 11.5 percent in math between 1978 and 2008, their improvements in reading rose by only 1.9 percent during the similar period of 1980-2008. Math achievements for 13-year-olds rose by 6.5 percent while their reading scores barely rose – by just 0.4 percent.

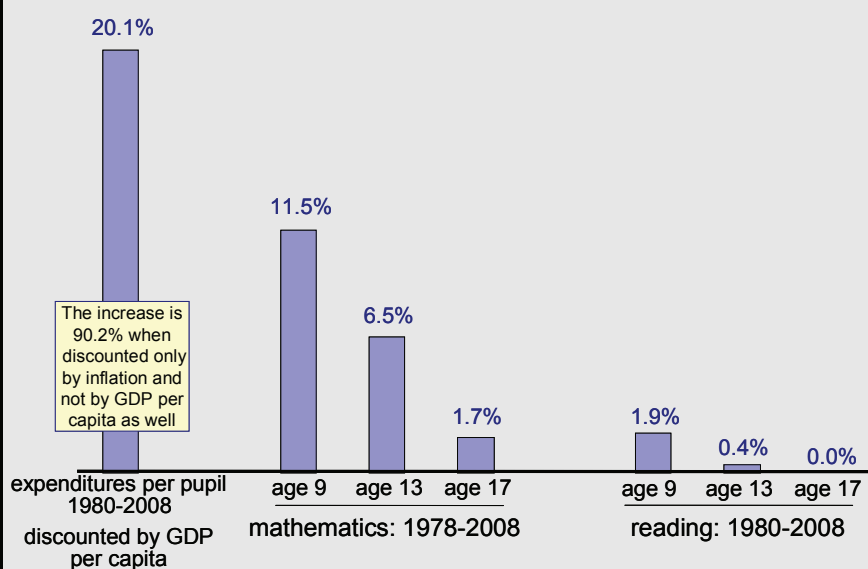
In the final analysis, the achievements of 17-year-olds mark the cumulative learning of pupils in the primary and secondary school system. Their math scores rose by just 1.7 percent over the three decade span while there was absolutely no change in their reading scores.

Unfortunately, until recently Israel's education system failed to examine its pupil population in tests that were comparable – i.e. calibrated – over time. Consequently, there is no way of measuring the changes in achievements over the decades and establishing whether the current low levels of achievement relative to the 24 OECD countries (see “Israel's Educational Achievements: Updated International Comparisons” in this volume) has always been the case, or whether they represent a real deterioration over time.

Figure 14

Education achievements versus expenditures, United States

average changes in primary and secondary public schools, 1980-2008



Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: National Assessment of Educational Progress (NAEP), the Statistical Abstract of the US.

Though the lack of a strong relationship between spending increases and educational improvements is a problem shared with other countries, the implications of this inability to link the two are particularly problematic for Israel. The country's very poor educational achievements, the fact that it has been on a slower multi-decade growth trajectory than the G7 countries since the 1970s, and that its rates of poverty and inequality are among the highest in the industrialized world (see *State of the Nation 2009*, "A Macro Perspective of Israel's Society and Economy") are a potent mix. The strong relationship between educational achievement and economic growth found by Hanushek and Kimko (2000) and others serves to underscore the substantial socioeconomic repercussions that are the result of Israel's inability to translate spending increases into scholastic improvements.

Over the next decade, between 1997 and 2006, primary education expenditures per pupil rose only marginally, averaging 1.8 percent a year. Secondary education expenditures per pupil fell by 2.2 percent during this period. The increases in 2007-2012 of 5.5 percent annually in the primary schools and 2.4 percent annually in the secondary schools reflect a corrective measure (in the case of the primary schools, a new wage agreement with the primary school teachers' union was the main reason for the higher expenditures). As noted above, secondary education spending per pupil still rose by less than GDP per capita over the entire three decade span. A newly signed wage agreement with the secondary school teachers' union is expected to increase expenditures per pupil substantially in coming years. Both new wage agreements involve longer at-school work hours for teachers – though not necessarily more teaching hours. While these reflect a step forward in the area of compensation, they have been misleadingly hailed as "reforms" while representing only a fraction of the measures needed for actual systemic reform.

In fact, Israeli education policy in general appears to be more one of correcting course rather than of charting new courses – or reactive rather than proactive. Long periods of relatively stagnating education budgets

tend to be followed by periods of sharp corrections whose effects are ultimately allowed to dissipate until the next period of correction. The problem is that when policy is more one of crisis intervention than prevention, solutions can be both costly and temporary. The endemic problems of Israel's education system are detailed extensively in both last year's and this year's *State of the Nation Reports*, and they require a comprehensive reform that will focus on what children learn, who teaches them and how they are compensated, as well as how the entire system allocates its limited budgets.

In the case of higher education, the level of the country's research universities is still considered to be very high in many disciplines, with the top students receiving graduate scholarships and fellowships to study at America's top universities. However, funding of higher education in Israel underwent a major reversal since the 1970s. Until then, the country had increased the number of its research universities to seven. Since then, numerous colleges at significantly lower academic levels have been created while not one additional research university has been established, although the country's population has doubled since 1973 and the percentage of the population going on to higher education has increased substantially. The fact that the expansion of higher education was slower than necessary is also discussed in Shavit and Bronstein in this book.

Non-research spending on higher education fell consistently since 1980, with just a few minor exceptions – the most notable of these between 1993 and 1996. Per student spending declined by an average of 1.9 percent a year between 1980 and 1992. After rising by 7.5 percent a year between 1993 and 1996, spending per student again fell by 2.5 percent from 1997 to 2006 and is expected to fall by even more between 2007 and 2012. The government has announced its intentions to increase overall spending on higher education during the next few years to try and reduce the academic brain drain that is unparalleled by any other country in the world. In the meantime, these proclamations have yet to find their way into the government budget.

5. Conclusion

One of the salient features of Israel's public expenditures over the past two decades is their relative stability. What makes this steady trajectory even more striking is that it has persisted over periods of tremendous internal turmoil and sharp political swings – a stability that also contrasts sharply with the volatility exhibited by most other Western countries.

On the one hand, the ability to control spending in such a fluctuating environment, and to do so more rigorously than many other countries that have undergone much less traumatic periods is a credit to the State of Israel. On the other hand, such fiscal responsibility also mandates a considerably more judicious use of the public's money. In this realm, the country's successive governments have been less than successful. This has also been the case with regard to government income, which is raised in a skewed and disproportional manner.

As former Finance Ministry Director-General Yarom Ariav points out in Spotlight B, government revenue planning leaves much to be desired. One could add to that the continued existence of a large shadow economy that creates a much larger tax burden on the fewer shoulders that bear it (Spotlight C).

On the expenditure side, welfare payments per person have been increasing steadily – more than five-fold over the past four decades, compared to just a doubling of the country's income per capita. This is unsustainable in the long-run. It has occurred while a very large and growing share of Israel's population is not receiving the necessary tools and conditions for working in a modern economy. As a result, the share of families that would have lived under the poverty line today (had they not received assistance) is roughly one-third – compared to “just” one-quarter in 1979 (Ben-David, 2010a, “A Macro Perspective of Israel's Society and Economy”). This personal inability to cope in a global workplace also translates into an increasing national difficulty to assimilate and develop new ideas and has been a major factor underlying the country's long-run growth path that has been steadily falling farther

and farther behind the growth paths of the world's leading economies. Therefore, while Israel has justifiably been referred to as the "Start-Up Nation,"⁸ this attribute applies to an ever-shrinking share of Israeli society.

Instead of utilizing the limited resources at its disposal in a manner that could initiate a positive and permanent change in the country's long-run socioeconomic trajectories, government after government have let an education system – once considered by many to be one of the best internationally – sink to the lowest levels in the developed world, with all of the growth, poverty and subsequent welfare repercussions implicit in this. The only systemic education reform passed by the government, by the Dovrat Task Force, a half-decade ago, was abandoned.

Many individuals who could work are receiving substantial amounts of government assistance while a large number of elderly and infirm are forced to live in abject poverty. The healthcare system, still one of the best in the world, is providing increasingly unequal care as the share of public expenditures has steadily fallen since the nationwide reform in the mid-1990s.

Fiscal responsibility is not just about controlling overall spending in unique circumstances. It also requires major, and often politically difficult, decisions regarding allocation. These are called *national priorities* – and Israel has a considerable distance yet to go in this realm.

⁸ See Dan Senor and Saul Singer, *Startup Nation* (2009).

Spotlight B: Who Is Responsible for Tax Policy?**Yarom Ariav***

When examining the frequent changes in Israel's taxation laws it is difficult not to be surprised by the lack of consistency in policy. What is most striking is the lack of a comprehensive perspective and a guiding hand. Examples are many and varied: a reduction in the rate of direct taxation and an increase in indirect taxes, increases and decreases in VAT every day, a rise in the excise tax on petrol and then a rescinding of that increase a few weeks later, an intent to cancel the VAT exemptions on fruit and vegetables and tourist services and then an abandonment of the idea, immediate changes in real estate taxes without a complete policy in this area, extension of an exemption from taxes for foreign investors in the stock market and then the cancellation of this. There are many additional examples.

Who is responsible for the taxation policy in Israel? It would seem that the answer is quite clear: the Minister of Finance and the Finance Ministry. The current prime minister appointed himself "super minister" in charge of the economy, so he is also responsible. The Director-General of the Ministry is surely also responsible for taxation policy as well as the head of the Taxation Authority. As the person who presents the budget to the government and is charged with keeping the budget deficit under control, the Budget Director also sees himself as somewhat responsible. And then there is also the chief of the Government Income Authority who is in charge of taxation policy within the Ministry of Finance.

The evidence, however, suggests that the multiplicity of cooks is spoiling the broth. As the examples above indicate, Israel's taxation policy is inconsistent, and it is often difficult to discern how it serves the government's economic policy objectives.

* Yarom Ariav, Taub Center Economics Policy Program Fellow; past Director-General, Ministry of Finance.

The importance of a successful taxation policy should need little explanation. The taxation system has a great impact at the macro level as well as at other levels. The system influences the size of the deficit and through it, the debt-GDP ratio. The taxation system impacts the country's economic growth and the distribution of income within it. The functioning of the tax system as an automatic stabilizer – i.e. one that minimizes economic fluctuations through an automatic effect on total tax revenues – impacts the ability of the economy to withstand economic shocks and instability within the security realm. The tax system and the incentives inherent in it affects long-term savings, the functioning of financial markets, the attractiveness of foreign investment, work incentives and labor force participation, population dispersion, real investments in the economy, development of natural resources, market structure and the degree of concentration within it – and, in essence, every citizen and economic unit. The tax system plays a special role with regard to equality in the market place.

So why is it that alongside those responsible for government expenditure in the Finance Ministry's Budget Bureau – a powerful agency filled with dozens of economists, whose voice is loud and clear and whose hand is everywhere – stands an income authority in charge of the income side of the budget, i.e. tax policy, which has little manpower and little influence determining policy? One explanation is related to the restructuring of the Ministry of Finance that took place less than a decade ago. In the past, the Income Tax Division and the VAT and Import-Export Tax Departments were separate units. Above them was the State Income Authority. In this case there was a clear distinction between the executive branch that set taxation policy and the implementation arm that was responsible for tax collection (just like the Budget Bureau is responsible for the planning and budgeting and the Department of the Accountant General is responsible for the implementation of the budget). In this situation, the State Income Authority wielded considerable influence on overall taxation policy as well as on taxation at the different sectoral levels. In fact, the country's Income Authority had a significant role in reforms such as the opening of markets to competition, stock market taxation and other tax reforms.

This situation changed substantially at the beginning of the new millennium when the departments were combined (at least in theory) into one tax authority.

The objective was to increase efficiency and lead to savings, but insufficient thought was given to its impact on the functioning of the Ministry of Finance. This structural change did not achieve the savings intended and it caused considerable damage in that it greatly weakened the State Income Authority that remained. The Authority, which was greatly reduced in size, tried to continue having an important impact in the determination of tax policy, but in practice, a vacuum was created that others – primarily from the Tax Authority and the Budget Department – entered. It is quite problematic when the body responsible for collection, i.e. the Taxation Authority, is also put in charge of the determining tax policy since issues of ease of collection could dominate the setting of policy as opposed to more relevant issues of how the tax policy serves the economic aims of the government. Even the Budget Department with all of its professionalism and power should not deal with tax policy since it is natural that it views issues through the prism of its authority – budget expenditure.

A taxation policy that works to increase growth, to minimize distortions and to narrow income gaps in the market is crucial. The absence of a professional, strong and dominant body that is responsible solely for this causes strategic damage to the economy, damage that will worsen over the years. There is an immediate need to strengthen Israel's Income Authority so that it will be a professional body that is central in establishing consistent and comprehensive taxation policy.

Spotlight C: Israel's Shadow Economy

Dan Ben-David

The severe economic problems experienced by a number of European countries in conjunction with the recent global recession have illuminated problems that are shared with Israel – even though Israel has thus far weathered the recession much better than most countries. However, as Yashiv points out (Yashiv, 2011), there is a need to distinguish between the current bright situation and the much darker long-term picture that underlies it.

Large underground economies in Greece and Italy seriously limit the ability of these countries to garner urgently needed domestic resources for dealing with their predicaments – and do not provide much of an incentive for the citizens of other European Union partner countries to grant financial support drawn from the taxes that they pay. Israel, which also receives extraordinary financial assistance from abroad, should be aware of the parallels that may one day be drawn in this regard.

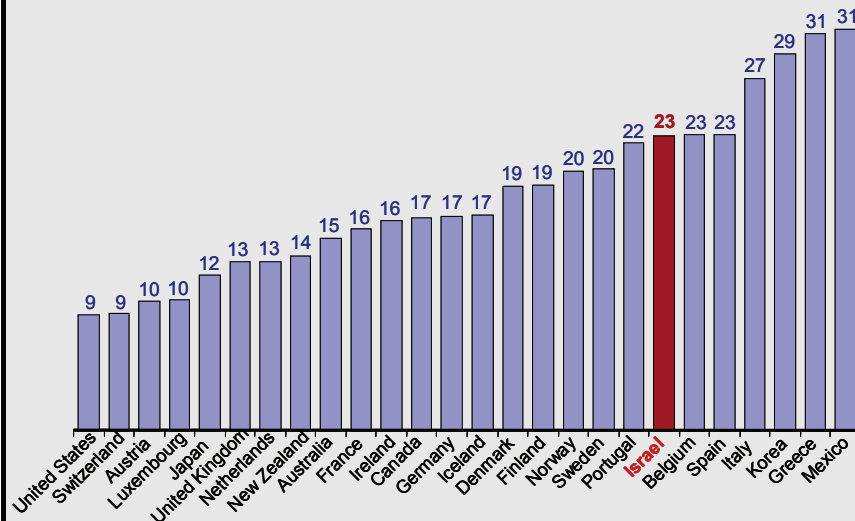
The extremely high rates of non-employment in Israel reflect not only problematic work habits by a large and growing segment of the population, but also what would appear to be – from an anecdotal perspective – quite extensive levels of tax evasion. The severity of non-compliance with the country's laws is very difficult to gauge, but its pervasiveness in some sectors of the population and business sectors is also difficult to ignore.

How large is Israel's shadow economy and how does it compare with other countries? A recent World Bank study by Schneider, Buehn and Montenegro (2010) provides a glimpse – albeit a very rough approximation – based on multiple indicators including currency demand. They rank 151 countries according to the size of their shadow economies. Figure 15 looks at a subset of these and shows how Israel compares to 25 OECD countries.

Figure 15

Shadow economy as share of GDP*

Israel and 25 OECD countries, in percent, 2007



* based on multiple indicators including currency demand.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.**Data:** Schneider, Buehn and Montenegro – World Bank 2010.

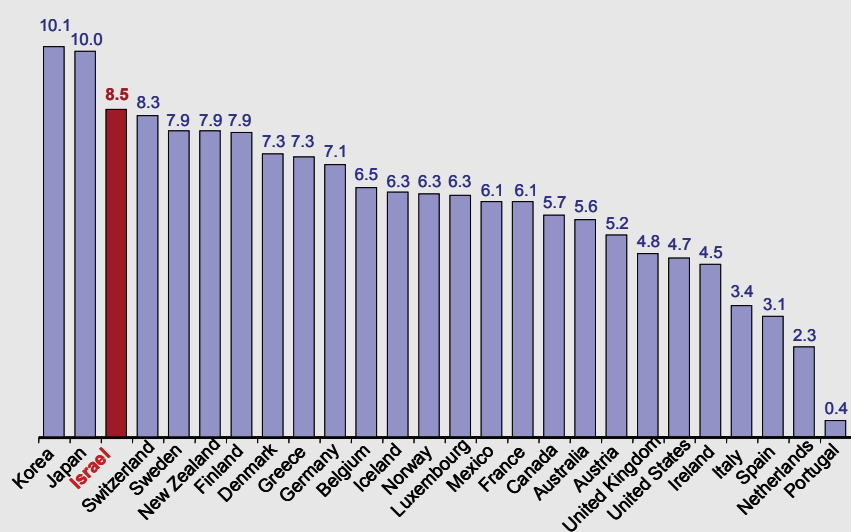
While the apparent problems of Greece and Italy eclipse Israel's as far as shadow economies are concerned, Israel, nonetheless, has some substantial economic activity that is hidden from the eye of the tax authorities. According to Schneider, Buehn and Montenegro, the size of Israel's shadow economy reached 23 percent of its GDP in 2007. This is considerably greater than Germany (16.7 percent), the United Kingdom (13.2 percent), Japan (12.1 percent), and the United States (9.0 percent).

The problem is not only in the size of the country's shadow economy, but also that its share of GDP is growing at a faster rate than in nearly all of the other countries (Figure 16). Since 1999, the shadow economy share of GDP has grown by six percent on average for the 25 OECD countries in the figure.⁹ The growth of Israel's underground economy (8.5 percent) was faster than in 23 of the other countries, with only two countries showing even faster growth rates, Japan and Korea.

Figure 16

Changes in share of shadow economy out of GDP

Israel and 25 OECD countries, in percent, 1999-2007*



* based on multiple indicators including currency demand.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: Schneider, Buehn and Montenegro – World Bank 2010.

⁹ Note that this refers to the percent change in the shadow economy share of GDP and not to a change in percentage points.

Even if one assumes that the shadow share of GDP in 2010 was similar and not greater to that of 2007, this still implies an enormous amount of economic activity that is taking place outside of the formal public eye – a sum of NIS 187 billion in 2010 alone. Such an extensive shadow economy skews the shouldering of the public burden in a substantial manner, leading to high tax burdens on some portions of the population while other segments of the population who work – while formally appearing not to do so – not only do not bear their share, they actually artificially inflate the burden further by receiving welfare assistance and subsidies since they appear to be much poorer than they actually are.

With underground activity at this scale, one has to wonder how cost-effective it would be to increase substantially the level of law enforcement in Israel to rein in this activity.

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Public Expenditure Tables

Yulia Cogan

*The Taub Center Appendix tables
are available as Excel files
on the Center website:
www.taubcenter.org.il*

*The tables include complete
and continuous time series'*

Table 1. **Social services expenditures**
in percent

	as a percent of		
	Government expenditures		GDP
	Total	Excluding interest payments and debt repayment	
1. Total budget: current and development			
1980	23.9	31.7	17.8
1985	18.2	32.1	15.5
1989	26.1	42.0	16.4
1996	36.8	53.2	19.9
2000	38.4	54.9	18.1
2005	35.3	51.6	16.3
2006	34.3	50.6	15.6
2007	34.3	50.8	15.3
2008	34.8	51.4	15.3
2009	35.9	51.7	15.6
2010	36.1	53.1	15.9
2011	36.3	53.5	15.9
2012	36.0	53.2	15.5
2. Current budget			
1980	26.4	30.4	15.1
1985	24.6	32.3	14.4
1989	34.0	42.8	15.6
1996	43.4	51.3	16.9
2000	45.9	54.2	16.4
2005	43.9	52.1	15.3
2006	43.3	51.3	14.9
2007	43.7	51.4	14.5
2008	45.1	52.5	14.7
2009	46.0	53.2	15.0
2010	47.6	54.9	15.4
2011	48.2	55.6	15.4
2012	48.0	55.4	15.0

Table 2. **Government expenditures**
by main component (in percent)

	Total	of which: Interest payments and debt repayment	Total excluding interest and debt repayment			
			Total	Social services	Defense	Other
1. Total budget: current and development						
1980	100.0	24.5	100.0	31.7	39.5	28.8
1985	100.0	43.4	100.0	32.1	40.2	27.7
1989	100.0	37.8	100.0	42.0	33.1	24.9
1996	100.0	30.8	100.0	53.2	24.5	22.3
2000	100.0	30.0	100.0	54.9	24.0	21.1
2005	100.0	31.6	100.0	51.6	25.3	23.1
2006	100.0	32.1	100.0	50.6	25.7	23.7
2007	100.0	32.5	100.0	50.8	25.8	23.4
2008	100.0	32.3	100.0	51.4	24.8	23.8
2009	100.0	30.6	100.0	51.7	23.8	24.4
2010	100.0	32.0	100.0	53.1	23.3	23.6
2011	100.0	32.3	100.0	53.5	21.3	25.1
2012	100.0	32.5	100.0	53.2	21.4	25.4
2. Current budget						
1980	100.0	13.3	100.0	30.4	44.5	25.0
1985	100.0	24.1	100.0	32.3	43.6	24.1
1989	100.0	20.6	100.0	42.8	35.4	21.8
1996	100.0	15.5	100.0	51.3	27.6	21.0
2000	100.0	15.4	100.0	54.2	26.1	19.7
2005	100.0	15.8	100.0	52.1	27.2	20.7
2006	100.0	15.7	100.0	51.3	27.4	21.3
2007	100.0	15.0	100.0	51.4	27.5	21.1
2008	100.0	14.1	100.0	52.5	26.4	21.1
2009	100.0	13.5	100.0	53.2	25.4	21.4
2010	100.0	13.3	100.0	54.9	24.8	20.3
2011	100.0	13.4	100.0	55.6	22.9	21.5
2012	100.0	13.4	100.0	55.4	23.0	21.5

Table 3. **Social services expenditures**
by main component (in percent)

	Total	Income maintenance	In-kind services			
			Total	Education	Health	Other *
1. Total budget: current and development						
1980	100.0	30.7	69.3	30.9	21.1	17.3
1985	100.0	41.0	59.0	28.6	19.9	10.5
1989	100.0	42.4	57.6	28.4	19.0	10.1
1996	100.0	33.4	66.6	30.3	17.4	18.8
2000	100.0	39.3	60.7	30.4	15.0	15.3
2005	100.0	39.5	60.5	30.4	17.2	12.9
2006	100.0	40.2	59.8	30.4	17.4	12.0
2007	100.0	39.8	60.2	31.7	16.2	12.4
2008	100.0	40.3	59.7	31.3	16.7	11.7
2009	100.0	41.1	58.9	31.3	16.6	11.0
2010	100.0	41.0	59.0	31.9	17.0	10.1
2011	100.0	40.7	59.3	31.0	17.0	11.3
2012	100.0	40.9	59.1	30.9	16.9	11.2
2. Current budget						
1980	100.0	36.0	64.0	34.5	23.7	5.8
1985	100.0	44.2	55.8	30.2	20.9	4.8
1989	100.0	44.5	55.5	29.3	19.7	6.6
1996	100.0	39.1	60.9	33.9	19.3	7.7
2000	100.0	43.3	56.7	32.3	16.1	8.3
2005	100.0	42.0	58.0	31.7	18.1	8.2
2006	100.0	42.2	57.8	31.3	18.0	8.5
2007	100.0	41.8	58.2	32.7	16.8	8.6
2008	100.0	42.1	57.9	32.0	17.2	8.7
2009	100.0	42.7	57.3	31.8	16.9	8.6
2010	100.0	42.2	57.8	32.0	17.1	8.6
2011	100.0	42.2	57.8	31.6	17.3	8.9
2012	100.0	42.2	57.8	31.4	17.3	9.1

* primarily personal social services, absorption and housing.

Table 4. **Social services expenditures**
by main component*

	Total	Income mainte- nance	In-kind services						
			Total	Education	Health	Welfare	Employ- ment	Absorp- tion	Housing
1. Total budget: current and development (NIS million, 2010 prices)									
1980	50,338	12,397	37,941	17,984	12,316	2,120	302	339	4,880
1985	50,817	16,167	34,650	17,314	12,003	1,856	290	381	2,807
1989	59,089	21,713	37,376	18,694	12,533	2,584	422	811	2,331
1996	105,738	33,665	72,073	32,342	18,600	3,915	540	2,183	14,493
2000	115,769	44,616	71,153	35,073	17,261	5,241	685	2,426	10,467
2005	111,116	44,162	66,954	33,543	18,925	6,039	841	1,367	6,239
2006	111,546	45,571	65,975	33,515	19,151	6,196	1,041	1,456	4,616
2007	114,148	46,449	67,699	35,626	18,157	6,649	1,114	1,269	4,883
2008	116,003	47,474	68,529	35,944	19,232	6,969	1,181	1,287	3,916
2009	123,114	50,671	72,443	38,502	20,410	7,493	1,217	1,267	3,555
2010	128,851	52,766	76,085	41,160	21,919	8,060	1,211	1,295	2,440
2011	134,114	54,636	79,479	41,636	22,731	8,487	1,664	1,246	3,714
2012	135,940	55,537	80,402	42,060	23,022	8,866	1,668	1,234	3,554
Average annual percent changes									
1980-1985	0.2	5.5	-1.8	-0.8	-0.5	-2.6	-0.8	2.4	-10.5
1985-1989	3.8	7.7	1.9	1.9	1.1	8.6	9.9	20.8	-4.5
1989-1996	8.7	6.5	9.8	8.1	5.8	6.1	3.6	15.2	29.8
1996-2000	2.3	7.3	-0.3	2.0	-1.9	7.6	6.1	2.7	-7.8
2000-2005	-0.8	-0.2	-1.2	-0.9	1.9	2.9	4.2	-10.8	-9.8
2005-2010	3.0	3.6	2.6	4.2	3.0	5.9	7.6	-1.1	-17.1
2010-2012	2.7	2.6	2.8	1.1	2.5	4.9	17.3	-2.4	20.7

* Income maintenance expenditure is deflated by the Consumer Price Index.
All other expenditures in the Current Budget are deflated by the Public Civilian Consumption Price Index while Development Budget expenditures are deflated by the Construction Price Index.

Table 4. **Social services expenditures**
by main component (continued)

	Total	Income mainte- nance	In-kind services						
			Total	Education	Health	Welfare	Employ- ment	Absorp- tion	Housing
2. Current budget (NIS million, 2010 prices)									
1980	44,734	12,397	32,337	17,431	11,971	2,085	302	339	209
1985	47,654	16,167	31,487	17,026	11,779	1,829	290	381	183
1989	56,648	21,713	34,935	18,432	12,374	2,562	422	811	333
1996	88,848	33,665	55,183	30,742	17,479	3,863	540	2,183	376
2000	103,571	44,616	58,955	33,626	16,713	5,197	685	2,426	307
2005	104,188	44,162	60,026	32,847	18,719	6,020	841	1,367	231
2006	106,243	45,571	60,672	32,893	18,874	6,182	1,041	1,456	225
2007	108,584	46,449	62,135	34,967	17,932	6,640	1,114	1,269	213
2008	111,332	47,474	63,858	35,273	18,961	6,954	1,181	1,287	202
2009	118,599	50,671	67,928	37,713	20,049	7,470	1,217	1,267	212
2010	124,966	52,766	72,200	40,033	21,415	8,025	1,211	1,295	220
2011	129,549	54,636	74,913	40,916	22,419	8,465	1,664	1,246	203
2012	131,504	55,537	75,967	41,307	22,723	8,839	1,668	1,234	196
Average annual percent changes									
1980-1985	1.3	5.5	-0.5	-0.5	-0.3	-2.6	-0.8	2.4	-2.7
1985-1989	4.4	7.7	2.6	2.0	1.2	8.8	9.9	20.8	16.2
1989-1996	6.6	6.5	6.7	7.6	5.1	6.0	3.6	15.2	1.7
1996-2000	3.9	7.3	1.7	2.3	-1.1	7.7	6.1	2.7	-4.9
2000-2005	0.1	-0.2	0.4	-0.5	2.3	3.0	4.2	-10.8	-5.6
2005-2010	3.7	3.6	3.8	4.0	2.7	5.9	7.6	-1.1	-0.9
2010-2012	2.6	2.6	2.6	1.6	3.0	4.9	17.3	-2.4	-5.6

Table 5. **Social services expenditures per capita**
by main component*

	Total	Income main- tenance	In-kind services						Housing
			Total	Education	Health	Welfare	Employ- ment	Absorp- tion	
1. Total budget: current and development (NIS, 2010 prices)									
1980	12,981	3,197	9,784	4,638	3,176	547	78	87	1,259
1985	12,005	3,819	8,186	4,090	2,836	438	68	90	663
1989	13,078	4,806	8,272	4,137	2,774	572	93	180	516
1996	18,599	5,922	12,678	5,689	3,272	689	95	384	2,549
2000	18,408	7,094	11,314	5,577	2,745	833	109	386	1,664
2005	16,034	6,373	9,661	4,840	2,731	871	121	197	900
2006	15,814	6,461	9,353	4,751	2,715	878	148	206	654
2007	15,898	6,469	9,429	4,962	2,529	926	155	177	680
2008	15,872	6,496	9,376	4,918	2,631	954	162	176	536
2009	16,447	6,769	9,678	5,143	2,727	1,001	163	169	475
2010	16,906	6,923	9,982	5,400	2,876	1,057	159	170	320
2011	17,309	7,051	10,257	5,374	2,934	1,095	215	161	479
2012	17,258	7,051	10,207	5,340	2,923	1,125	212	157	451
Average annual percent changes									
1980-1985	-1.6	3.6	-3.5	-2.5	-2.2	-4.3	-2.5	0.6	-12.0
1985-1989	2.2	5.9	0.3	0.3	-0.5	6.9	8.1	18.9	-6.1
1989-1996	5.2	3.0	6.3	4.7	2.4	2.7	0.2	11.5	25.6
1996-2000	-0.3	4.6	-2.8	-0.5	-4.3	4.9	3.5	0.1	-10.1
2000-2005	-2.7	-2.1	-3.1	-2.8	-0.1	0.9	2.2	-12.6	-11.6
2005-2010	1.1	1.7	0.7	2.2	1.0	3.9	5.5	-2.9	-18.7
2010-2012	1.0	0.9	1.1	-0.6	0.8	3.2	15.4	-4.0	18.7

* Income maintenance expenditure is deflated by the Consumer Price Index.
All other expenditures in the Current Budget are deflated by the Public Civilian Consumption Price Index while Development Budget expenditures are deflated by the Construction Price Index.

Table 5. **Social services expenditures per capita**
by main component (continued)

	Total	Income main- tenance	In-kind services						
			Total	Education	Health	Welfare	Employ- ment	Absorp- tion	Housing
2. Current budget (NIS, 2010 prices)									
1980	11,536	3,197	8,339	4,495	3,087	538	78	87	54
1985	11,258	3,819	7,438	4,022	2,783	432	68	90	43
1989	12,538	4,806	7,732	4,079	2,739	567	93	180	74
1996	15,628	5,922	9,707	5,408	3,074	679	95	384	66
2000	16,468	7,094	9,374	5,347	2,657	826	109	386	49
2005	15,034	6,373	8,662	4,740	2,701	869	121	197	33
2006	15,062	6,461	8,601	4,663	2,676	876	148	206	32
2007	15,123	6,469	8,654	4,870	2,497	925	155	177	30
2008	15,233	6,496	8,737	4,826	2,594	951	162	176	28
2009	15,844	6,769	9,074	5,038	2,678	998	163	169	28
2010	16,396	6,923	9,473	5,252	2,810	1,053	159	170	29
2011	16,720	7,051	9,668	5,281	2,893	1,092	215	161	26
2012	16,695	7,051	9,644	5,244	2,885	1,122	212	157	25
Average annual percent changes									
1980-1985	-0.5	3.6	-2.3	-2.2	-2.1	-4.3	-2.5	0.6	-4.4
1985-1989	2.7	5.9	1.0	0.4	-0.4	7.0	8.1	18.9	14.4
1989-1996	3.2	3.0	3.3	4.1	1.7	2.6	0.2	11.5	-1.6
1996-2000	1.3	4.6	-0.9	-0.3	-3.6	5.0	3.5	0.1	-7.3
2000-2005	-1.8	-2.1	-1.6	-2.4	0.3	1.0	2.2	-12.6	-7.4
2005-2010	1.7	1.7	1.8	2.1	0.8	3.9	5.5	-2.9	-2.8
2010-2012	0.9	0.9	0.9	-0.1	1.3	3.2	15.4	-4.0	-7.2

Table 6. Income maintenance expenditures
by main component*

	Total	Old-age and survivors	Child allowances	General disability	Unem- ployment	Income support	Other NII	Nazi victims
NIS million, 2010 prices								
1980	12,397	5,572	3,744	1,363	225	0	1,101	393
1985	16,167	7,453	4,180	2,111	422	539	1,149	314
1989	21,713	9,467	5,003	2,523	1,619	660	1,943	498
1996	33,665	13,323	7,469	4,039	2,331	1,983	3,458	1,062
2000	44,616	16,672	8,583	6,134	3,658	3,554	4,587	1,427
2005	44,162	18,516	5,107	8,537	2,270	3,144	5,176	1,413
2006	45,571	19,147	5,547	9,036	2,183	2,926	5,280	1,451
2007	46,449	19,323	5,517	9,727	1,950	2,684	5,672	1,576
2008	47,474	19,549	5,421	9,898	1,952	2,538	6,121	1,995
2009	50,671	20,485	5,728	10,254	3,109	2,549	6,398	2,147
2010	52,766	21,800	6,204	10,788	2,534	2,527	6,658	2,256
2011	54,636	22,268	6,385	11,463	2,463	2,585	7,052	2,418
2012	55,537	22,786	6,677	11,802	2,456	2,284	7,282	2,249
Average annual percent changes								
1980-1985	5.5	6.0	2.2	9.1	13.3	0.0	0.9	-4.4
1985-1989	7.7	6.2	4.6	4.6	40.0	5.2	14.0	12.3
1989-1996	6.5	5.0	5.9	7.0	5.3	17.0	8.6	11.4
1996-2000	7.3	5.8	3.5	11.0	11.9	15.7	7.3	7.7
2000-2005	-0.2	2.1	-9.9	6.8	-9.1	-2.4	2.4	-0.2
2005-2010	3.6	3.3	4.0	4.8	2.2	-4.3	5.2	9.8
2010-2012	2.6	2.2	3.7	4.6	-1.6	-4.9	4.6	-0.2

* deflated by the Consumer Price Index.

Table 7. Income maintenance expenditures
by main component (in percent)

	Total	Old-age and survivors	Child allowances	General disability	Unem- ployment	Income support	Other NII	Nazi victims
1980	100.0	44.9	30.2	11.0	1.8	0.0	8.9	3.2
1985	100.0	46.1	25.9	13.1	2.6	3.3	7.1	1.9
1989	100.0	43.6	23.0	11.6	7.5	3.0	8.9	2.3
1996	100.0	39.6	22.2	12.0	6.9	5.9	10.3	3.2
2000	100.0	37.4	19.2	13.7	8.2	8.0	10.3	3.2
2005	100.0	41.9	11.6	19.3	5.1	7.1	11.7	3.2
2006	100.0	42.0	12.2	19.8	4.8	6.4	11.6	3.2
2007	100.0	41.6	11.9	20.9	4.2	5.8	12.2	3.4
2008	100.0	41.2	11.4	20.8	4.1	5.3	12.9	4.2
2009	100.0	40.4	11.3	20.2	6.1	5.0	12.6	4.2
2010	100.0	41.3	11.8	20.4	4.8	4.8	12.6	4.3
2011	100.0	40.8	11.7	21.0	4.5	4.7	12.9	4.4
2012	100.0	41.0	12.0	21.3	4.4	4.1	13.1	4.0

Table 8. Education expenditures in current budget
by main component*

	Total	General	Pre-schools	Primary	Secondary	Post-secondary non tertiary	Tertiary	Vocational training	Yeshivas
NIS million, 2010 prices									
1980	17,431	1,821	676	4,958	4,365	798	3,907	601	305
1985	17,026	1,605	807	4,357	4,657	860	3,516	576	649
1989	18,432	1,394	931	4,852	5,414	1,049	3,342	569	882
1996	30,742	2,194	1,706	8,199	9,071	1,837	5,510	884	1,342
2000	33,626	2,382	2,081	8,927	9,789	2,015	6,187	869	1,375
2005	32,847	2,358	2,427	9,657	9,468	1,698	5,928	629	683
2006	32,893	2,181	2,550	9,957	9,235	1,814	5,847	561	749
2007	34,967	2,196	2,544	11,113	9,318	1,900	6,345	541	1,010
2008	35,273	2,091	2,774	11,456	9,697	1,931	5,839	485	1,001
2009	37,713	2,241	2,991	11,723	9,928	1,989	7,035	553	1,252
2010	40,033	2,974	2,666	13,531	10,190	1,853	6,937	631	1,251
2011	40,916	2,779	2,803	13,922	11,048	1,744	6,842	581	1,197
2012	41,307	2,849	2,766	14,564	10,955	1,713	6,746	571	1,144
Average annual percent changes									
1980-1985	-0.5	-2.5	3.6	-2.6	1.3	1.5	-2.1	-0.8	16.3
1985-1989	2.0	..	..	..	..	..	-1.3	-0.3	8.0
1989-1996	7.6	6.7	9.0	7.8	7.7	8.3	7.4	6.5	6.2
1996-2000	2.3	2.1	5.1	2.2	1.9	2.3	2.9	-0.4	0.6
2000-2005	-0.5	-0.2	3.1	1.6	-0.7	-3.4	-0.9	-6.3	-13.1
2005-2010	4.0	4.8	1.9	7.0	1.5	1.8	3.2	0.1	12.9
2010-2012	1.6	-2.1	1.9	3.7	3.7	-3.8	-1.4	-4.9	-4.4

Table 9. **Health expenditures out of current budget**
by main component*

	Total	Gov't financing of health insurance			Direct expenditures				
		Parallel tax	Co-payments	Other transfers	General hospitals **	Psychiatric care	Long-term care	Public health and other ***	Other ****
NIS million, 2010 prices									
1980	11,971	4,866	..	1,927	1,358	940	512	728	1,641
1985	11,779	6,407	208	1,408	556	666	474	587	1,473
1989	12,374	7,940	909	346	167	748	614	515	1,134
1996	17,479	8,975	2,378	1,342	238	1,294	909	806	1,536
2000	16,713	0	10,464	642	197	1,295	1,188	1,262	1,664
2005	18,719	0	11,601	905	186	1,663	1,323	1,128	1,913
2006	18,874	0	11,914	729	189	1,570	1,378	1,151	1,943
2007	17,932	0	10,885	667	145	1,632	1,379	1,096	2,128
2008	18,961	0	11,489	868	76	1,661	1,417	1,198	2,252
2009	20,049	0	11,912	735	139	1,757	1,505	1,491	2,509
2010	21,415	0	12,861	753	250	1,792	1,465	1,552	2,741
2011	22,419	0	15,214	831	462	647	1,437	915	2,912
2012	22,723	0	15,309	832	544	678	1,483	918	2,959
Average annual percent changes									
1980-1985	-0.3	5.7	..	-6.1	-16.4	-6.7	-1.5	-4.2	-2.1
1985-1989	1.2	5.5	44.6	-29.6	-25.9	3.0	6.7	-3.2	-6.3
1989-1996	5.1	1.8	14.7	21.4	5.2	8.1	5.8	6.6	4.4
1996-2000	-1.1	..	44.8	-16.8	-4.6	0.0	6.9	11.9	2.0
2000-2005	2.3	..	2.1	7.1	-1.2	5.1	2.2	-2.2	2.8
2005-2010	2.7	..	2.1	-3.6	6.2	1.5	2.1	6.6	7.5
2010-2012	3.0	..	9.1	5.1	..	-38.5	0.6	..	..

* deflated by the Public Civilian Consumption Price Index.

** beginning in 2011 this item includes "general administrative expenditures" without inpatient hospitalization.

*** beginning in 2011 this item includes "public health expenditures" only.

**** includes government health expenditures in non-Ministry of Health budgets.

Table 10. **Investment expenditures**
as a percent of Education and Health budgets

	Education	Health	Total Education and Health
1980	4.7	4.3	4.5
1985	2.3	2.6	2.4
1989	1.8	1.6	1.7
1996	4.6	5.6	4.9
2000	3.6	2.8	3.4
2005	2.0	1.0	1.6
2006	1.8	1.4	1.7
2007	1.9	1.2	1.6
2008	1.9	1.4	1.7
2009	2.0	1.8	2.0
2010	2.7	2.3	2.6
2011	1.7	1.4	1.6
2012	1.8	1.3	1.6

Definitions and Sources

Definitions

Government social services expenditures includes all expenditures on education, health, income maintenance, welfare (personal social services), housing, employment, and immigrant integration by government ministries and agencies and by the National Insurance Institute. The analysis in this book includes the current budget (current expenditures) and the development budget (investments). Government expenditures are treated in net terms, i.e., total expenditures less earmarked revenues from outside agencies (such as co-payments from recipients of services).

The focus is on total government expenditures on in-kind services provided by the government (public consumption) and on subsidies and transfers such as National Insurance allowances, government support of non-governmental health institutions and support of non-governmental schools. Thus, the data reflect the activity of the government as a funding agent for the various social services, irrespective of the agency that delivers them.

The expenditures pertain to fiscal years that correspond to calendar years (January-December).¹ Data are shown in constant 2010 prices. The absolute figures were deflated by the Consumer Price Index or by an implicit price index for Civilian Public Consumption, as the case may be. Investment expenditure, implemented through the development budget was deflated by the Construction Inputs Price Index.

¹ Until 1990, the fiscal year began on April 1 and ended at the end of the following March. For the transition period – fiscal 1991 – a nine-month budget (April-December) was approved. To facilitate comparison with data from previous years, the 1991 budget expenditures were “translated” into full-year terms by linear extrapolation.

Classification of Social Expenditures

Social service expenditures were functionally classified by main fields (education, health, etc.) irrespective of the agency that delivers the service. This classification is different from that used conventionally in the government budget and in the annual reports of the Accountant General, which categorize expenditures by administrative units (e.g., ministries and departments). Below is a detailed list of items included in each field.

Education: Education expenditures include Ministry of Education outlays for school systems (pre-primary, primary, secondary, post-secondary), general expenses for the education system, government participation in higher education budgets, and government expenditures for vocational training (Ministry of Industry, Trade and Labor). Transfers to secondary schools from education levy receipts were also included until this was abolished in 1987.

Health: Health expenditures include Ministry of Health outlays for health services (general inpatient, long-term, and psychiatric care; vocational training; public health services; government participation in the funding of National Health Insurance; and transfer payments to public medical institutions), including Defense Ministry participation in the Health Ministry budget. The National Insurance Institute health expenditures (inpatient maternity care, medical care for work accidents, health outlays under the Long-Term Care Insurance Law, and transfers to the health funds from Parallel Tax receipts until this tax was abolished in 1997) are also included as well as the health expenditures of the Unit for Care of Victims of Nazi Persecution. To facilitate comparison with previous years' data, the health tax that citizens pay through the State Health Insurance Law is treated as a substitute for the sick fund dues that households remitted directly to the sick funds in earlier years and thus not considered here government expenditure. Due to structural changes in the State's Proposed Budget of the Ministry of Health it is not possible to compare 2011-2012 with previous years.

The Social Security System: Social Security System expenditures include all transfers from the National Insurance Institute (with the exception of reserve duty compensation and expenditures explicitly included in other social service fields) and benefits for victims of Nazi persecution.

Other social services: These include government outlays for personal social services (expenditures by the Ministry of Social Affairs and Social Services for the care of children, the elderly, the disabled, and the mentally disabled; community work; and, most expenditures by the National Insurance Institute on account of the Long-Term Care Insurance Law); housing (expenditures by the Ministry of Construction and Housing); employment (expenditures by the Ministry of Industry, Trade and Labor for labor relations, personnel planning and referral, and occupational safety, employment grant programs); and immigrant integration (expenditures by the Ministry of Immigrant Absorption).

Sources

The data on government expenditures for social services are based on the government's financial statements, prepared by the Accountant General of the Finance Ministry (the 2011-2012 data are budget data updated to the time the report was prepared), and on the Statistical Quarterlies of the National Insurance Institute. The explanatory notes attached to the state budget and the Bank of Israel Annual Report for the years at issue were also used. To compute real expenditures, the appropriate price indices supplied by the Central Bureau of Statistics were used.

A detailed list of data references:

Bank of Israel. *Report of the Bank of Israel*, various years.

Central Bureau of Statistics. *Statistical Abstract of Israel*, various years.

— *Monthly Bulletin of Statistics*, various periods.

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National Insurance Institute. *Annual Survey*, various years.

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— *Poverty and Social Gaps Report*, various years.

State Comptroller. *Annual Report*, Jerusalem, various years.

Taub Center for Social Policy Studies in Israel. *Israel's Social Services*, Jerusalem, various years.

II. EMPLOYMENT AND WELFARE

Income Inequality in Israel

Ayal Kimhi*

Abstract

Israel is one of the least equal countries in the Western world. Part of the responsibility for this lies with the government's welfare policy, but most existing income inequalities stem from disparities in employment, work hours and wages. Wage gaps in Israel are higher than in any other developed country and are particularly evident where worker educational levels differ. Over the past decade the average Israeli worker's educational level has risen greatly while at the same time, demand for educated workers has grown even faster, leading to the continued widening of wage gaps. Policies aimed at narrowing socioeconomic disparities in Israel should, in the short term, promote employment and provide income support to low-wage earners. In order to succeed in the long term, though, policies should upgrade the skills of the future generations of workers, and minimize the skill gaps. For this to happen, it is not enough to increase the number of years of schooling, the percentage of those eligible for matriculation certificates, or the percentage of those with academic degrees. It is also necessary to upgrade the curricula and the level of training provided by educational institutions.

* Prof. Ayal Kimhi, Deputy Director and Chair, Taub Center Labor Policy Program; Department of Agricultural Economics and Management, the Hebrew University.

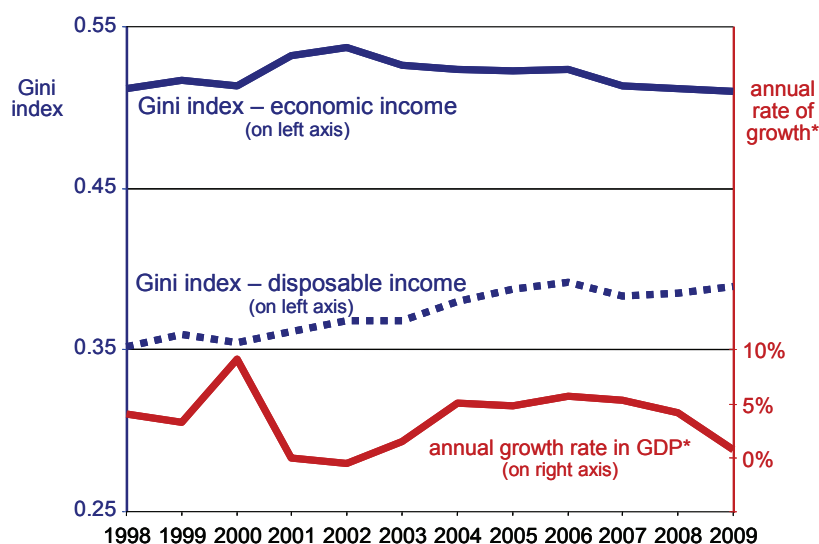
I wish to thank Kyrill Shraberman for organizing, processing and analyzing the data used in this chapter.

The Taub Center's last annual report looked at the evolution of poverty rates in Israel over the past three decades (Ben-David, 2010a), and pointed to a link between poverty and employment rates, and between employment and education (Ben-David, 2010b). The aim of the present chapter is to examine these topics in greater depth, focusing particularly on income disparities within both the general and the employed populations. The chapter concentrates on the post-1997 period, mainly because the Central Bureau of Statistics' income surveys, on which this study is largely based, were modified between 1997 and 1998 in terms of their population coverage. Moreover, focusing on a shorter period of time makes it possible to identify changes that might be missed when looking at the broader picture. Most of the findings were obtained through a relatively simple analysis of the data; some of them are based on more in-depth research. This chapter does not propose to cover all issues related to income inequality, but rather to present the main topics and to recommend directions for policy. These recommendations would, ideally, be supported later on by more focused and in-depth research.

1. Income Inequality

Economic theory points to several possible links between economic growth and income inequality. Differing levels of income inequality due to economic growth generally have to do with the degree to which different population groups benefit from the growth process. Figure 1 presents Israel's annual per capita GDP growth rates for the period 1998-2009, and the Gini coefficient of per capita income inequality. The Gini coefficient is calculated in two ways: by economic income (before taxes and transfer payments) and by disposable income (after taxes and transfer payments).

Figure 1
Growth versus inequality
 1998-2009



* real growth in GDP per capita.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

The lower curve describes growth rates. One sees that the economy was in recession during the years 2001-2003, recovered in subsequent years, and entered recession again in 2009 in the wake of the global economic crisis. It is worth noting that this last recession appears to have been brief in duration: 2010 data published by the Central Bureau of Statistics on March 10, 2011 indicate a 4.6 percent growth rate.¹ The upper curve describes inequality in economic income. A rise in income inequality is evident for the recession period; however, once the recession

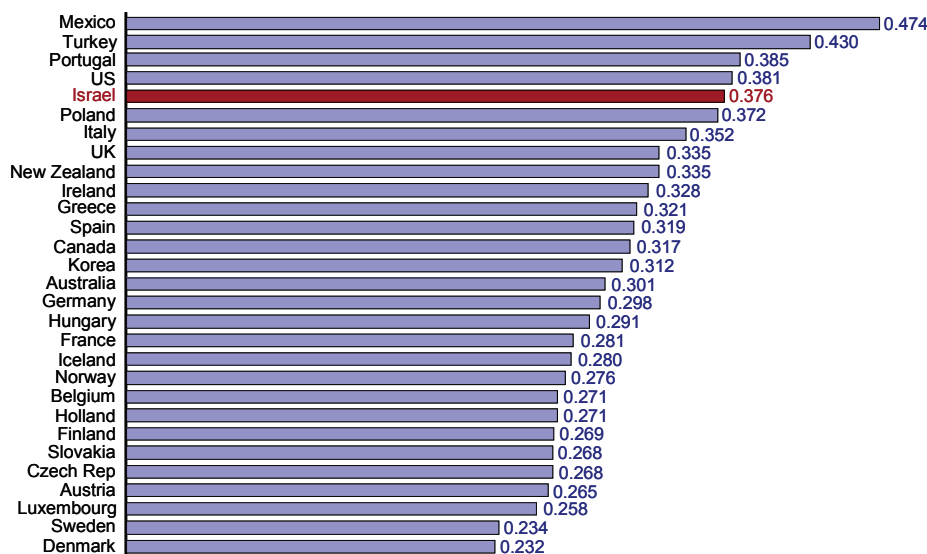
¹ This chapter was written before the final impact on the world economy of the 2011 disaster in Japan could be determined.

ended there was a gradual return to pre-recession inequality levels. The conclusion is that the recession hurt low-income earners more than anyone else.

The middle curve describes inequality in disposable income, whose levels began to rise during the recession of 2001-2003. In contrast to economic income inequality, disposable income inequality continued to rise even after the recession ended, stabilizing somewhat only during the last four years. The continued rise in disposable income inequality post-recession was due, apparently, to cuts in National Insurance Institute (NII) allowances (Ben-David, 2010a).

In Figure 2 one can see that in 2005, the level of inequality in Israel as measured by the Gini coefficient of per capita disposable income was one of the highest in OECD countries, just slightly lower than that of the US and lower than that of Portugal, Turkey and Mexico – countries with a lower standard of living than that of Israel.

Figure 2
Income inequality in Israel and the OECD
Gini index of disposable income per standardized person, 2005



Source: Taub Center for Social Policy Studies in Israel.

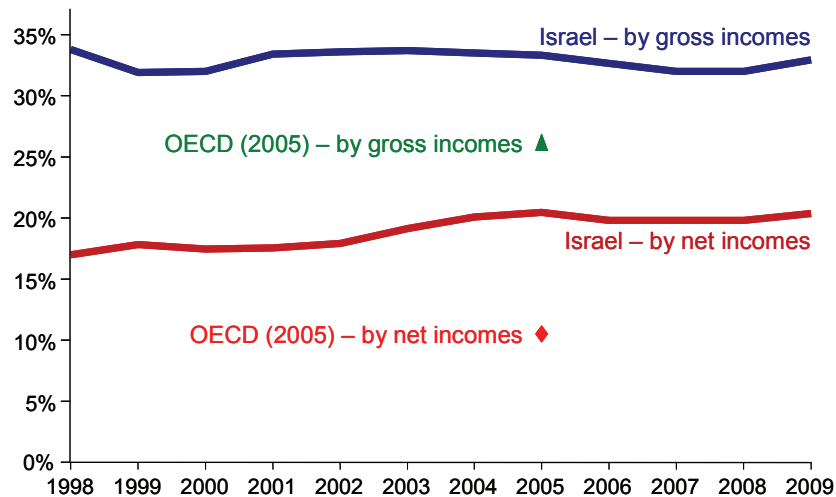
Data: National Insurance Institute and OECD.

2. Poverty Incidence

In Israel poverty rates are commonly measured using a relative index derived from income distribution. This index does not necessarily reflect the percentage of people actually living in economic distress. This is an important point to remember throughout the following discussion. Poverty rates are measured as the percentage of families whose income per equivalent adult falls below a given level referred to as the “poverty line.” In Israel the poverty line is defined as half of the median income per equivalent adult. What this means is that the poverty line changes over time, and families whose real income remains unchanged may be classified as poor at one point, and as not-poor at another.

Figure 3 presents Israeli poverty rates for the period 1998-2009. The changes in poverty rates over the years are similar to the changes in inequality. The poverty rate calculated by economic income (the upper curve) ranged from 32 to 34 percent during this period and was significantly higher than the mean poverty rate of the OECD countries, which was 26.4 percent in 2005. The poverty rate calculated by economic income rose when the recession began early in the decade, stabilized when the recession ended, dropped slightly between 2005 and 2007, and rose again last year. By contrast, the poverty rate calculated in terms of disposable income (the lower curve) rose more moderately when the recession started but continued to rise until the middle of the decade. Since then it has stabilized at 20 percent – double the mean poverty rate of the OECD countries (10.6 percent in 2005). The increase in poverty rates in 2009, in terms of both economic and disposable income, appears to have resulted from the economic decline suffered by Israel due to the global recession. It supports the hypothesis that a slowdown in economic activity harms the poor, first and foremost.

Figure 3
Poverty rates in Israel and OECD*
1998-2009



* gross incomes are before taxes and welfare payments
while net income take these into account.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics and OECD.

As the poverty line used to calculate poverty rates is an arbitrary one, one must ask whether the changes in poverty rates (which are dwarfed in absolute terms when compared to Israel's high poverty rate relative to Western countries) are influenced by this arbitrariness. In order to answer this question, a statistical model may be employed that tests the hypothesis that the relative status of the poor remained unchanged between two periods of time (Duclos, 2009). The model is highly complex and will not be described in detail in this chapter. The method that it proposes is as follows: a specific poverty line is chosen and a statistical analysis is performed to determine whether the poverty rate for

this poverty line has remained unchanged between two time periods. The procedure is carried out at all possible poverty-line levels within the relevant income range. Only if one can reject the hypothesis that poverty rates remained unchanged at all possible poverty lines can it be concluded that a change occurred in the relative status of the poor independent of the poverty line. The results obtained when this method is applied to Israeli data indicate that, between 1998 and 2008, and particularly between 2002 and 2008, the relative status of the poor improved, when poverty is defined in terms of economic income. By contrast, when poverty is defined in terms of disposable income, one cannot point to a significant change in the relative status of the poor during this period.

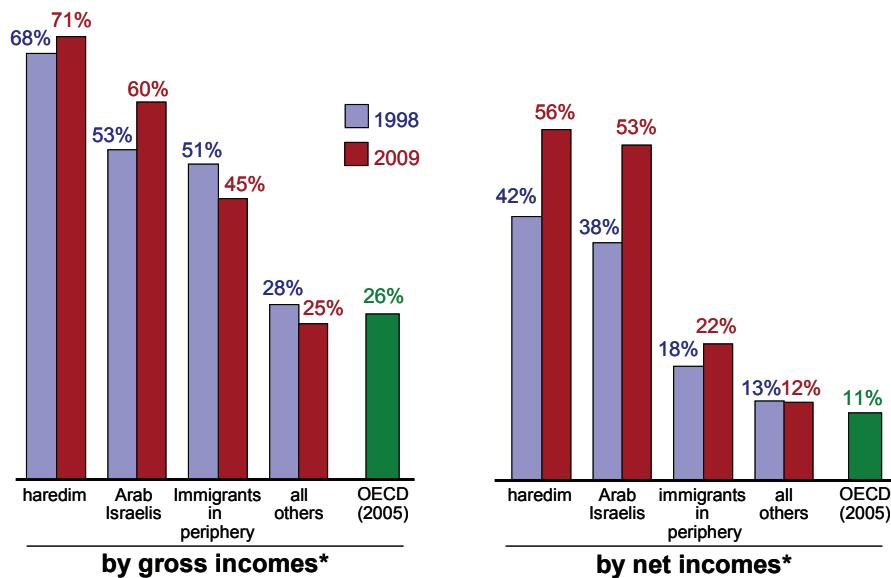
These results are not entirely consistent with the poverty rate changes appearing in Figure 3. According to the figure, the rise in poverty rates by disposable income is more significant than the decline in poverty rates by economic income. The implication of this is that one must, in fact, be careful about drawing conclusions from poverty data calculated in reference to a specific poverty line. In any event, the differing results obtained when poverty is calculated by economic and by disposable income support the hypothesis that NII allowance cuts over the last decade have worsened the status of Israel's socioeconomically weaker groups.

The National Insurance Institute (2010) and the Bank of Israel (2010) both point to high poverty rates among specific population groups, particularly the ultra-Orthodox and Arab Israelis. Changes in poverty rates experienced by these groups during 1998-2009, as well as by new immigrants living in the periphery (yet another population group whose standard of living is relatively low), are presented in Figure 4.

The left-hand section of the graph presents the poverty rates measured in terms of economic income. A comparison of the various population groups indicates that the highest poverty rates of all are among the ultra-Orthodox. Poverty rates among Arab Israelis are slightly lower than those of the ultra-Orthodox, although they are still very high in absolute terms. New immigrants living in the periphery of the country also have high

poverty rates, although these rates are slightly lower than those of Arab Israelis. The rest of Israel's population exhibits poverty rates similar on average to those of the OECD countries.

Figure 4
Poverty rates by population groups
1998 and 2009



* gross incomes are before taxes and welfare payments
while net incomes take these into account.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

During the period 1998-2009 there was a steep rise in the Arab Israeli poverty rate. Ultra-Orthodox poverty rates also rose, though to a lesser degree. By contrast, the poverty rates of immigrants in Israel's periphery declined, as did those of the remainder of the population. Interestingly, in

1998 the poverty rate of immigrants in the periphery (51 percent) was similar to that of Arab Israelis (53 percent), while by 2008 the status of the immigrants had improved and that of the Arabs had worsened (a poverty rate of 45 percent for immigrants in the periphery, compared with 60 percent for Arab Israelis). This improvement in status among immigrants in the periphery may be attributed to their continued integration into the labor force, while the worsening of Arab Israeli status may be ascribed to a decline in Arab males' labor force participation – due, apparently, to their relatively low education level and to competition with foreign workers for relevant jobs (Ben-David, 2010b; Yashiv and Kasir, 2010).

The right-hand portion of the graph presents poverty rates measured in terms of disposable income. The rise in the ultra-Orthodox and Arab Israeli poverty rates is significantly higher than the rise in poverty rates by economic income. A rise in poverty rates by disposable income was also found for immigrants in the periphery. For the rest of the population, a slight decline in poverty rates was obtained. The difference between the two parts of the graph calls attention once again to the welfare allowance cuts of the past decade, which led to a relative worsening of the status of Israel's weaker populations.

The explanation commonly given for ultra-Orthodox and Arab Israeli poverty is these sectors' low employment rates. Opinions differ as to whether the unemployment is by choice (among the ultra-Orthodox, for example) or whether it is due to discrimination in the labor market (as in the case of Arab Israelis). Another contention is that both of these population groups choose poverty as a way of life by having large families. In this case one can talk about direct and indirect effects of the fertility rate on the poverty rate – effects that work in the same direction. The direct effect is that as the number of children in the family rises, household income has to be divided up among a greater number of members, leading to a lower per capita income. The indirect effect is that as the number of children in the family rises, the parents have to devote more time to caring for them and to running the household as a whole. As

a result, the parents are less available to work outside the home and total household income declines.

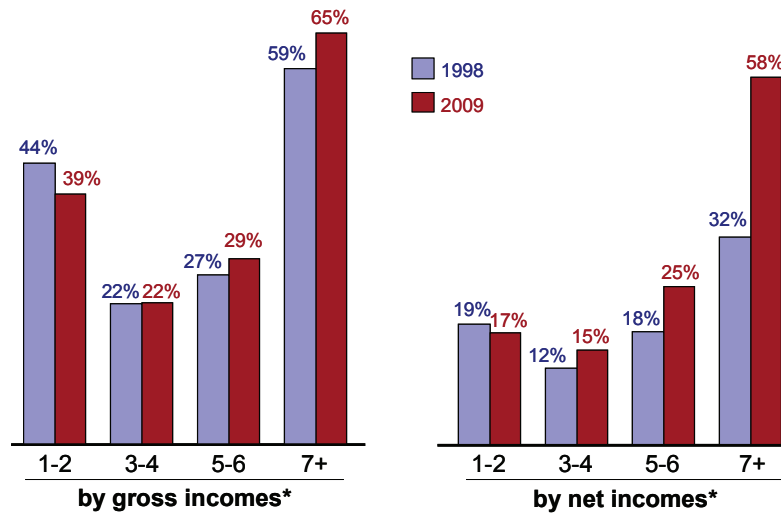
Prior to testing these arguments empirically, one should determine the degree to which poverty correlates to family size and to the number of wage earners in the family.

Figure 5 presents poverty rate changes between 1998 and 2009 for different sized families. When poverty rates are calculated in terms of economic income, it is found that 1998's highest poverty rate was for families of seven or more. This finding is not surprising, as large families have a relatively small number of wage earners and a relatively large number of dependents. Families no larger than two also have high poverty rates, for two apparent reasons: firstly, in 38 percent of these families the head of the household is aged 65 or over. Secondly, another prevalent group within this population is that of very young couples, whose labor force participation rates, and salaries, are low. Families with three to four members have particularly low poverty rates, while families with five to six members have slightly higher poverty rates.²

It is interesting to note that the mean number of wage earners in families of five to six members was higher than the mean number of wage earners in families with three to four members (1.8 versus 1.6). Thus, if it is assumed that there is no difference in wage-earning potential among these families' workers, the conclusion is that the poverty rate discrepancy between the two groups is due largely to the number of children. The years between 1998 and 2009 saw a decline in the poverty rate of families with two or fewer members; in contrast, the poverty rate of families with five or more members increased, particularly in the case of families with seven members or more. This indicates that changes in the labor and capital markets over the past decade have caused a relative deterioration in the status of larger families.

² In order to control for the elderly/young couple problem, a similar analysis was performed for families with head of household of prime working age (35-54); the findings were not significantly different. Poverty rates were lower for all groups, except for families of seven or more.

Figure 5
Poverty rates by family size
 1998 and 2009



* gross incomes are before taxes and welfare payments
 while net incomes take these into account.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

When poverty rates are measured in terms of disposable income a slightly different picture emerges, although the overall conclusion remains the same. In 1998 families with seven or more members had the highest of all poverty rates. Poverty rates of families with five to six members and families with no more than two members were almost identical. However, while the poverty rate of families with no more than two members declined slightly between 1998-2009, that of larger families rose, with the rate of increase rising along with the number of family members. Thus, the poverty rate for families with seven or more

members nearly doubled. This leads to the conclusion that allowance cuts worsened the relative situation of larger families over and above the deterioration resulting from changes in the labor and capital markets.³

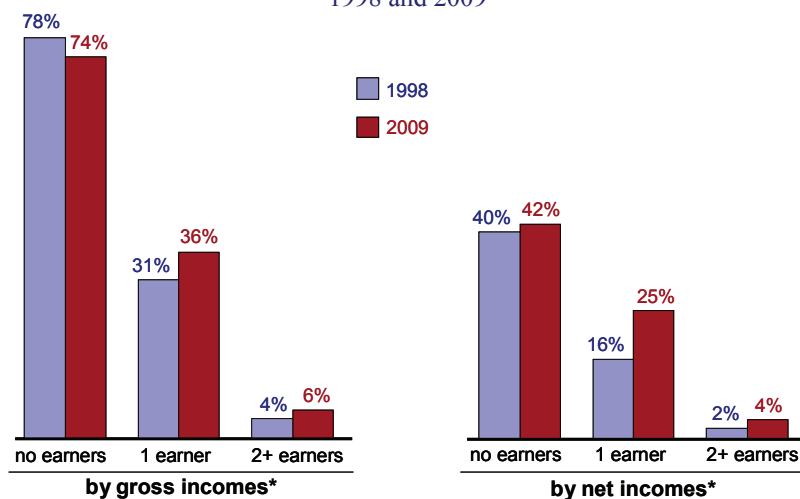
Figure 6 presents poverty rate changes during 1998-2009 among families with different numbers of wage earners. Here one can discern more significant differences than those noted between families of different sizes. When poverty rates by economic income are calculated, they are exceedingly high in 1998, over 70 percent, among families with no wage earners; poverty rates are average for families with one wage earner; and very low for families with two or more wage earners. Between 1998 and 2009, the discrepancy between families with and without wage earners narrowed slightly, indicating that the changes that took place in the labor and capital market during this period affected families with wage earners more negatively than families without wage earners.

The picture does not change qualitatively when the poverty rate is calculated in terms of disposable income, although the differences between family-size categories do, predictably, become smaller. Between 1998 and 2009, the narrowing of poverty rate disparities between families with and without wage earners is more significant when the poverty rates are calculated by disposable income, indicating that the taxation and transfer payment changes affected working families more negatively.⁴

³ It should, however, be noted that the number of families with seven or more members is relatively small, meaning that the poverty rate for this group can be measured with only a relatively low degree of accuracy.

⁴ When we limit the population to households headed by people of prime working age (see Note 2), the differences between the groups are larger, but the changes over time are smaller.

Figure 6
Poverty rates by number of wage earners
 1998 and 2009



* gross incomes are before taxes and welfare payments while net incomes take these into account.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Figures 5 and 6 suggest that employment has a greater effect on poverty than does family size. In order to verify this finding, three hypothetical scenarios were simulated and their impact on poverty rates quantitatively analyzed using data for 2008. The three scenarios vary the demographic and income structure of families with more than three children, a group accounting for eight percent of all Israeli families.

In the first scenario, the number of children per family (up to age 18) is reduced so as not to exceed three. At the same time, the child allowance for all children beyond the family's third is deducted from each family's income. In the second scenario, the income of each family

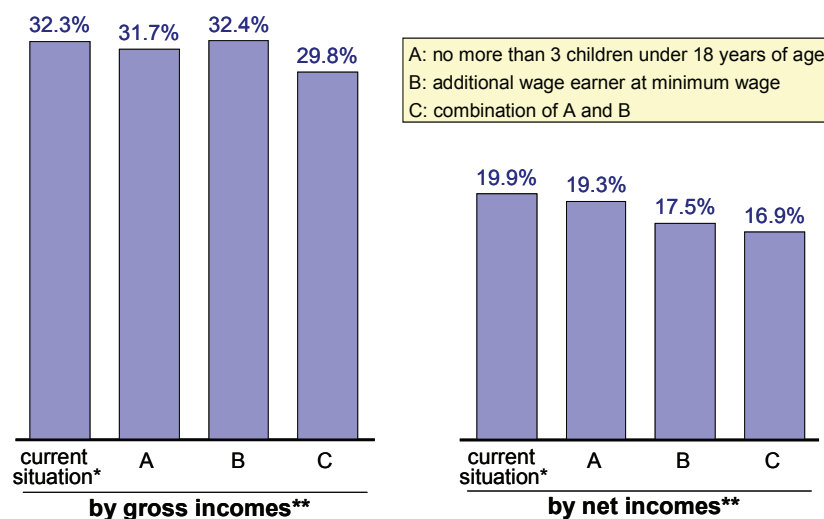
with more than three children, no more than one wage earner, and at least one non-working adult is increased by the amount of a minimum-wage salary. The assumption behind this modification is that one of the non-working adults in the family begins to work and earns a minimum-wage salary. The third scenario combines the two previous ones, that is, the number of children is reduced and a minimum-wage-earning worker is added. The poverty line was re-calculated for each scenario in terms of the simulated income distribution, and poverty rates were arrived at.

The findings are presented in Figure 7. One can see that the poverty rates calculated by economic income undergo virtually no change in the first two scenarios, that is, when the large families “enjoy” a reduction in the number of their children, or when the number of wage earners is greater. Only in the third scenario, when the number of children is reduced and the number of wage earners is simultaneously increased, does the poverty rate decline by 2.5 percentage points. By contrast, when the poverty rates by disposable income are calculated, they decline by 2.4 percentage points in the second scenario as well (that in which the number of wage earners alone is increased). The transition to the third scenario, in which the number of children is reduced while the number of wage earners is increased, leads to an even greater, three percentage point decline, in the poverty rate. The conclusion to be drawn from these simulations is that Israel’s high poverty rates cannot be linked to its high fertility rate. In any event, a decline in the fertility rate would reduce poverty only if it enabled both parents to go to work. The bottom line is that these poverty rate changes are not sufficiently large to explain the poverty rate gap between Israel and the OECD countries.

Figure 7

Impact of changes in number of children and employment on poverty rates

simulations of poverty rates after changes in number of children and employment



* current situation=2008.

** gross incomes are before taxes and welfare payments while net income take these into account.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

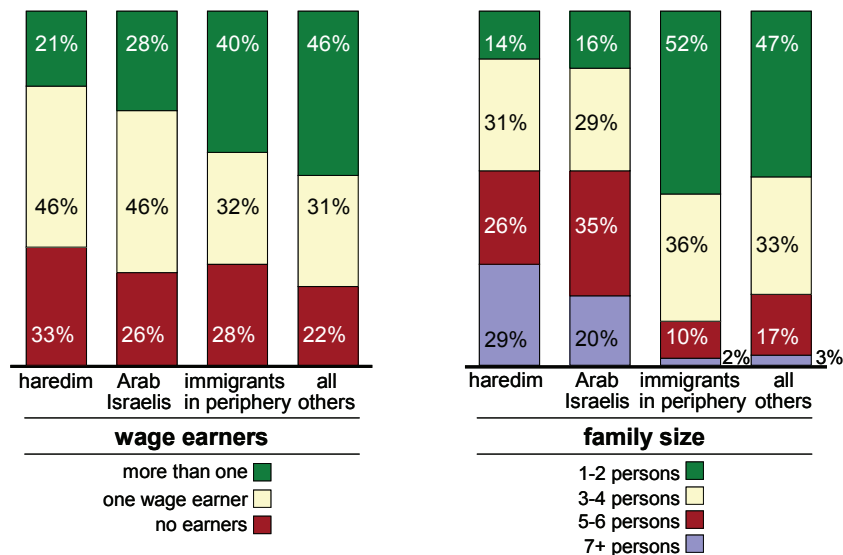
Figures 4-6 present three different poverty rate segmentations: by population group, by family size, and by number of wage earners. In essence, there is a relatively strong correlation between the three segmentations, as may be seen in Figure 8, which describes the distribution of family size (on the right-hand side) and of number of wage earners (on the left-hand side) for each population group. The percentage of large families is particularly high among the ultra-Orthodox and Arab Israelis, and especially low among new immigrants in the periphery, most

of whom appear to be elderly. The percentage of families with two or more wage earners is particularly low among the ultra-Orthodox and Arab Israelis, and relatively low among new immigrants in the periphery as well. Half of all ultra-Orthodox and Arab Israeli families have just one wage earner, though one should not conclude that the two sectors have similar employment patterns based on this. The single wage earner in the Arab Israeli family is, 87 percent of the time, the husband, while the single wage earner in the ultra-Orthodox family is, in 76 percent of the cases, the wife. To compare: among non-ultra-Orthodox Jews the man is the single wage earner 55 percent of the time. This percentage is higher in the periphery (59 percent) but lower for new immigrants (44 percent).

Figure 8

Poverty rates by number of wage earners

2009



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

3. Causes of Poverty: Employment, Extent of Work, and Wage Disparities

Based on a comparison of poverty data by economic income and disposable income, the conclusion is that one factor behind the rise in Israeli poverty rates is the cutbacks in transfer payments. However, poverty rates as measured by economic income are relatively high compared to other developed countries. The poverty rate is derived from income distribution, and where poverty by economic income is concerned, the roots of poverty should be investigated among income from work and income from capital.

The following analysis focuses on income from work, as it is nearly 4.5 times greater than capital-based income per average household. Income from work, at the individual level, presupposes, first and foremost, that the individual works. When the individual is employed, it also depends on the number of hours worked and on the wage earned.

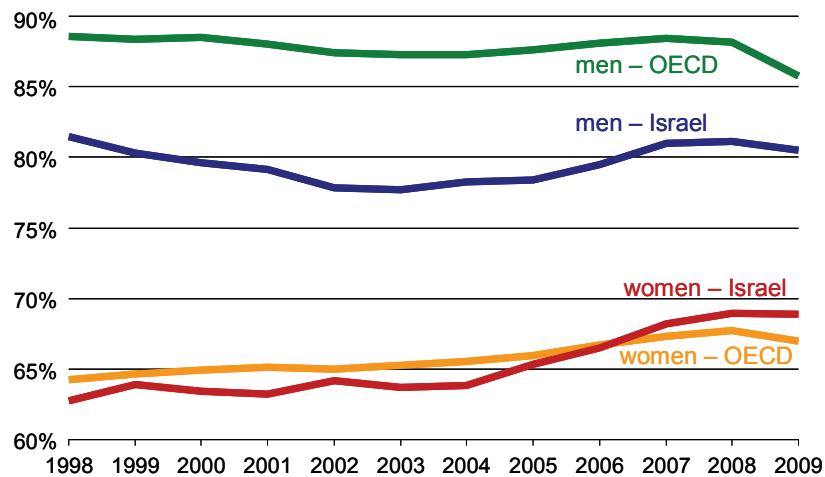
3.A. Employment

The strong link between poverty rates and employment is shown in Figure 6, and leads to the conclusion that employment promoting policies can reduce the incidence of poverty. Figure 9 shows that the employment rate for Israeli males is significantly lower than the OECD mean. The rate for Israeli women is similar to the OECD rate – even exceeding it in recent years – despite the fact that in certain population groups (like the Arab Israelis), women, and particularly those with low educational levels (Ben-David, 2010b), tend not to work outside of the home for traditional reasons.

The employment rate for Israeli men declined from 82 percent in 1998 to 78 percent in 2003; however, after Israel emerged from its recession the rate gradually returned to its original level by 2007. By comparison, the employment rate for men in OECD countries ranged from 86 percent to 89 percent during the period 1998 to 2009. In 2009 there was a 2.3

percent decline in the OECD's male employment rate, due to the economic recession, while Israel suffered only a minor decline of a half of a percentage point.

Figure 9
Employment rates by gender, 1998-2009
 ages 35-54



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics and OECD.

The employment rate for Israeli women rose significantly over the last decade: from 63 percent in 1998 to 69 percent in 2009, the major portion of the increase taking place during the second half of the decade. Although Israeli women's employment rates are still much lower than those of men, Israel's gender gap in the employment sphere is narrowing. In an international comparison, the employment rate for Israeli women

increased at a faster rate than in the OECD countries and over the last few years, as noted earlier, it has exceeded the OECD rate.

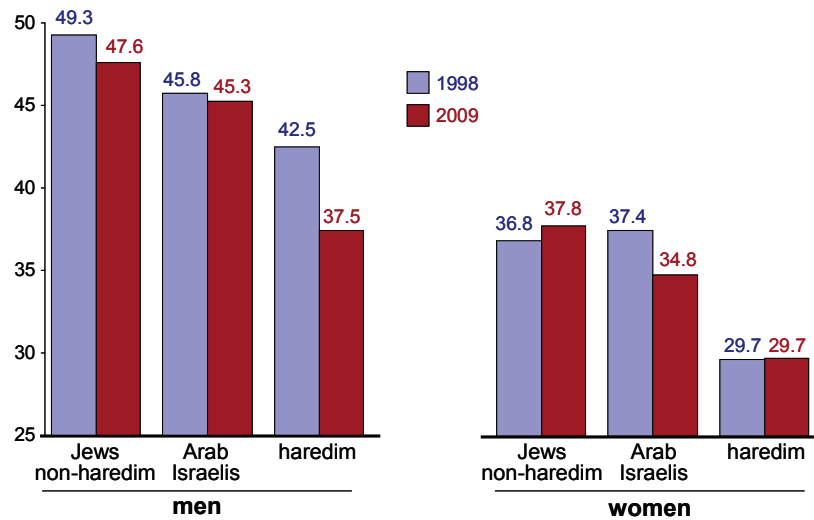
In total, between 2003 and 2009, once the recession of the earlier part of the decade had ended, the employment rate for Israeli men increased by 2.8 percentage points while the rate for women rose by 5.2 percentage points. During the same period, the poverty rate of Israeli households by economic income declined by 0.74 percent. These changes indicate that higher employment rates may contribute to lower poverty rates.

3.B. Extent of Work

The extent of work may be measured in terms of the number of hours worked by a salaried worker per week. Figure 10 shows that the mean number of hours worked per week by ultra-Orthodox workers is significantly lower than that of the other population groups. In 2009, for example, ultra-Orthodox men of prime working age worked, on average, 37.5 hours per week, while non-ultra-Orthodox Jewish men worked an average of 47.6 hours per week – 27 percent more. Additionally, while the number of weekly work hours of non-ultra-Orthodox Jewish men declined by fewer than two hours (3.5 percent) during the period 1998-2009, the number of weekly work hours of ultra-Orthodox men declined by five, nearly 12 percent, on average. Ultra-Orthodox women also work less, about thirty hours per week versus 37 hours per week for non-ultra-Orthodox Jewish women (20 percent less). There was no change in the mean number of hours worked by ultra-Orthodox women during the period 1998-2009, while non-ultra-Orthodox Jewish women increased their number of weekly work hours by one, on average. Moreover, Arab men showed virtually no change in the number of hours they worked per week during the period 1998-2009, while the number of hours worked per week by Arab women declined, on average, by three hours (seven percent). It may be that the increase in Arab women's employment rates is reflected in a rising percentage of women employed in part-time jobs, leading to a decline in the average number of hours worked per week for

this population. This explanation does not apply with regard to the decline in number of weekly work hours recorded for ultra-Orthodox men, as their employment rates did not change significantly during this period.

Figure 10
Weekly work hours, 1998 and 2009
ages 35-54



Source: Taub Center for Social Policy Studies in Israel.
Data: Central Bureau of Statistics.

As the gap between the mean number of weekly work hours for ultra-Orthodox and for non-ultra-Orthodox Jewish men widened from 1998 to 2009 – with no significant change in these groups' employment rates – one may conclude that one possible cause of the widening gap in poverty rates between the various population groups during the period in question, as shown in Figure 4, is the decline in ultra-Orthodox men's mean number of weekly work hours.

3.C. Wage Disparities

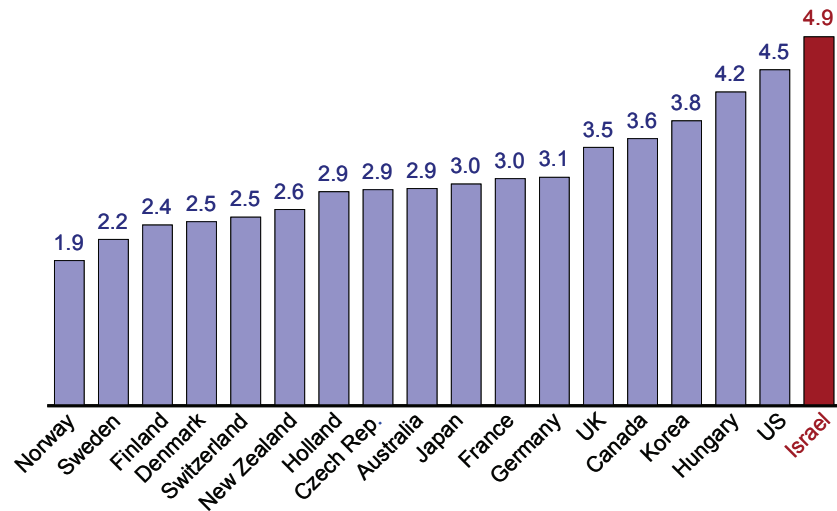
In order to avoid the issue of part-time workers generally earning less (per hour) than full-time workers, the focus will be on salaried full-time workers (working at least 35 hours per week). There are many ways of measuring wage gaps. A 90-10 ratio was chosen: the ratio between the wage earned by a worker in the 90th wage percentile (the worker earning more than 90 percent of all workers) and that of a worker in the 10th percentile (one earning more than 10 percent of all workers). The advantage of this 90-10 ratio measure is that it is not affected by the highest and lowest wage earners, who might influence the findings in a manner disproportionate to their presence in the population.

Israel's 90-10 gross wage ratio for 1998 was 4.9 percent. What this means is that the wage earned by a worker in the 90th percentile was nearly five times higher than that earned by a worker in the 10th percentile. This ratio was the highest of all OECD countries in that year (Figure 11) and more than double the ratio for the Scandinavian countries which are characterized by a high degree of equality in this area.

Figure 11

90-10 wage differentials in Israel and the OECD

ratios of wages in the 90th percentile to wages in the 10th percentile
for full-time salaried employees, 1998



Source: Taub Center for Social Policy Studies in Israel.

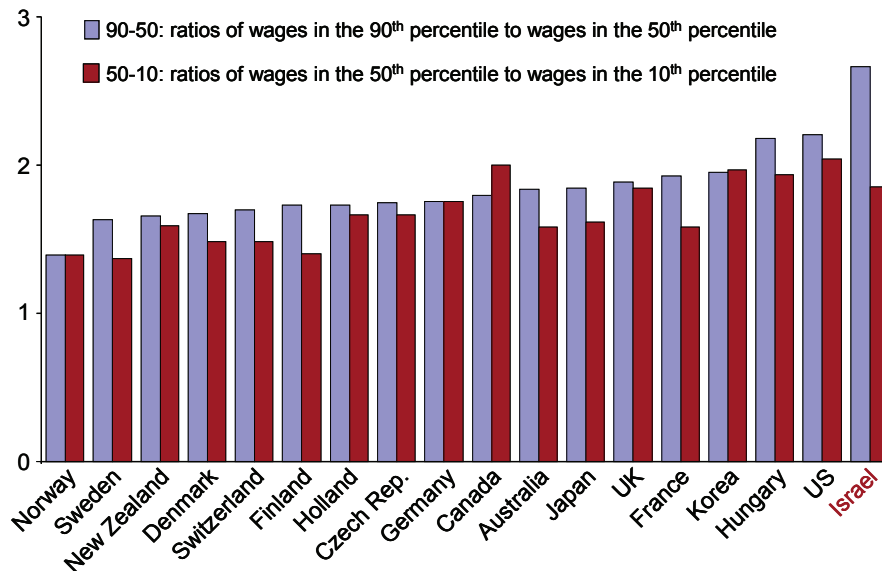
Data: Central Bureau of Statistics and OECD.

Israel's wage distribution pattern differs from that of the OECD countries not only in its high degree of variance. When wage gaps are examined separately in the upper portion of the overall distribution (a 90-50 ratio) and in the lower portion (a 50-10 ratio), nearly all countries showed larger gaps in the upper portion for 1998 (Figure 12). Israel stood out in particular indicating that the country's ranking at the top of the wage gap list was due primarily to large discrepancies among those earning relatively high wages. However, even the wage gaps within the lower portion of Israel's wage distribution scale were relatively high. Only four other OECD countries (the US, Canada, Korea, and Hungary) had larger wage gaps.

Figure 12

Wage differentials in Israel and the OECD

90-50 and 50-10 wage ratios, full-time salaried employees, 1998

**Source:** Taub Center for Social Policy Studies in Israel.**Data:** Central Bureau of Statistics and OECD.

During the period 1998-2009, wage gaps in Israel, as reflected in the 90-10 ratio, fluctuated considerably (Figure 13). Up to 2000, the gaps widened only to narrow dramatically during the recession years of 2001-2003. This may indicate that, in the short term, the recession primarily affected high-wage earners. However, this cannot be concluded with certainty, as the low-wage earners may have lost their jobs or been forced to reduce their number of work hours during the recession, leading to smaller gaps among workers who managed to stay in full-time positions. After 2003 the wage gaps remained more or less stable. By contrast, in

the US – which is ranked second to Israel in terms of wage disparities – the gaps continued to widen steadily over the years, although they have never reached Israeli levels.

Figure 13



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics and OECD.

4. Factors Behind Israeli Wage Disparities

In Israel there are those who feel that raising the minimum wage is an effective means of resolving the wage gap problem.⁵ Indeed, as demonstrated by OECD economists (2010), Israeli's minimum wage is one of the highest in the Western world (relative to the mean wage). However, the same source notes that Israel suffers from a high degree of a lack of enforcement of its labor laws, including the minimum wage law. Various Israeli sources (the State Comptroller, 2008; the Bank of Israel, 2009) point out that in recent years over a tenth of full-time salaried workers have been earning less than the minimum wage. As the minimum wage, though relatively high, is not enforced effectively, one may conclude that raising it is not a worthwhile means of battling wage disparities in Israel – at least not until the minimum wage law comes to be enforced at reasonable levels.

Simulations have indicated that if all full-time salaried workers earning less than the minimum wage were given the minimum wage, with no change in their number of work hours, the 90-10 ratio for 2009 would drop from 5.2 to 4.6. This ratio would place Israel below countries like Korea and the US on the wage-disparity scale. However, as there is a lack of data regarding minimum-wage violations in other countries, it is difficult to base an international comparison on such simulations. From this it may be concluded that, although enforcement of the minimum wage law may help narrow wage gaps in Israel, even full enforcement would not remove Israel from the list of countries suffering from relatively high wage disparities.

The primary causes of wage disparity should be sought in features of the labor market. If existing jobs are divided schematically into two types – those requiring a high level of skill and those not requiring a high level of skill – it is found, not surprisingly, that highly skilled workers earn more than those who are not highly skilled. A large wage gap provides

⁵ See Ynet article from 2.1.2011: <http://www.ynet.co.il/articles/0,7340,L-4007427,00.html>.

sufficient incentive for workers (at least for younger workers joining the labor force) to acquire skills through education. When the number of highly skilled workers becomes relatively large, wage disparities may be expected to narrow, unless there has been a simultaneous rise in demand for such workers on the part of employers. Thus, in order to analyze wage disparity variations over time the breakdown of change over time in existing jobs and change in worker attributes must be analyzed.

4.A. Worker Attributes

The focus will be on three main attributes: education, work experience, and gender. The first two reflect work skills that have been acquired, whether through formal study or on-the-job training. Gender is not an indicator of work skills, but the wage gaps that exist between men and women are well-known (this phenomenon has many causes that will not be addressed in this chapter).

Figure 14 presents wage gaps by gender, level of work experience and education, as well as the changes in these gaps over the last few years. In 1998, men earned 43 percent more than women, on average; by 2009, the gap had narrowed to 34 percent. This leads one to conclude that wage gaps between men and women were not a factor in the overall rise in wage gaps between 1998 and 2009.



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Wage gaps between more experienced and less experienced workers were not a central factor behind the overall widening of wage gaps. One can see that while a worker with more than ten years of experience earned, on average, 45 percent more than a worker with up to ten years' experience in 1998, this gap narrowed to 39 percent in 2005, then rose gradually to 53 percent in 2009. These fluctuations in wage gaps by level of work experience make it impossible to link work experience directly to the general rise in wage disparity.⁶

⁶ When the worker population was broken down into a larger number of experience-level groups (up to 10 years, 10-20 years, 20-30 years, and over 30 years' experience), wage disparities between all worker groups with over 10 years' experience were negligible.

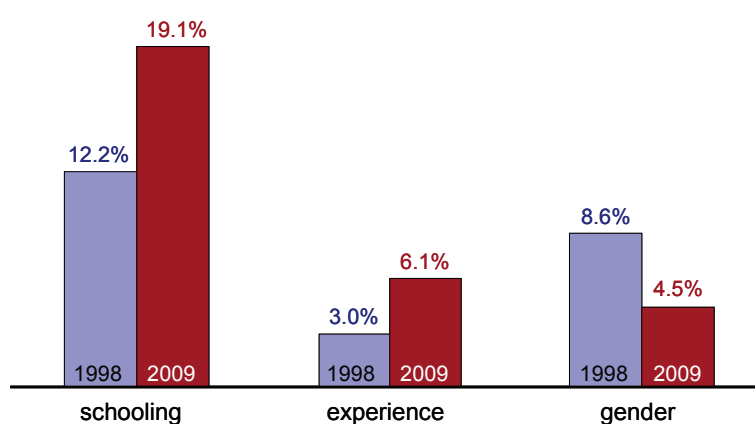
By contrast, the picture with respect to education is entirely different. Firstly, wage gaps between better-educated and less-well-educated workers are much larger: in 1998 a worker with over 12 years of schooling earned 66 percent more than a worker with up to 12 years of schooling, on average. Secondly, the education gap has in fact widened steadily over the years (despite fluctuations, the overall trend has been upward), reaching 80 percent in 2009. From this arises the conclusion that the main attribute correlated with the high level of wage disparity and with the overall widening of wage gaps in Israel is worker educational background. As education is, perhaps, the most important element contributing to worker skill levels, this comes as no surprise.

Education may be the most important component of worker skill, but one should not regard worker skill levels as measurable solely in terms of education. Educational level is measured in terms of number of years of schooling; however, the skills acquired through the education system, even among those with an equal number of years of schooling, vary considerably. This has to do with the diversity of disciplines studied, a lack of uniformity in instructional quality, differences in natural talent, and in skills acquired at home.

It should be noted that additional wage comparisons were conducted using different breakdowns by number of years of schooling and by academic degree. The findings did not differ significantly; in several instances they were even more unequivocal. For example, the wage gap between workers with academic degrees and workers without academic degrees grew from 65 percent in 1998 to 88 percent in 2009. However, it is not surprising to discover that significant wage disparities exist even among those with identical levels of education. Moreover, even when the effects of gender, work experience and educational level on wage gaps are controlled for, the wage for workers in the 90th percentile is over three and a half times higher than that of workers in the 10th percentile. That is, gender, work experience and education, as measured in this study, account for only a third of wage disparities. In any case, Figure 15 shows that the share of wage variance accounted for by number of years of

schooling increased by over 50 percent between 1998 and 2009, while the share accounted for by gender declined by over 50 percent. In each of these years, the share of wage variance accounted for by education was greater than the total share of gender and work experience combined. This finding reinforces the conclusion that education gaps are the primary cause of wage disparities in Israel.

Figure 15
Primary factors causing wage gaps
by degree of impact, 1998 and 2009



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Wage changes as a function of worker's skills and attributes are determined, amongst other things, by changes in the distribution of those skills and attributes in the working population. One example of such variation is women's increased willingness to work outside the home due to changes in family behavioral patterns. Another example is that young workers entering the labor market are highly educated while older, retiring workers generally have lower levels of formal education. These

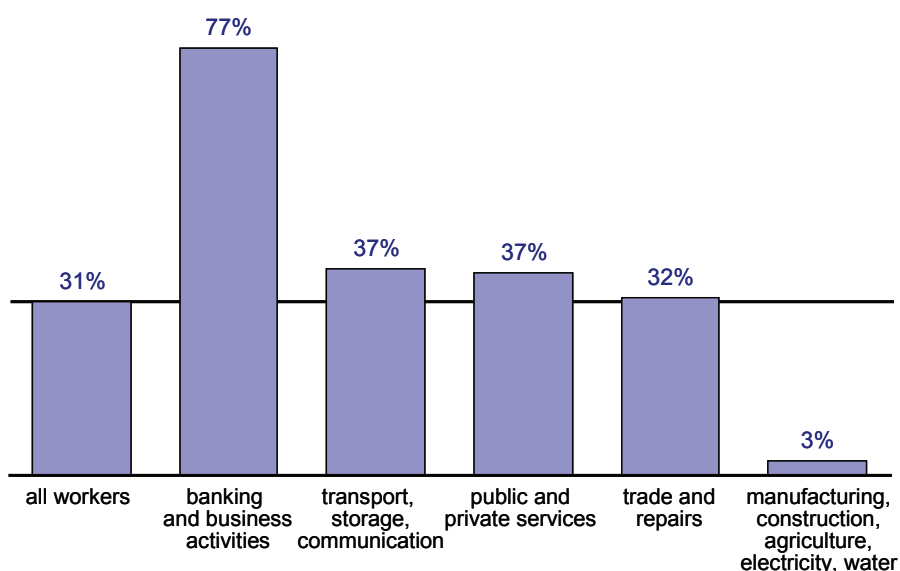
variations should not be separated from the economic incentives that drive them: the rise in women's wages and the greater flexibility in work conditions are among the main factors that led to women's increased willingness to join the labor force; while the greater compensation offered to the highly educated is one of the reasons why young people decide to earn degrees prior to entering the labor market. Changes in economic incentives are also driven by the demand for workers: when demand rose for women in the labor market, women's salaries increased, and when demand rose for highly educated workers, compensation for the highly educated rose accordingly. This leads to the question of what drives changes in the demand for workers.

4.B. Job Composition

One way of studying changes in the demand for workers is to look at variations in the distribution of quantity of work within the economy by sector and by occupation. Quantity of work can be measured in terms of the overall number of work hours (the number of workers multiplied by the mean number of work hours per worker). In Figure 16 one sees that the distribution of overall number of work hours across the various economic sectors changed significantly between 1998 and 2009. The largest increase in number of work hours was found in the banking and business services sectors, while manufacturing sectors showed only a minimal rise. These changes can be represented as an increase in the share of the economy's white collar sectors, at the expense of its blue collar sectors. From this an improvement in women's relative status within the labor market may be inferred, since men's physical advantage, which might perhaps be important in the blue collar sectors, has little significance in the white collar world. When the sector breakdown by gender is examined it was found that in the banking and business services sectors the percentage of employees who were women had reached 47 percent by 2009, while in the manufacturing sectors the percentage of women came to just 24 percent. One may also conclude that there has

been a rise in demand for educated workers, as jobs in the white collar sectors are relatively education-intensive compared with those in the blue collar sector. An examination of the sector distribution by educational level shows that the percentage of banking and financial service sector employees with academic degrees reached 72 percent in 2009, a much higher percentage than in the manufacturing sectors, where only 45 percent of workers had academic backgrounds. As the mean wage per full-time worker in the banking and financial service sectors is three times higher than in the manufacturing sectors, women and the highly educated have clearly improved their relative standing in terms of income as well.

Figure 16
The increase in the number of annual work hours
by economic branch, 1998-2009

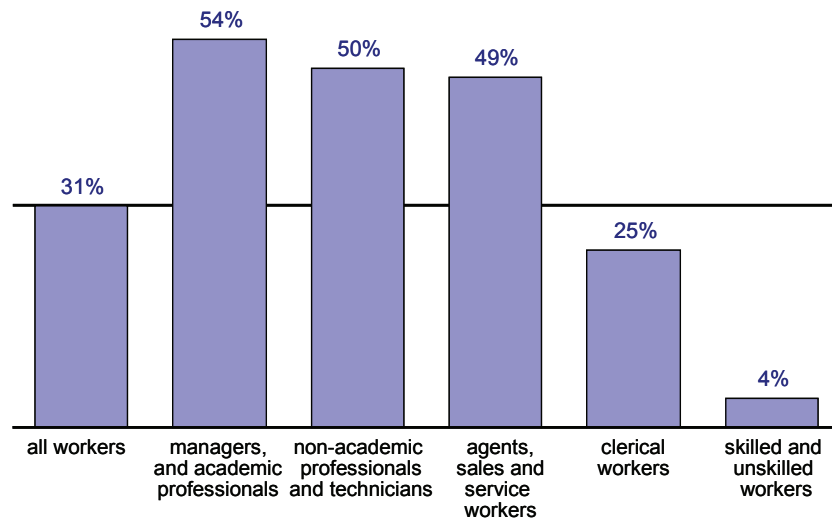


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Similar conclusions may be drawn when changes in work hour distribution by occupation are analyzed. Figure 17 shows that, between 1998 and 2009, the number of work hours (total annual number of hours) of managers and academic professionals, associate professionals and technicians increased greatly, as did that of agents, salespeople and service workers, while the number of work hours of skilled and unskilled workers grew to a limited degree, much less than the overall mean. In this case as well, the changes may be interpreted as a rise in the labor market share of white collar jobs versus blue collar jobs.

Figure 17
The increase in the number of annual work hours
by occupation, 1998-2009



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

The distribution of occupations by gender shows that in 2009 women accounted for 58 percent of those in occupations whose number of work hours had increased, while the percentage of women among skilled and unskilled workers was just 21 percent. Similarly, the percentage of managers and academic professionals was 90 percent, but only 26 percent among skilled and unskilled workers. It is hardly surprising that the mean wage of full-time managers and academic professionals was over twice the mean wage of skilled and unskilled workers. Here, as well, it appears that women and the highly-educated have successfully climbed the wage ladder, due to relative changes in the number of work hours of the various occupations.

The previous analyses point to a positive correlation between changes in number of work hours for different kinds of workers and variations in the mean wage earned by these workers during the period 1998-2009. That is, there was a greater increase in the number of work hours for those who enjoyed higher wage increases. This indicates that the labor supply reacted to relative wage changes. However, it also indicates that labor supply adjustments have not completely neutralized a rise in demand for workers equipped with modern skills. This rise in demand stems from the growing importance of high-tech in general, and of information technology in particular, within the Israeli economy.

Theoretically, a rise in demand for a specific type of worker leads, in the immediate term, to an increase in the wage earned by this kind of worker relative to other workers. However, if as a result of this the labor supply of this specific type of worker rises to the same degree, then wage disparities may be expected to return to their previous levels. Since Israeli wage disparities are continuing to widen (except for the gap between men and women), one may conclude that changes in the demand for workers in Israel have been too large and too rapid for the labor supply to fully adjust.

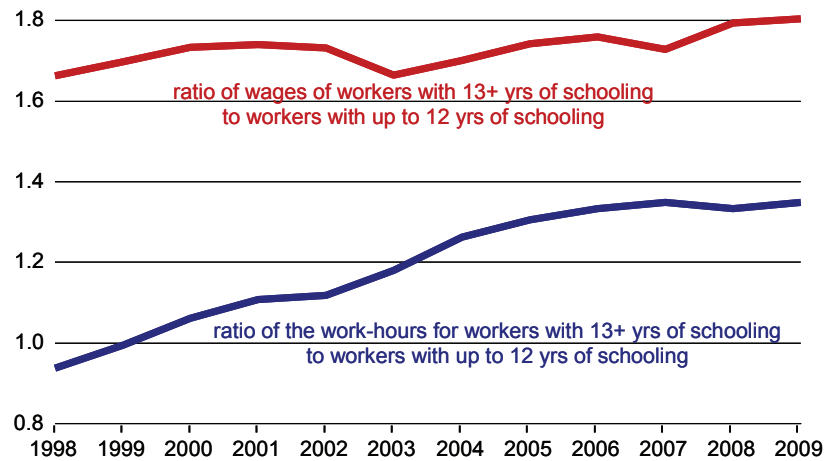
As an example, a re-examination of the important, perhaps the primary, component of the worker skill set – educational level – is in order. Not only does education enable workers to be admitted to sectors

where demand is higher in relative terms, it also facilitates their mobility and their adaptability to changes that arise.

During the period 1998 to 2009 the real wage of workers with over 12 years of schooling increased by slightly more than one percent, while the real wage of workers with up to 12 years of schooling declined by nearly seven percent. The widening wage gap between those with higher and lower levels of education can be halted, or at least slowed, by furthering education. The strong link between education and employment is well-known: raising educational levels can increase employment rates and narrow wage disparities and thereby decrease income inequality and poverty. Indeed, during the period in question, there was an impressive rise in the Israeli labor force's overall educational level. Figure 18 (the lower curve) shows that in 1998 workers with over 12 years of schooling accounted for six percent fewer work hours than did workers with up to 12 years of schooling. By 2009 the situation had changed dramatically: the more highly-educated group accounted for 35 percent more work hours than did the less-educated group. However, the fact that the wage gap between the more and the less educated continued to widen (the upper curve), at least during the second half of the decade, indicates that the overall rise in educational level had not overcome the effect of increased demand for educated workers.⁷

⁷ When highly-educated workers were divided into two groups, those with 13-15 years of schooling and those with over 15 years of schooling, it was found that the more highly educated group grew at a much higher rate in terms of number of annual work hours between 1998 and 2009. However, the two groups' wages increased at similar rates over the course of the decade. What this means is that the increased supply of highly-educated workers supplied precisely the rise in demand for this kind of worker, compared to workers with 13-15 years of schooling.

Figure 18
Wages and work hours* of educated workers versus others
 1998-2009



* work hours are the total number of annual hours worked for all workers.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

5. Conclusion

Israeli income inequality and poverty levels are among the highest in the Western world. Cutbacks in National Insurance Institute allowances contributed to a rise in poverty rates by disposable income over the past decade, although poverty rates by economic income remained high relative to the OECD countries. This means that the high poverty rates cannot be attributed to allowance cuts alone.

Poverty rates are particularly high among the ultra-Orthodox, Arab Israelis and new immigrants living in the country's periphery. These three

groups account for the entire rise in the poverty rate by disposable income for the period 1998-2009. For the remainder of the population poverty rates have barely changed – in fact, there has been a slight decline from 13 percent to 12 percent (Figure 4). The ultra-Orthodox and Arab Israelis, Israel's two poorest population groups, are characterized by especially large families and by a particularly small percentage of families with more than one wage earner. Family size has a limited effect on poverty levels, but the number of wage earners is a more important factor. Hence, a rise in the employment rate is likely to lower poverty rates generally, and among the ultra-Orthodox and Arab Israeli sector particularly.

Compared with the OECD countries, Israel has an employment problem specifically with regard to men; Israeli women's employment rates are actually slightly higher than the OECD average. Nevertheless, the number of hours worked by employed women is relatively low compared with the number of hours worked by employed men. This has an impact mainly on ultra-Orthodox families, in which the clear majority of wage earners are women.⁸

Even when employment rates and number of work hours are taken into account, Israel's labor market is still characterized by relatively large disparities. Wage gaps among full-time salaried workers are larger than those in all of the OECD countries, although a major portion of this gap is that between high-wage earners and median-wage earners. However, even within the group of those earning relatively low wages, Israel has some of the largest disparities in the Western world. The disparities cannot be blamed on the minimum wage, as Israel's minimum wage relative to its mean wage is among the world's highest. Although better

⁸ Both ultra-Orthodox men and ultra-Orthodox women work fewer hours per week on average than the non-ultra-Orthodox; however, as ultra-Orthodox women work fewer hours per week than ultra-Orthodox men in any case, and as ultra-Orthodox women's employment rates are higher than those of ultra-Orthodox men (Ben-David, 2010b), the tendency of women to work part-time has a greater impact on the ultra-Orthodox family.

enforcement of the minimum wage law and other labor laws might help to narrow the disparities, it appears that they would still be relatively large compared with those of the OECD countries.

While wage disparities between men and women narrowed over the last decade, those between highly educated and less-well-educated workers started out high and continued to grow. As the relative increase in educated workers' wages was accompanied by a significant increase in the number of such workers between 1998 and 2009, one may conclude that the demand for educated workers grew faster than the supply. This conclusion is reinforced when the changes that have occurred in labor force distribution by sector and by occupation are examined. During the period in question there was a significant rise in the number of work hours in those sectors that chiefly employ better-educated workers, while the number of work hours in sectors employing less-educated workers experienced virtually no increase. Moreover, there was a major rise in the number of work hours for managers, professionals, agents, salespeople, and service workers – occupations that employ relatively highly educated workers – while the number of hours worked by skilled and unskilled workers grew only minimally. These two observations point to a rise in the importance of “white collar” jobs for which education tends to be essential, and a concomitant increase in returns to education within the labor market, despite the fact that the percentage of educated workers has risen significantly as well.

A “war-on-poverty” policy (which should be regarded as no less important than wars of other kinds) must address causes and not just symptoms. A major portion of the poverty problem is rooted in labor market disparities. Raising employment rates should be an important component of any war-on-poverty policy, since many of the current disparities are between families with different numbers of wage earners. Another important issue to be addressed is that of wage disparities. Here there is a need for immediate solutions such as better enforcement of the minimum wage law or enacting a more generous negative income tax system, as well as for a more comprehensive effort aimed at raising the

skill level of workers in low-wage jobs. It should be kept in mind, though, that increasing the percentage of those with at least 12 years of schooling, of those eligible for matriculation certificates, and of those enrolled in the higher education system is insufficient to narrow wage disparities. School curricula need to be redesigned and instructional methods reassessed in order to ensure that the next generation has high-level work skills suited to the labor market of a modern economy competing in the global market.

To conclude, it should be noted that the aforementioned features of a war-on-poverty policy should be implemented as part of a comprehensive strategy, not as point-specific solutions. Should they be introduced in the wrong proportions, the various policy features could lead to conflicting outcomes. For example, measures that successfully encourage employment could also bring larger numbers of low-earning workers into the labor force and thereby widen wage disparities. Therefore, a multifaceted strategy that works simultaneously to promote employment and to narrow wage gaps is needed.

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Working and Poor

Haya Stier^{*}

Abstract

This chapter reviews poverty rate trends among Israel's working population over the past 30 years, with the aim of identifying the social characteristics of working families living in poverty, and the factors leading to a situation in which employment fails to prevent poverty. The poverty rate among Israel's working population is high and trending upward; working families currently account for most of Israel's poor. Poverty among the employed stems from a combination of economic factors, in particular: low wage jobs and a lack of opportunities for low-skilled workers; demographic/family characteristics such as large families and a low percentage of two earner families; and, political factors, particularly the level of support provided to large families and to workers with employment difficulties. These factors lead to exceptionally high poverty rates among the working Arab population, which is characterized by barriers to employment, low levels of female participation in the labor market, and large families.

^{*} Prof. Haya Stier, former Chair, Taub Center Social Welfare Policy Program; Department of Labor Studies and the Department of Sociology and Anthropology, Tel-Aviv University.

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Israel's poverty rate, one of the highest in the Western world, poses complex social and economic problems for the State and for its social policy makers. Poverty is not distributed uniformly throughout the population, and a number of different social groups are at high risk of falling into poverty. Studies conducted in recent years (Flug and Kasir, 2001; Lewin and Stier, 2002; Stier and Lewin, 2002) have shown that poverty rates are exceptionally high within the ultra-Orthodox and the Arab sectors, due to a variety of demographic and social factors, including large numbers of children per family, limited labor force participation and low skill levels. Poverty is also prevalent among single-parent families headed by women – households that are particularly vulnerable economically.

The discussion on poverty has traditionally focused on people who do not participate in the labor force, that is, those who are dependent on national insurance payments and institutions. Many of the groups that fall into this category are characterized by a high degree of vulnerability: single-parent families headed by women, the unemployed, people with physical disabilities, and the elderly. Many social programs aimed at fighting poverty have been aimed at returning poor people, single mothers, and the unemployed to the labor market in order to ensure their escape from poverty. Recent years witnessed the implementation of a welfare-to-work policy with the declared purpose of raising employment rates while reducing the dependence of Israeli households on National Insurance payments. Programs of this kind, which have been instituted by other countries as well, have generally succeeded in bringing large numbers of people into the labor force. However, over the last few years scholars and social policy makers have become increasingly attentive to rising poverty rates within the working population (Andres and Lohmann, 2008).

According to official Israeli statistics, in 50 percent of poor families the head of the family is a labor force participant, while a not insignificant percentage of all workers – over 12 percent in 2008 and 13.4 percent in 2009 in Israel, and seven percent on average in the OECD

countries (Andres and Lohmann, 2008) – live under the poverty line. In the industrialized world there is a growing recognition that employment by itself does not prevent poverty, and that the welfare system has been unsuccessful in significantly improving the economic status of the working poor.

Why doesn't work enable individuals and their families to escape poverty? Some feel that developments within the Western world's labor markets over the last few years have contributed greatly to the rise in poverty rates within the working population. Industrialized labor markets are currently characterized by economic instability that is expressed both in significant fluctuations in unemployment rates and in the employment difficulties of workers who, while they may succeed in finding employment, often earn wages too low to maintain a decent standard of living, or who are employed only part-time despite their desire to invest more of their time in the labor market. In general, there has been a reduction in the quality of various labor indices like employment security and the ability to develop skills suited to Western labor markets. These markets are characterized by increasing competitiveness due to the opening up of international markets and to an influx of migrant workers as well as technological developments that have changed the labor configuration and distribution of opportunities within the labor market. These changes have increased opportunities for the highly skilled and narrowed those for workers lacking the appropriate skills and educational background. In addition, traditional worker protections have eroded with the weakening of labor unions. All of these factors have sharpened economic inequality and left the labor market's more vulnerable groups with uncertainty, low wages and suboptimal work conditions. It should also be remembered that some workers encounter barriers to being hired like discrimination or opportunity structures that keep them from fully integrating into the labor market or which channel them into unstable, low wage occupations incompatible with a decent standard of living.

In addition to changing labor conditions and eroding worker status, particularly with regard to low-skilled workers, changes in the welfare

system have had a particularly negative impact on groups characterized by a high degree of economic vulnerability. Cutbacks in the support extended by many Western countries to the unemployed and to single-parent families, as well as the implementation of welfare-to-work programs and the creation of incentives for labor market participation, have brought numerous low-skilled workers into the labor force where they are employed in low wage jobs. The programs and incentives have not, however, succeeded in improving these workers' standard of living; in many cases they have actually made things worse (Blank, 1997).

Low wages and difficult work conditions are not the sole reasons why labor force participation does not offer protection against poverty. While labor market wages are paid to workers based on their skills and productivity, poverty is a characteristic of families and is a function of a family's place relative to the poverty line – which is itself relative. It is defined by two main characteristics: family income and number of family members. For example, a low wage worker (usually a woman) may not necessarily be poor if there is an additional earner in the household (generally a man) earning a high salary; a family with a single earner and a large number of children may be poor even if the earner's wage is not particularly low. The welfare system can supplement the family's income and raise it out of poverty. By the same token, a reduction in benefits might intensify poverty even for families with one or more wage earners.

This chapter reviews poverty rate trends among Israel's working population over the past 30 years with the aim of identifying the social attributes of working families living in poverty, and the factors leading to a situation in which employment fails to prevent poverty. Focusing specifically on the working poor is important because those who fall into this category "play by the rules" yet have no chance of winning the game. An understanding of the causes of poverty may facilitate the formulation of more effective policies, whether in the social welfare or the labor market spheres.

1. Changes over Time in the Poverty Rates of Working Families

Poverty rates in Israel are among the highest in the Western world (Central Bureau of Statistics, 2009). A fifth of all Israelis live under the poverty line, a figure that does not seem to improve even during periods of economic growth. One prominent feature of Israel's poverty picture is its high rate of poverty among families with at least one member who is a labor force participant. The most recent poverty report (National Insurance Institute, 2010) gives a poverty rate of 13.4 percent for all working families, accounting for half of all Israeli families living in poverty. In order to understand how the status of Israeli working families has changed, the discussion will focus on families where the head of the household is aged 25 to 64. Limiting head-of-household age makes it possible to focus on the poverty rate of families headed by people of working age, the majority of whom have completed their studies.¹ "Worker" is defined in this chapter as someone who is actively employed in the labor market.²

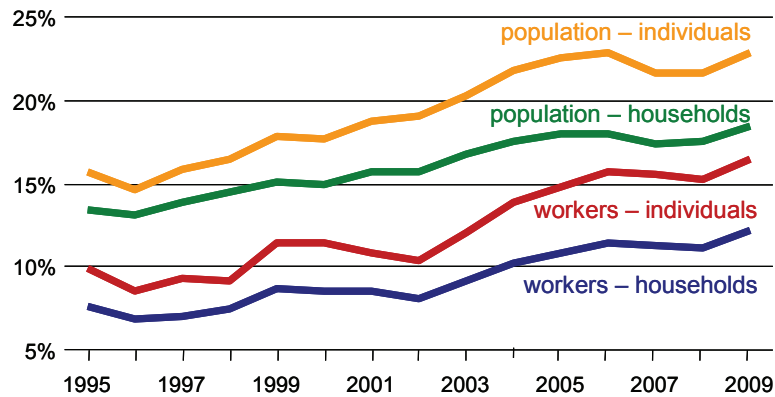
Figure 1 surveys poverty trends over recent years within the Israeli population and among families where the head of household is employed in the labor market.³ The poverty line relates to households and takes household income and number of household members into account. The data on poverty within the working population refer to households with at least one member who is a labor force participant (generally the head of household), and it presents the number of people (poverty per capita) living in poor families.

¹ The data are based on income surveys for different years and do not include residents of East Jerusalem. The poverty line is likewise calculated without reference to this population.

² The worker population does not include the unemployed, who, according to this definition, are part of the labor force.

³ Throughout this chapter, the term "working household" refers to households headed by people aged 25-64 employed in the labor force.

Figure 1
Poverty rates in the population and among workers,
1995-2009, by household head aged 25-64



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Poverty levels have been trending upward since the mid 1990s. Despite a stabilization or even something of a decline in certain years (e.g., during 2005-2008), 18.5 percent of all households were living below the poverty line in 2009, compared with 13.4 percent in 1995 (Figure 1). In parallel, the overall rise in poverty rates for all households was accompanied by a rise in the poverty rate for families whose head of household was employed. Within the relevant age group (25-64), the poverty rate rose from 7.6 percent in 1995 to over 12 percent in 2009. At the same time, while the overall poverty rate has risen steadily since 1995, the trend for working people has been inconsistent. In 2003 there was a sharp rise in the percentage of workers living under the poverty line after years of moderate increase (1996-2002). A similar pattern was found when poverty rates for individuals living in families headed by people who are employed were examined. As expected, the poverty rate

for this group is higher than the household poverty rate, which rose from ten percent in 1995 to 16.5 percent in 2009. Here as well, it is interesting to note a certain moderation in the poverty rates of those living in working households during the period 2006-2008; however last year saw a rise in the poverty rates of working households and of individuals living in working households.

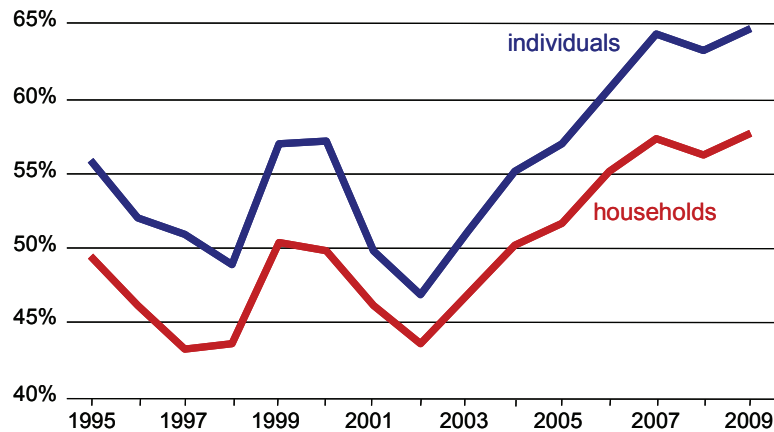
Along with fluctuations in the percentage of families with one or more working heads of household that do not manage to escape poverty, the relative share of working households within Israel's overall working-household population (headed by people aged 25-64) has changed as well. During the latter half of the 1990s there was a significant decline in the percentage of poor families with employed heads of household, from half of all poor families in 1995 to 44 percent in 1998 (Figure 2). However, despite the fluctuation in the relative share of workers within the poor population as a whole, the overall trend is upward – whether the figures are calculated in terms of households (a rise from 44 percent in 2002 to 58 percent in 2009) or in terms of individuals living in poor families with a working head of household – from 56 percent to 65 percent.⁴ That is, while the rise in overall poverty rates has moderated, and along with it the percentage of poor people within the working population, Israel's poverty mix is changing. Today, most poor people are living in families where at least the head of household (and frequently other household members as well) play an active economic role. The overall trend may reflect processes rooted in a changing employment situation and in a worsening of Israeli work conditions, as well as in changes in the array of supports provided by the Israeli welfare system to disadvantaged groups.

⁴ The number of individuals refers to people living in household headed by working people who are themselves aged 25-64 (working or not).

Figure 2

Percent of poor households headed by a worker

as a percent of all poor households in Israel, 1995-2009
by households and individuals, household head aged 25-64



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

2. Who Are the Working Poor?

The rise in overall poverty rates and among families headed by workers is not distributed evenly across all population groups. Studies on poverty in Israel (Bank of Israel, 2008; Flug and Kasir, 2001; Shayo and Vaknin, 2001; Lewin and Stier, 2002) have called attention to high concentrations of poverty among several specific groups within Israeli society, particularly Arabs, the ultra-Orthodox and single mothers.

The high poverty rates among the ultra-Orthodox are due primarily to low labor market participation rate, and to the large numbers of children per ultra-Orthodox families (Ben-David, 2010). (The present chapter will not be discussing the ultra-Orthodox.) Among Arabs, by contrast, poverty

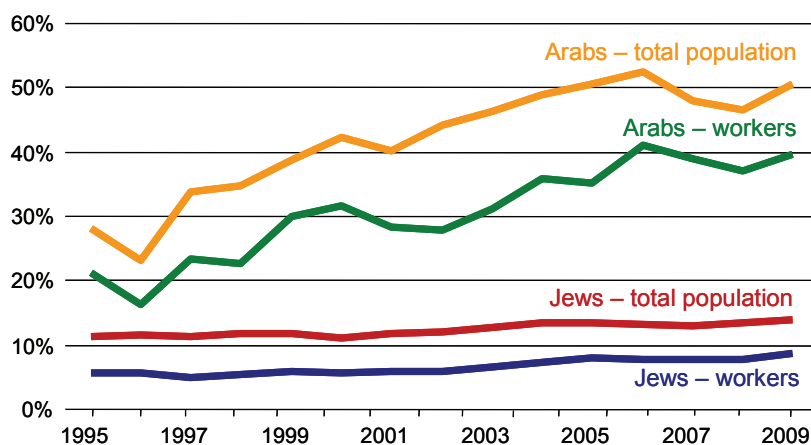
stems from a variety of reasons, including difficulties in employment, often manifested in withdrawal from the labor market at a relatively young age, problems finding work (Sa'di and Lewin-Epstein, 2001), low-wage jobs, as well as a number of demographic factors, like large families and especially low employment levels for women. Single mothers, whose labor market participation rates are relatively high and whose families are usually smaller, are also poorer due to their sole wage earner status.

An increase in the number of Arab workers, for example (without any change in their employment patterns or in the welfare system's policy toward them) may explain the rise in the percentage of poor workers or their proportion within the overall poor population. In the same way, the rise in the percentage of the working poor may be due to changes in the welfare system – particularly with regard to populations that had not previously participated in the labor market, such as single mothers and, in particular, mothers of young children. The entry of additional economically weak groups into the labor market and the cutting of income supports that had previously supplemented income from work, may also explain the increase in the working poor population and in that population's share within the overall poor population. In other words – as was found in a number of other countries (Blank, 1997) – the welfare-to-work programs that were intensively implemented from the early 2000s and the creation of work incentives alongside the reduction in benefits, not only failed to significantly change Israel's poverty picture, but actually led to a rise in the percentage of workers living in poverty.

Poverty rates for Jews and Arabs, as presented in Figure 3, point to the Arab population's high degree of economic vulnerability. While the overall poverty rate, like that of the working population, rose during the first half of the 2000s, the percentage of Jewish families within the population of households headed by people aged 25-64 that fell under the poverty line was significantly lower than that of Arab families in the same category. Also, the increase in poverty among Jewish families was

very low – from 11.3 percent at the beginning of the decade to 14 percent by its end.

Figure 3
**Poverty rates in the population and among households
 headed by a worker, 1995-2009**
 by sector, household head aged 25-64



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Among Jewish workers in the relevant age group, the poverty rate is even lower – 5.7 percent of all workers in 1995 and 8.7 percent today. Interestingly, within this group poverty rates were quite stable during the period 2005-2008, although they rose by a percentage point last year (from 7.7 percent to 8.7 percent.) For Arab households headed by people aged 25-64, a different picture emerges. Firstly, Arab poverty rates are significantly higher than amongst Jews throughout the period in question. Moreover, the disparities between the two population groups widened significantly: during the mid 1990s, 28 percent of all Arab households in the relevant age group were poor (the lowest figure was for 1996 when 23 percent fell under the poverty line), but by 2000 the poverty rate had risen

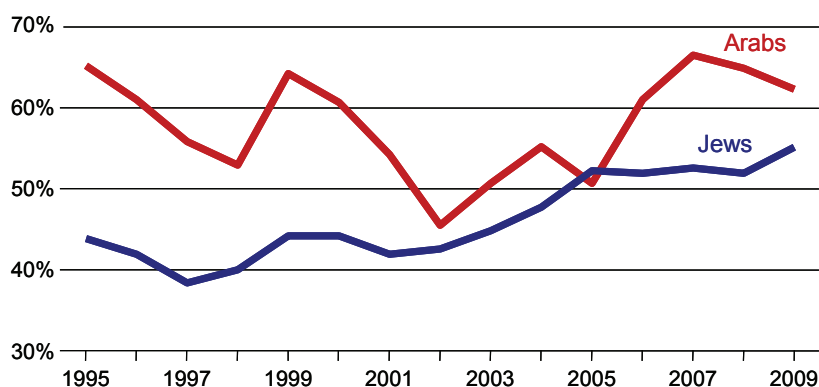
to over 42 percent, while in 2009 half of this population was living in poverty. Secondly, during the period 2001 to 2006 there was a steep rise in poverty rates (from 40 percent to 52 percent) which has since declined somewhat. The picture for working people is very similar: in 1995, 21 percent of Arab households headed by workers (aged 25-64) were living under the poverty line and the figures trended upward. Today, 40 percent of working households are poor. To conclude, work does not, in general, protect the Arab population in Israel from a very low standard of living.

An interesting picture emerges when the composition of Israel's poor population is examined. As shown in Figure 2, half of poor households have at least one member who is a labor market participant. Figure 4 presents the percentage of poor households (i.e., all households under the poverty line headed by people aged 25-64) that are headed by workers both Jews and Arabs. What is found is that, within the relevant age group, most poor households are, in fact, headed by working people, and that the poor population has changed in many ways over time (in terms of head-of-household employment status). Throughout the period in question (except in 2005), the percentage of poor households headed by an employed person is higher among Arabs than among Jews; however, the gap between the two groups is unstable – in certain periods it becomes narrower (during 2002-2005, for instance), while at other times it widens. When disparities narrowed, the finding could be traced to two simultaneous developments. The first of these was a decline within the Arab sector in the percentage of poor people who were labor market participants. This was due apparently to an influx of foreign workers into the Israeli labor market during the latter half of the 1990s that caused a lessening of employment opportunities primarily for those with low educational levels (Ben-David, 2010). At the same time, there was a steady increase in poverty among working Jews which ultimately moderated toward the mid 2000s. This rise in poverty may reflect a rise in the percentage of single-parent families, or it may be due to market difficulties related to the wave of immigration during the 1990s and changes in labor arrangements within the Israeli economy as a whole.

Starting in 2005 the disparity between the two population groups expands, due primarily to a rise in the proportion of working poor families within the Arab population: in 2008, 65 percent of all poor Arab households were headed by workers, versus 52 percent among Jews. However, in 2009 the gap narrowed again due to an increase in the percentage of working Jewish heads of households living in poverty, and a decline in poverty rates among working Arabs. Overall, one finds that the percentage of working poor within the Arab population declined somewhat compared with the situation in 1995, while the proportion of working poor within the Jewish population rose steadily throughout the period, from 44 percent at its start to 55 percent at its end.

Figure 4

**Percent of households headed by a worker
out of all poor households, 1995-2009**
by sector, household head aged 25-64



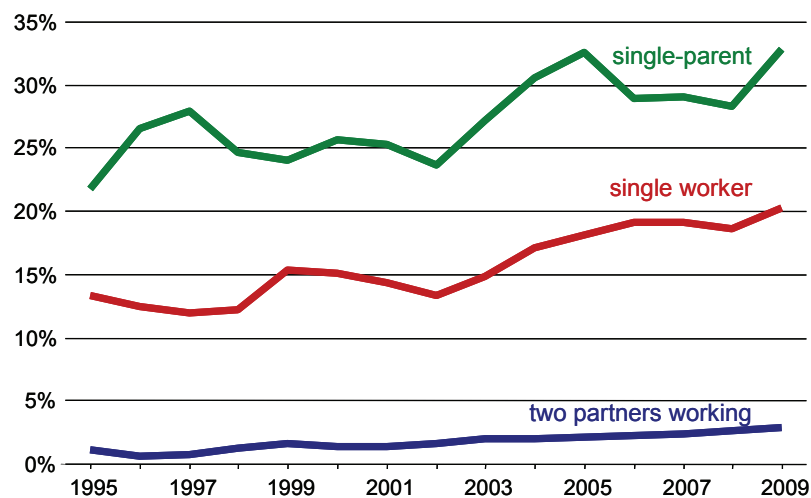
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Work in and of itself, as noted, is not a shield against poverty. One also has to take into account demographic and other population related factors, especially household composition and the number of wage

earners. Large households with only one earner are more economically vulnerable, and in many cases the salary of a single earner is insufficient to ensure a decent standard of living. Figure 5 compares three types of household: households headed by couples in which both partners participate in the labor market; couple-headed households in which only one partner works; and single-parent (or single-person) households categorized as households headed by a single working person (without a partner) and with children up to age 18. A consideration of household wage earner composition points to significant disparities between single earner households (particularly single-parent households) and two earner households. The poverty level of households headed by two working people is very low (though trending upward), and is similar to the overall poverty level within the Jewish working population. In fact, most two earner households are Jewish (Stier, 2010).

Figure 5
Household poverty rates, by number of wage earners,
1995-2009, household head aged 25-64



Source: Taub Center for Social Policy Studies in Israel.

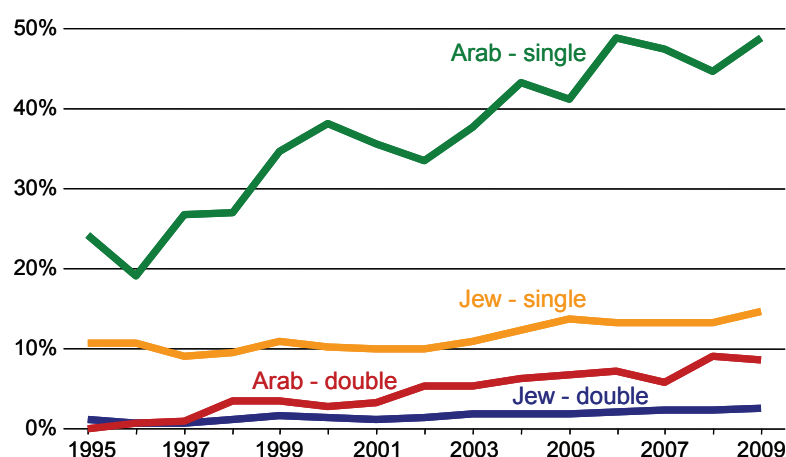
Data: Central Bureau of Statistics.

When Jewish and Arab household wage earner structures are compared, an interesting picture emerges (Figure 6): the poverty level of Arab households in which both partners are active in the labor market is very low and comparable to that of similarly configured Jewish households until 1997; after 1997, though, the poverty rate for two earner households has risen significantly, from an almost insignificant amount in 1995 to 8.5 percent. At the same time, the poverty rate increase for Jewish households of this kind has been very small. This change could reflect complex processes, particularly the worsening of market conditions for Arabs in Israel during the 1990s and most notably the disappearance of jobs for low-skilled Arabs due to a massive influx of foreign workers into the Israeli labor market, as well as labor arrangement changes as noted previously. However, it may also be that the increase reflects reductions in child allowances and other benefits on which families depend. As can be seen, the poverty rates of two earner families have increased most drastically since 2003. Another possible explanation is the changing characteristics of two earner families, as reflected in the entry of low-skilled women into the labor market and the rising percentage of large families in which both partners participate in the labor market (see the following discussion), but which still do not manage to raise their income above the poverty line.

Two additional findings of importance are found: firstly, single-parent households headed by a labor market participant have the highest poverty rates of all. This may be attributed to the fact that, in the absolute majority of these households, the wage earners are women – whose market power is lower than that of male wage earners (the prevalent situation in couple-headed households with only one earner). One also finds that the first half of the 2000s witnessed a significant rise in poverty rates among working people, within both the single-parent family and the single income family populations – due, apparently, to the decline of the welfare state as manifested in sharp child allowance cutbacks (single income households have more children) and in reduced income support benefits (on which single-parent families depended). Nor did welfare-to-

work programs, at least during their early years of operation, do well by single mothers; only during the second half of the 2000s was there a decline in poverty rates for single heads of households who were labor force participants.

Figure 6
**Household poverty rates by number of wage earners
 and by sector, 1995-2009**
 household head aged 25-64



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

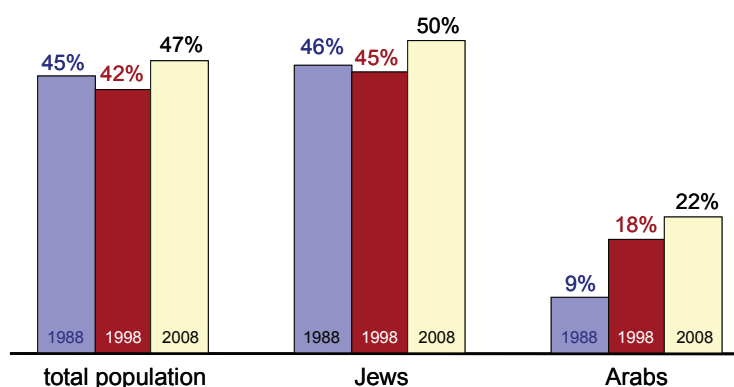
The comparison between Jewish and Arab single income households (Figure 6) raises many questions. Why is the poverty rate for Arab families so high? If it was due to the number of household wage earners, as Israeli policy makers insist (Bank Israel, 2008), there would be only small discrepancies based on household wage earner composition. However, Figure 6 shows that the largest discrepancies exist between single income households in the Arab and Jewish populations. Not only

are poverty rates for the Arab population in question significantly higher than for the Jewish population, but poverty rates for Arab workers who are sole wage earners have increased more rapidly and started earlier than for Jewish workers. For example, the poverty rate for Arab single income households – which was 38 percent at the beginning of the 2000s versus ten percent for Jewish single income households – reached 48.7 percent in 2009 (an increase of over ten percentage points), compared with just 14.6 percent for Jews. Moreover, the disparity between single earner and two earner households within the Jewish population is relatively small (ranging from ten percent to twelve percent throughout the period in question), while in the Arab sector it is much more significant and actually rose from 25 percent to over 40 percent. This disparity appears, as will be seen, to be attributable to differences between the two populations in household demographic and socioeconomic characteristics.

Families headed by single earners are the most vulnerable group within the working family sector. Who are these families? In order to understand the attributes of vulnerable households within the two population groups, a comparison of two household types is presented: those headed by sole wage earners and those headed by two earners. Firstly, about half of Israeli households headed by people of working age have two earners, and the percentage of two earner households has been rising, particularly since the late 1990s. Figure 7 shows that the percentage of two wage earner families is significantly higher in the Jewish population. In 2008, for example, half of all Jewish households had two earners, versus a fifth of all Arab households. However, over time one finds that the main increase in this kind of household has been in the Arab sector: in 1988, only a small minority (less than ten percent) of households headed by employed people had two earners; this figure grew to 18 percent during the 1990s and to 22 percent by the late 2000s. The Jewish population had a much more moderate increase – from 46 percent to 50 percent. The rise in the proportion of two earner households is due primarily to women's growing participation in the labor market.

The Jewish population's relative stability in this regard also reflects a rise in the number of households headed by single people during the period in question.

Figure 7
Households with two wage earners
 out of all households with wage earners, by sector, 1988-2008



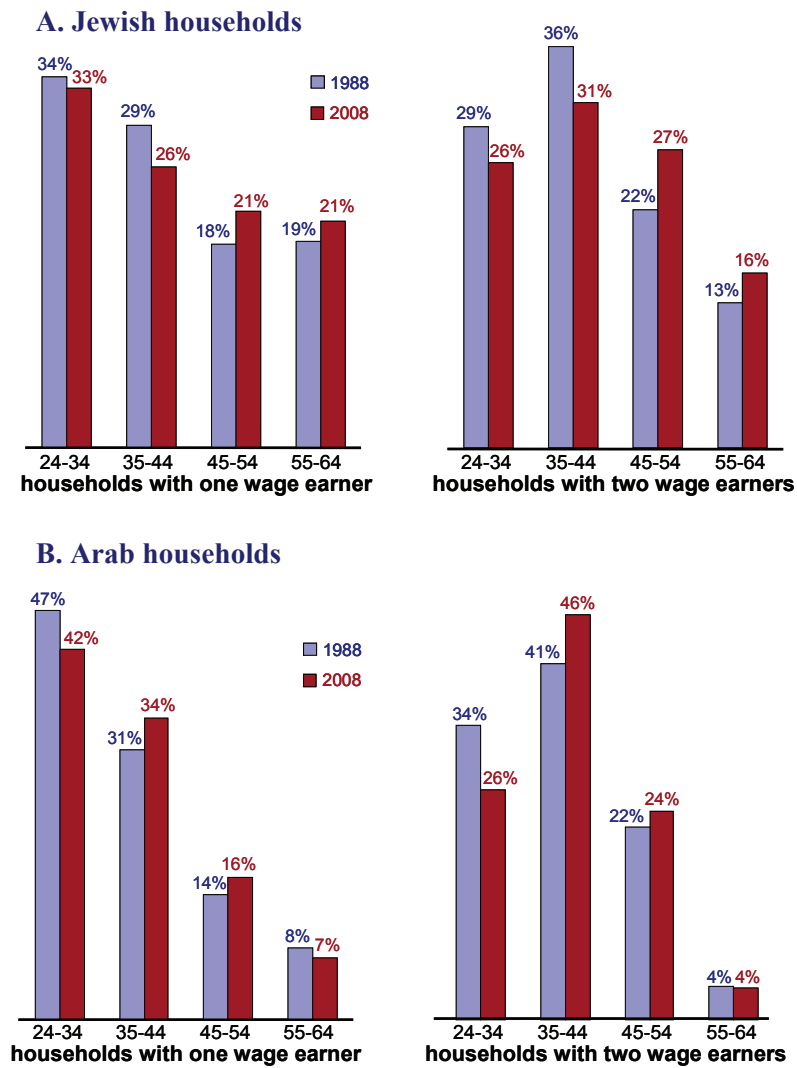
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

The following is a comparison of single earner and two earner households in the Jewish and Arab sectors. With regard to the demographic characteristics of the two types of household, Arab single earners are younger than their Jewish counterparts, as shown in the two parts of Figure 8. Over all time periods, over 70 percent are under age 45. The figure is very similar for two earner families, in contrast to a rate of 50 percent amongst all Jewish sole wage earners.

The two groups differ significantly with regard to number of children per family (Figure 9, parts A and B). In 2008, 60 percent of all Jewish single wage earners had no children in their households, and only six percent had four children or more. By contrast, a quarter of all Arab

Figure 8
Distribution of households, by age and number of wage earners
 1988 and 2008

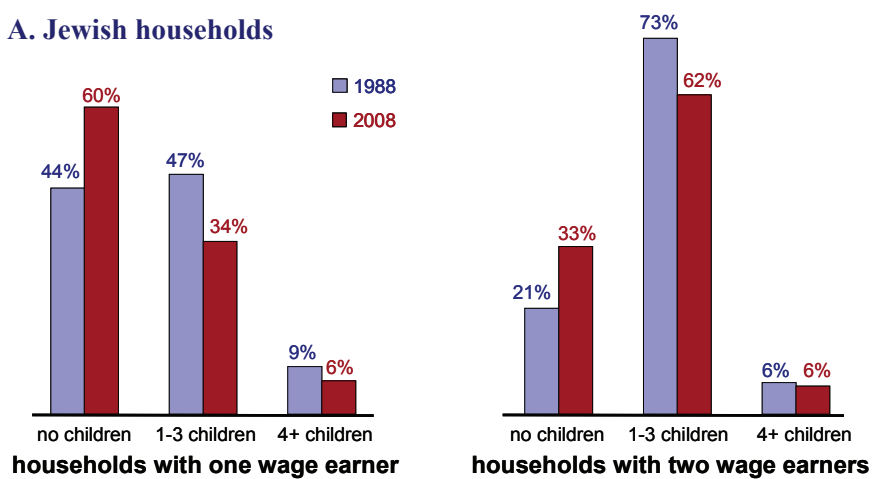


Source: Taub Center for Social Policy Studies in Israel.

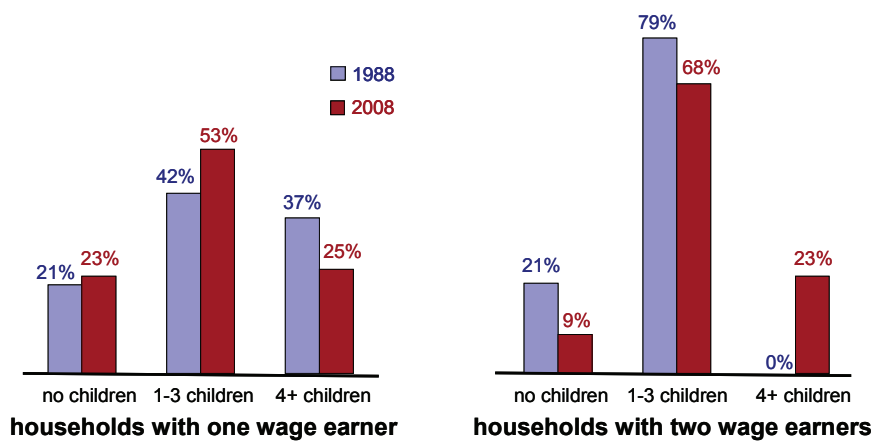
Data: Central Bureau of Statistics.

Figure 9
Households, by number of children and wage earners
1988 and 2008

A. Jewish households



B. Arab households



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

families headed by a single wage earner were families with four or more children, while a similar figure was obtained for single wage earners in households with no children. These differences may account for the discrepancies between the two groups in terms of poverty rates for single earner households.

When the groups are compared at two different points in time, 1988 and 2008, several interesting developments are found. Firstly, among Jews there was a significant rise in the proportion of households with no children, both for single earner households (from 44 percent to 60 percent of all households) and for two earner households (from 21 percent to 33 percent of all households of this type). At the same time, there was a decline in the proportion of households with one to three children. These changes are the result of demographic processes that affected both the younger and the older age groups. On the one hand, there is a tendency to delay starting a family (later marriage and parenthood), and on the other hand, an overall aging of the population. These processes are typical of Western countries in general.

In Israel's Arab sector a similar change did not take place; households without children account for a fifth of all households headed by a single earner, while the proportion of households with no children within the two earner household population declined from 21 percent to just nine percent. The Arab population witnessed a decline in the percentage of single earner families with four or more children (from 37 percent to 25 percent), and a rise in the proportion of such families among two earner households – in 1988, these families were not represented at all, while in 2008 they accounted for a fifth of all two earner households. The change stems from two simultaneous developments: a decline in fertility that reduced the relative share of large families within the Arab population (with a concomitant increase in the proportion of smaller single earner families); and women's growing participation in the labor market, particularly amongst those with large families.

These findings support the argument that, despite a decline in fertility among Arabs over the past decade and a rise in married women's labor

market participation (see also the Central Bureau of Statistics, 2008), and in addition to a worsening of market conditions for Arab workers, part of the rise in the percentage of the working poor may be attributed to the child allowance cuts that took place during the early 2000s. This is inasmuch as the child allowances enabled the average Arab family to maintain a decent standard of living.

With regard to wage earner labor market characteristics, Arab heads of household (whose single earner poverty rates are significantly higher than those of Jews) are also more likely to be employed full-time than their Jewish counterparts – 65 percent of all Jewish single earners versus 77 percent of Arab single wage earners worked full-time in 2008 (Figure 10). Over time there was a decline in the percentage of full-time workers who were also sole earners – the decline was most intensive during the period 1988-1998 (not shown in Figure 10) and characterized both Arab and Jewish households, with the disparity between the two groups remaining largely unchanged. The reason for this significant decline is difficult to determine.

Also, for all time periods, Jewish heads of households with two earners enjoy better employment status than do Arab heads of household who are sole wage earners. In 2008, for example, 82 percent of all Jewish heads of two earner households worked full-time, versus 65 percent of all single earner heads of household. A similar discrepancy exists between the two previous points of time. The situation is different in the Arab sector. On the one hand, the percentage of full-time workers is lower among two earner households – only 66 percent of the heads of these households worked full-time in 2008, compared with 77 percent of sole earners. On the other hand, only those Arab households that had two wage earners witnessed a rise in the percentage of heads of household who were employed full-time.

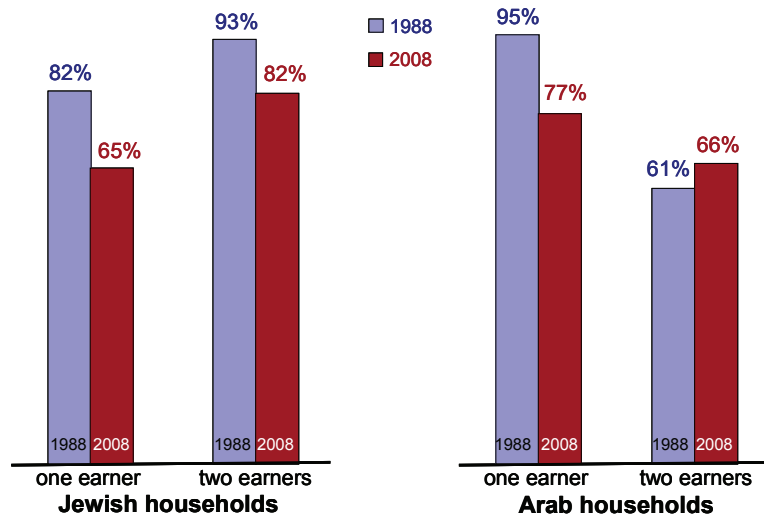
Within the Jewish population of single wage earners, the decline in the percentage of those working full-time may be attributable to an increase in the number of single-parent families headed by women, particularly in the wake of the massive influx of former Soviet Union (FSU) immigrants

during the early 1990s. It may also be due to a growing ultra-Orthodox population in which part-time employment for men is widespread, and in which the proportion of families in which the wife is the sole earner is rising (Stier, 2010).

However, this kind of development did not emerge within the Arab population. It may be hypothesized that market difficulties and an inability to find full-time jobs, particularly for low-skilled members of this sector, led to a decline in the percentage of those employed full-time, and thus to a worsening of these families' economic status.

Figure 10

Rate of household heads working a full-time position
by number of wage earners and sector, 1988 and 2008



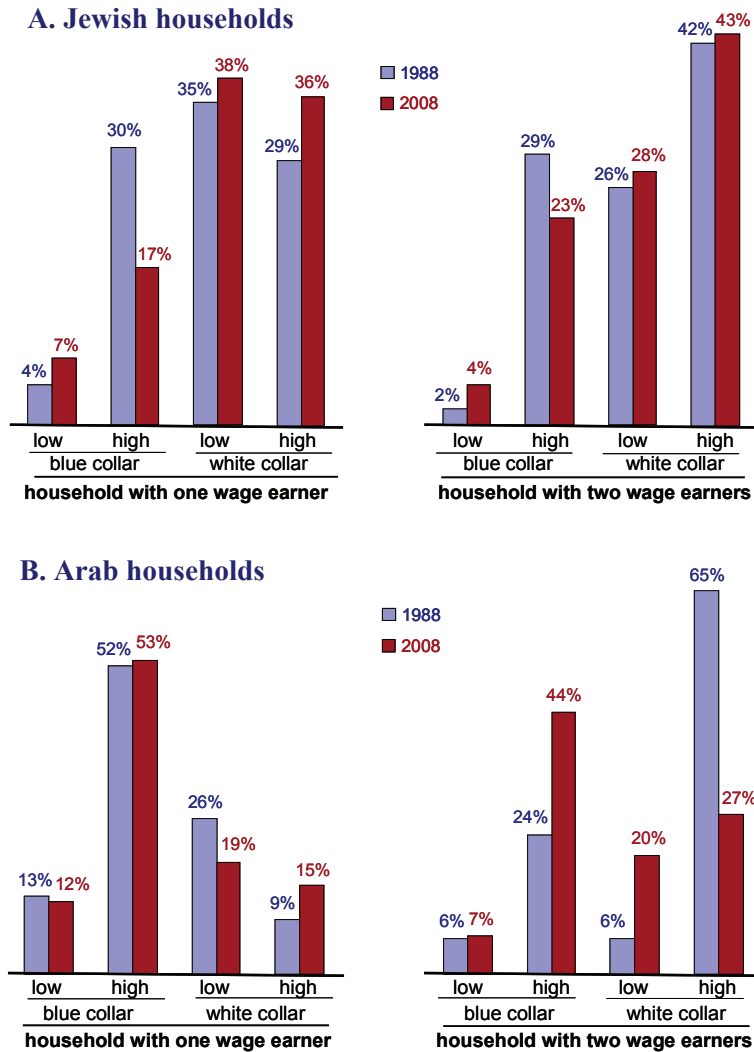
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Support for this hypothesis may be found in the employment distribution of the two groups (Figure 11). Occupations were divided into four categories: high-level white collar occupations, including academic/professional, technical and administrative workers; lower-level white collar occupations, e.g. clerical and service workers; high-level blue collar occupations, e.g. skilled manual laborers; and low-level blue collar occupations, and unskilled workers. Jews occupy a higher rung on the employment ladder. In 2008, 36 percent were employed in professional occupations, with a similar number in the lower-level white collar category. Among Arabs, 15 percent were employed in professional occupations in 2008, compared with just nine percent in 1988. Half of Arab sole wage earners are high-level blue collar workers, a group whose poverty rates have risen especially sharply in recent years.

Interestingly, there has been a change in the occupational distribution of Arab families with two earners. In the past, the absolute majority of these families were headed by people employed in professional occupations (high-level white collar); by 2008, however, women's labor market participation had come to characterize not only highly educated families but all levels of the population. In 1988 only a fifth of two wage earner families were headed by high-level blue collar workers, while in 2008 this figure had risen to 44 percent of all two wage earner families. At the same time, the proportion of families headed by professionals declined from 65 percent to just 27 percent of all families in which both partners participated actively in the labor market. This change (which did not occur in the Jewish sector) may have helped to narrow disparities between families and to strengthen those families which, without the partner's income, would have become poor. Moreover, during the period in question, the overall percentage of white-collar families increased (from 15 percent of all Arab families to 18 percent), with a particular rise (nearly fivefold) among two earner families. This change in occupational distribution may also help explain the rise in poverty rates that nevertheless occurred among two earner families in the Arab sector, most of which is still concentrated in lower paying fields. This did not occur

Figure 11
**Distribution of households by profession of household head
 and number of wage earners**
 1988 and 2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

within the Jewish sector, in which the proportion of families headed by people of relatively high earning capacity, due to an abundance of opportunities in the labor market, is still very high (and growing). It should also be noted that in most of these families both spouses are employed in white-collar fields, which serve to further enhance the families' economic status.

3. Causes of Poverty Among Working Families

The high percentage of the working poor and the fluctuations that have occurred over time inspire speculation about why households headed by at least one labor market participant fail to avoid poverty. One is also drawn to wonder what factors lay behind the fluctuations that have occurred in worker poverty rates overall, and within each specific population group.

As noted earlier, poverty among working families may be related to labor market participation levels, to type of occupation, to worker skill levels, and to wage levels. For couple headed two earner households poverty rates are low; by contrast, when households have only one wage earner, their risk of falling into poverty rises. This risk increases when the head of household is a woman, due to wage disparities between women and men in the labor market, and to the double burden borne by mothers of small children who have to support their families as sole earners.

However, Israel's welfare system also has an important role in influencing levels of poverty. Since 1994 there have been significant changes within the welfare system and in the levels of support provided to the weaker segments of Israeli society. While the second half of the 1990s witnessed an expansion of support, since 2003 there has been a sharp withdrawal of assistance to the weaker sectors on the part of the welfare system. This is reflected in extensive cuts in benefits of all kinds: child allowances have been slashed; eligibility for income support has been greatly restricted and the payments themselves reduced; and

welfare-to-work programs have been instituted for the purpose of raising labor market participation rates.

Israel's Reduction of Poverty and Income Inequality Law 1994 significantly improved the eligibility status of vulnerable families for state assistance, particularly that of single-parent families. Support for needy families also increased accordingly. An important change was introduced regarding child allowance eligibility for Arabs, which had previously been limited due to this population's non-participation in national service. The changes in child allowance policy that took effect in 1996 and which stipulated equalization of allowance payments to Jews and Arabs from the third child on, considerably improved the economic status of large families in the Arab sector.

The rise in child allowance levels peaked during the early 2000s with the passing of the Large Families Law (2001). However, once the allowances were cut beginning in 2002 and changes were introduced regarding income support eligibility criteria for single-parent families, the achievements of the war on poverty undertaken during the 1990s were effectively nullified. The economic status of working families suffered a significant decline, particularly within the Arab sector where the number of large families is greater. These changes were reflected in a rise in the overall poverty rate, and in poverty rates among working people in particular.

In order to trace the effects of these changes over time, both within the welfare system and with regard to the demographic characteristics of the working population as a whole, three points in time corresponding to the introduction of changes in the system were chosen: 1988 – before the Reduction of Poverty and Income Inequality Law was passed and before the wave of mass immigration from the FSU; 1998 – after the Reduction of Poverty and Income Inequality Law was passed and child allowance payments were equalized between the different population segments (with the passing of an amendment applicable to the Arab population); and, 2008 – after the passing of the Economic Arrangements Law in the

early 2000s and its aftermath in the form of massive child allowance cutbacks and restrictions on eligibility for income support.

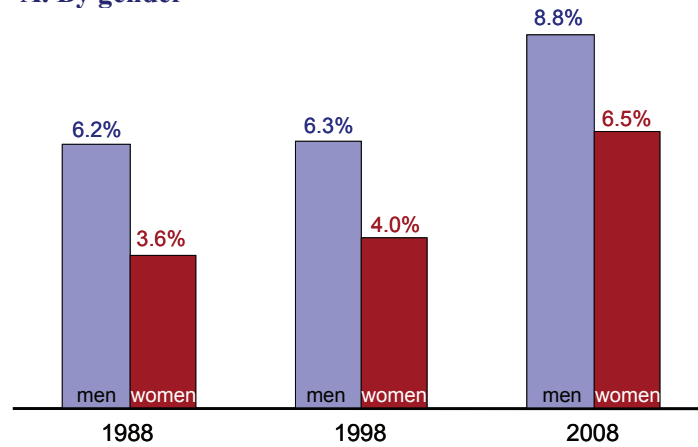
These three points in time are also meaningful with regard to changes that emerged in the labor market, including a significant decline in the power wielded by trade unions, a transition to temporary contracts throughout the labor market, including a large section of the public sector, a rise in the percentage of foreign laborers, which likely contributed to a lessening of employment sources for the country's weaker population segments, and, in addition, demographic changes in the wake of the FSU immigration wave. Beyond the sheer size of this mass immigration to Israel, which took place during the 1990s, the FSU immigrant population is characterized by a high proportion of single-parent families – a demographic whose numbers in Israel increased from 33,000 in the mid 1980s to 108,000 during the first half of the 2000s (Achdut, 2009).

The following figures present the poverty rates of various employed groups over the course of these three time periods. The data refer to the entire population of working people aged 25-64 and, within this population, to workers whose families live below the poverty line.

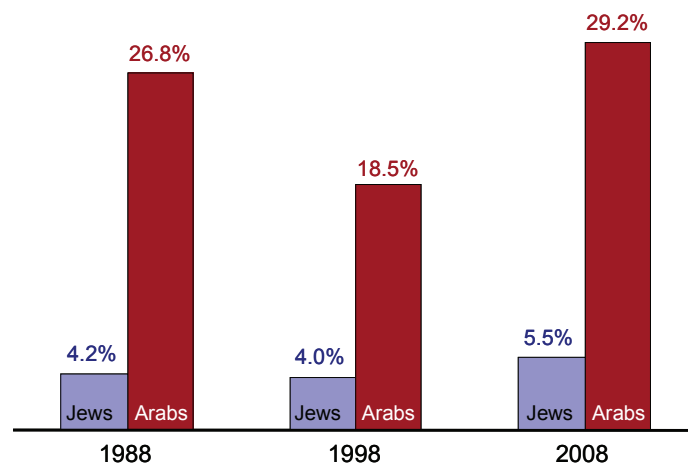
The poverty rate for men who actively participated in the labor market is higher than that of women (Figure 12, Part A). One can see that the 1990s were characterized by relative stability in the poverty rates of both groups. However, since 1998 there has been a rise from six percent to nine percent in the poverty rate for men, and from four percent to seven percent for women. The gender disparities are not surprising, inasmuch as most poor families are headed by couples, in which both partners are classified as "poor." Poverty is concentrated among single wage earner families, which are usually families headed by male wage earners. Also, there is a certain degree of selectivity regarding women who join the labor market: those whose earning power is particularly low are less likely to participate in the labor force. However, one can also see that the gender disparities are narrowing. This indicates both that the percentage

Figure 12
Poverty rates among workers
1988-2008

A. By gender



B. By sector

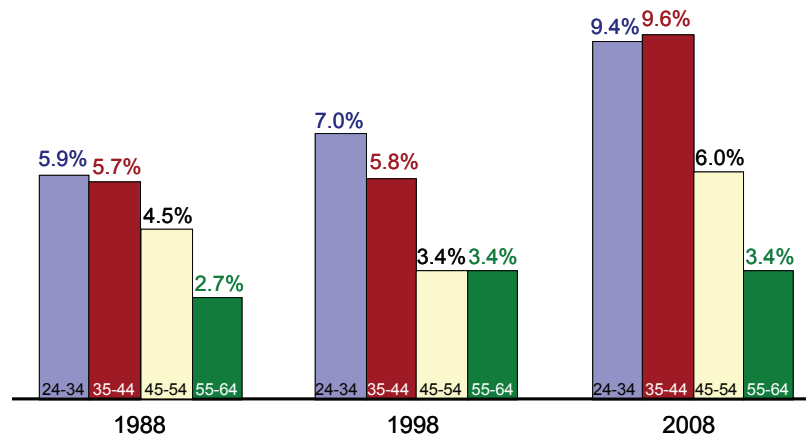


Source: Taub Center for Social Policy Studies in Israel.
Data: Central Bureau of Statistics.

of families headed by women who are sole earners is growing, and that low earning women have been joining the labor market in recent years.

The second part of Figure 12 shows that poverty rates for working Arabs are significantly higher than for Jews, as already noted. One also finds that the gap between the two population groups narrowed considerably during the 1990s, when the level of support for Arabs through child allowances was made equal to that received by Jews. However, the gap widened again during the 2000s due to massive child allowance cutbacks through the Economic Arrangements Law (although this development applied equally to both populations, Arab families are larger, making them more likely to be harmed by the cuts). Notably in this context, Figure 13 shows that poverty rates for working people are higher in the younger age groups during all time periods and particularly since 2008. These age groups receive lower pay and their households are characterized by the presence of young children.

Figure 13
Poverty rates among workers
by age, 1988-2008

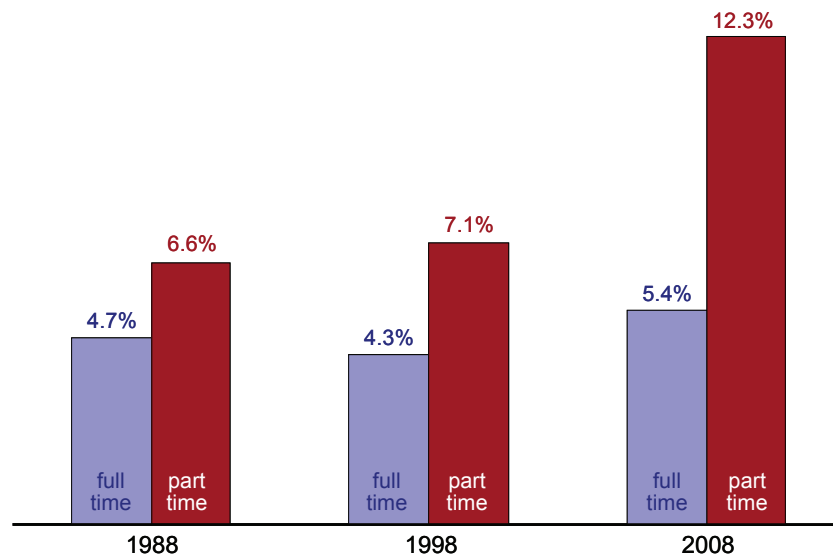


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Labor market characteristics, particularly employment status (number of hours worked) and field of employment, influence the poverty rates of working people. With regard to employment position, as might have been expected, poverty rates are higher for those employed on a part-time basis⁵ (Figure 14). Disparities between full-time workers and part-time workers grew significantly over the last two decades – while during the late 1980s there was a two percentage point gap between the two groups, by 2008 the gap had grown to seven percentage points. Likewise, although overall poverty rates for working people increased between

Figure 14
Poverty rates among workers
 by part-time or full-time positions, 1988-2008



Source: Taub Center for Social Policy Studies in Israel.

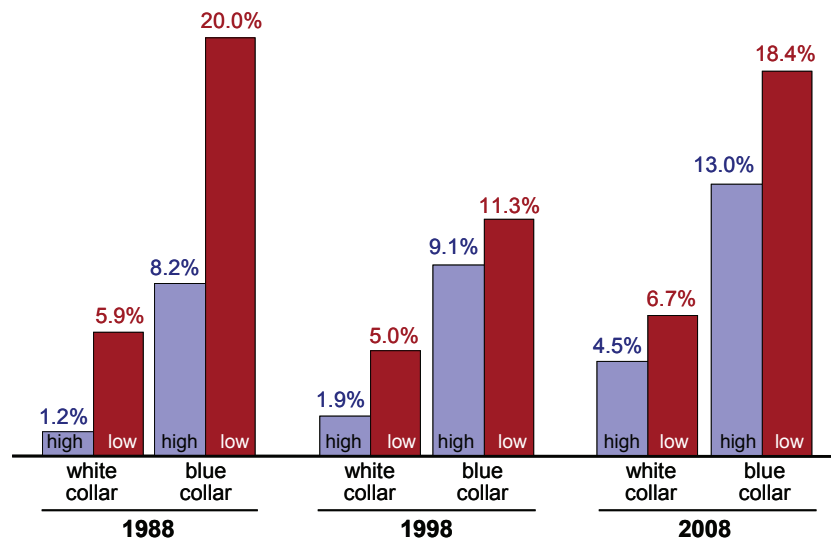
Data: Central Bureau of Statistics.

⁵ A part-time job is defined as one that entails fewer than 35 hours of work per week.

1988 and 2008, the increase was significantly greater for part-time workers (from 6.6 percent to 12.3 percent), compared with those employed full-time. An increase of this kind can indicate changes of two kinds: changes in the economy with a greater availability of part-time, low paying jobs; or, changes resulting from a rise in the number of “weak” workers, primarily those lacking the skills that are in demand and employed part-time, whether by choice or due to an inability to secure full-time work (Cohen and Stier, 2006). It may also be that the forced entry into the labor market of people with employment difficulties, especially those with family constraints, e.g. single mothers of young children – an outcome of the welfare-to-work programs and of the drastic restrictions in income support eligibility – has pushed these people into part-time, low paying jobs.

Regarding field of employment, poverty rates are low in the white-collar occupations and particularly high among unskilled workers in the low-level blue-collar occupations (“unskilled workers”) (Figure 15). At the same time, despite the low poverty rate of the high-level white-collar population (professional, technical and administrative occupations), this rate has also increased over time, from 1.2 percent to 4.5 percent. This change may indicate both a worsening of labor market conditions even for this highly-skilled group, and a change in the demographic composition of the high-level white-collar population, due to a sharp rise in the labor market participation rate of women, many of whom are employed in white-collar occupations. A significant rise in poverty rates was also experienced by high-level blue-collar workers, particularly skilled workers – from eight percent to thirteen percent. In the past, labor unions protected the interests of this group, which enjoyed a high degree of employment security. The labor market changes of recent years, including the *Histadrut*’s (Israel’s largest labor union) decline in power, have also harmed the employment conditions of these workers.

Figure 15
Poverty rates among workers
 by type of work, 1988-2008

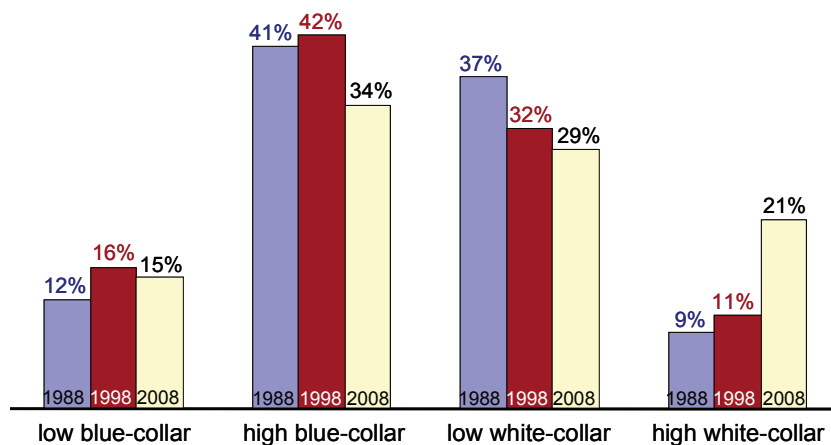


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

An examination of the occupational distribution of the heads of poor households (Figure 16) shows that the proportion of high-level white-collar workers within the poor household population more than doubled over the last few years, from 8.6 percent to 21.3 percent. Poverty rates, which had been relatively high among low wage earners, also increased significantly during the past two decades (Figure 17).

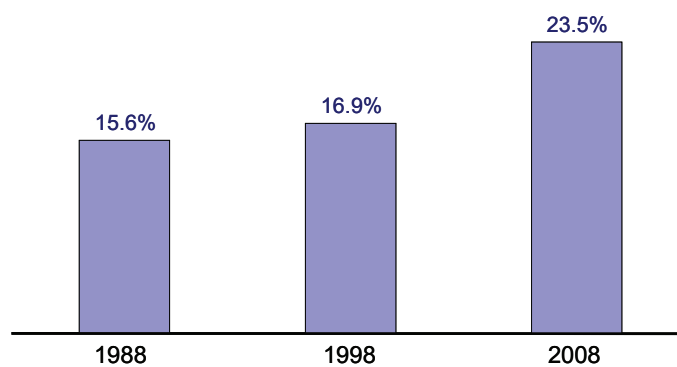
Figure 16
Distribution of poor households
 by profession of household head, 1988-2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Figure 17
Poverty rates among workers
 percent in the bottom quintile of income from work, 1988-2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

During the late 1980s and the late 1990s, 16 percent of low wage earners (Israel's lowest wage quintile for each of these time periods) belonged to poor families. By 2008, the poverty rate for this group had risen to nearly 24 percent. That is, although low wages are not the sole cause of poverty within the working population, the changes that have occurred over time point to a strengthening relationship between individual wage levels and family economic status – whether because more sole wage earners are earning low wages, or because the combined efforts of all household members are insufficient to raise families out of poverty.

These findings indicate that the labor market is a significant factor in determining the standard of living of individuals and their families, and, consequently influences poverty levels. However, poverty is also strongly impacted by household structure and organization. Figure 18 points to major differences in family poverty rates by wage earner composition. Poverty rates are especially high for families with children supported by single earners; the rate for this group rose from 17 percent in 1988 to 36 percent in 2008. Families with children headed by single parents – a group that is also subject to employment difficulties and whose economic vulnerability is high – actually experienced a significant decline in poverty in 1998 after the Reduction of Poverty and Income Inequality Law was enacted. However, this group's poverty rate had returned to 15 percent by 2008, due to the Economic Arrangements Law and the cuts in National Insurance payments and eligibility. For all household types, the presence of children raises poverty rates, particularly when there is a sole family wage earner (whether the family is headed by a couple or a single parent). Poverty rates for families without children also rose during the time period under discussion, particularly families with sole earners. That is to say, the presence of children alone does not explain the inability of sole earners to provide for their families in a market that fails to offer living wages.

Figure 18
Poverty rates among workers
 by household characteristics, 1988-2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

As noted, poverty among working people may be attributed to low wages and to the inability to find full-time work (Bank of Israel, 2010). As noted in the Bank of Israel report, poverty among the employed stems primarily from “low earning ability,” also among full-time workers. There are a number of reasons for low wages. These include a lack of skills suited to the labor market, inadequate education that channels workers into low wage occupations, unstable employment contracts, and lengthier periods of unemployment. Unskilled workers’ employment difficulties make them vulnerable to discrimination and exploitation by employers. In the absence of adequate enforcement of minimum wage laws, “weak” workers, particularly those from socially disadvantaged

groups (e.g., Arabs and women), find themselves in the labor market for years on end, working full-time yet unable to provide for their basic household needs (Sussman, 2004; Lewin, Stier and Caspi-Dror, 2006). However, even workers whose wage is higher than the minimum are not always able to meet their family needs, particularly in instances where a large family is being supported by a sole wage earner.

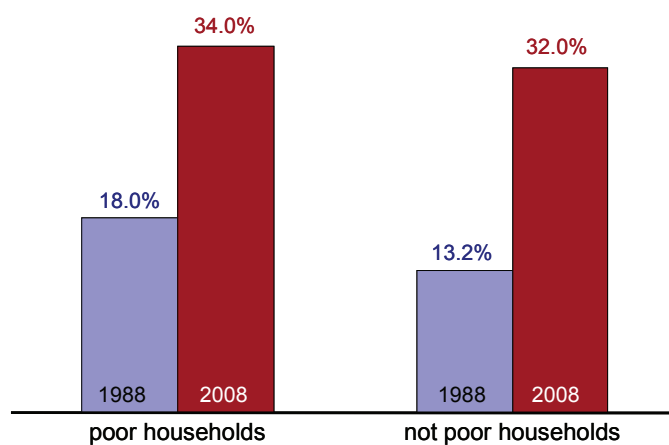
The two groups' demographic characteristics and the changes that they have undergone over time point out the main differences between the working poor and Israel's working population as a whole. Over the two decades being examined, several important demographic changes have occurred.

Firstly, the percentage of households headed by women has grown, as may be seen in Figure 19.⁶ Within the not-poor population, the percentage of households headed by working women grew from 13 percent in 1988 to 32 percent in 2008. For poor households there was an increase during this time period from 18 percent to 34 percent. Although households headed by women are poorer than those headed by men, the difference in the percentage of poor and not-poor households headed by women is not particularly high for each of the points in time under examination. In 1988 the gap was five percent (18 percent of poor households were headed by women versus 13 percent of not-poor households), and it had narrowed to two percent by the late 2000s.

Regarding the difference between Jews and Arabs, the chances of an Arab family being poor have increased over the years. This sector's share in the poor population as a whole rose from about a quarter in 1988 to 38 percent today, in contrast to its representation within the not-poor population, which comes to just nine percent (Figure 20).

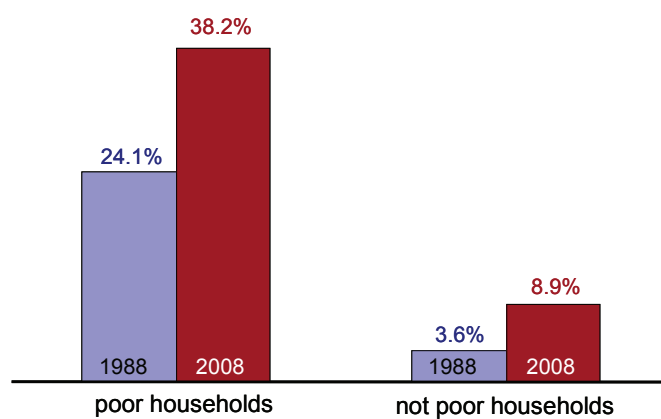
⁶ A woman can head a household as a single person or as a member of a couple. In the case of a couple-headed household, the head of household is the member of the couple who devotes the most time to the labor market.

Figure 19
Households headed by women
1988 and 2008



Source: Taub Center for Social Policy Studies in Israel.
Data: Central Bureau of Statistics.

Figure 20
Arab households
1988 and 2008

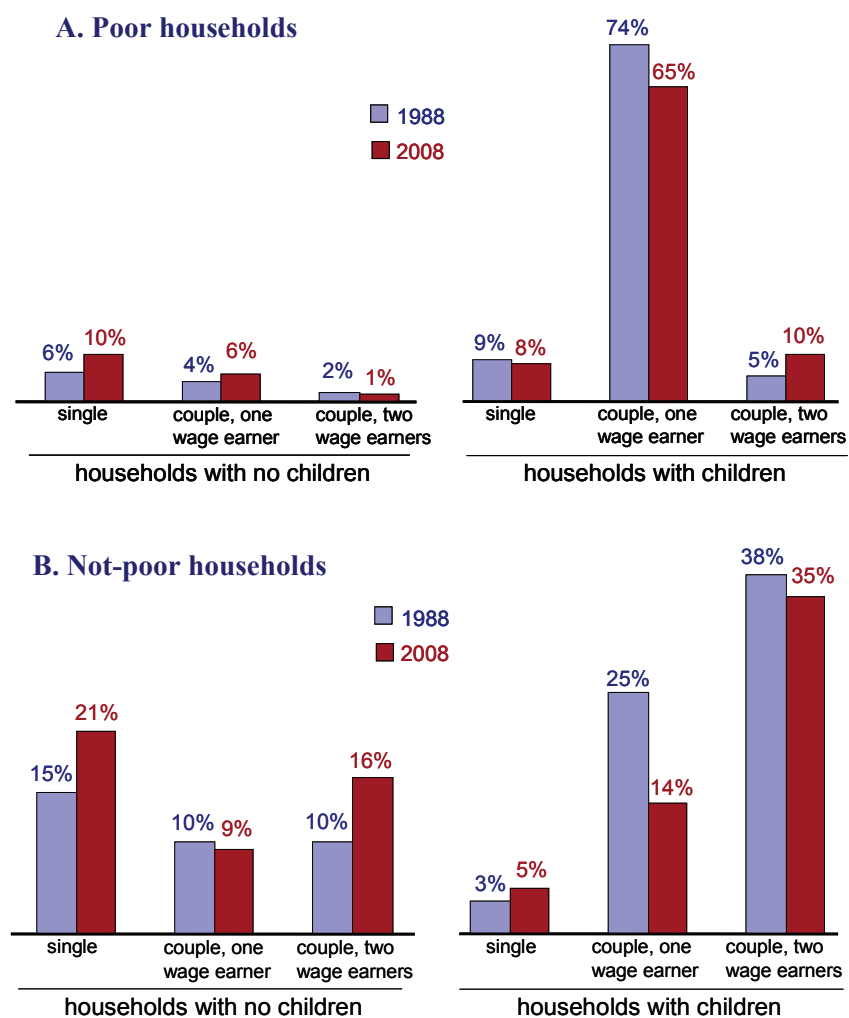


Source: Taub Center for Social Policy Studies in Israel.
Data: Central Bureau of Statistics.

Poverty within the working population is thus concentrated among single earner families with children: in 1988, three-fourths of all poor households headed by working people were households with a sole wage earner (Part A of Figure 21), compared with a quarter of all not-poor households with a single earner (Part B of Figure 21). Over the years, the percentage of couple headed households with children and supported by a sole labor market participant has declined, both among the poor (from 74 percent in 1988 to 65 percent in 2008) and among the not poor (from 25 percent to 13.6 percent respectively). At the same time, there has been a significant rise in the percentage of poor families with children headed by two wage earners – from 5.2 percent in 1988 to 9.9 percent in 2008. The percentage of these families within the not-poor population has remained stable, even dropping slightly from 37.5 percent to 35.2 percent. That is, despite the concentration of poverty within the single wage earner population, it cannot be argued that the rise in poverty among working people stems from a rise in the proportion of these families within the population as a whole, inasmuch as poverty rates also rose for families with two earners. Another type of family that is at risk for poverty is the single-parent family, whose share within the poor population did not change during the 1988 to 2008 period, but whose representation within the population of not-poor families increased slightly during the same period, from 3.5 percent to five percent.

Regarding families with children, there has been a significant rise in the percentage of poor families with four or more children, from 28 percent of all poor working families during the late 1980s to 34 percent by the late 2000s. At the same time, their representation within the not-poor population declined (Figure 22, parts A and B).

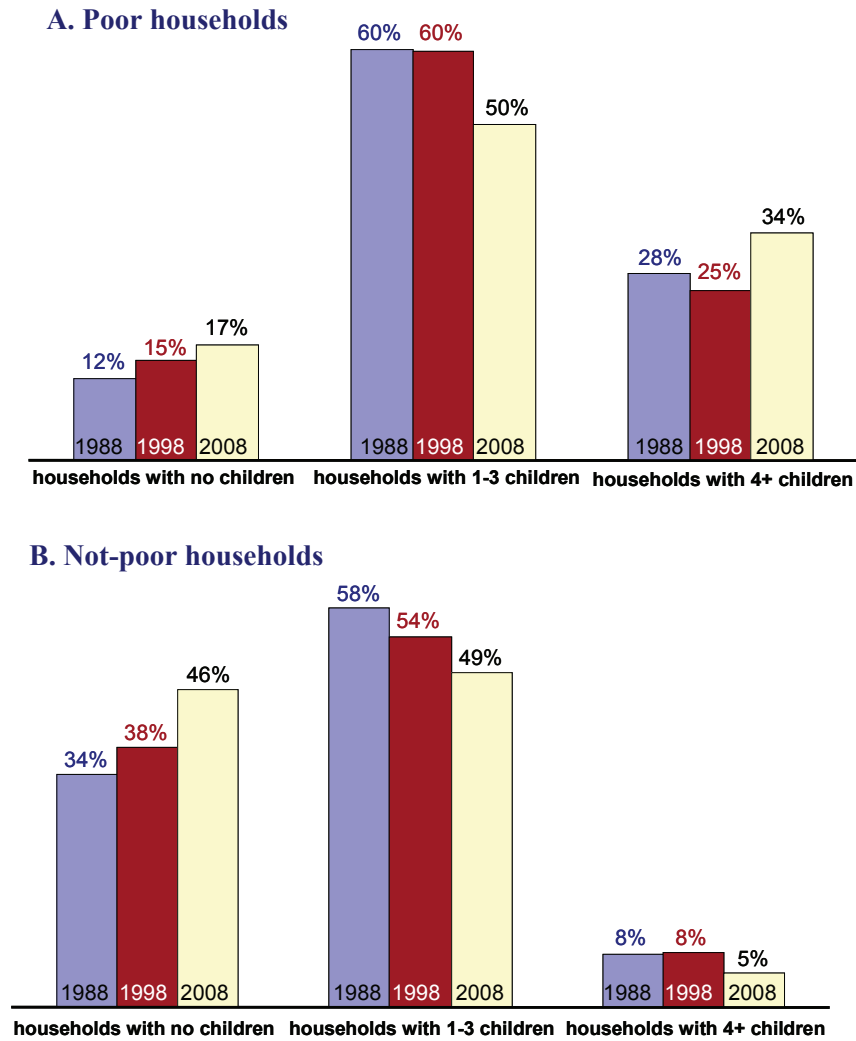
Figure 21
Distribution of households by household composition
 1988 and 2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Figure 22
Distribution of the number of children in households
 1988-2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

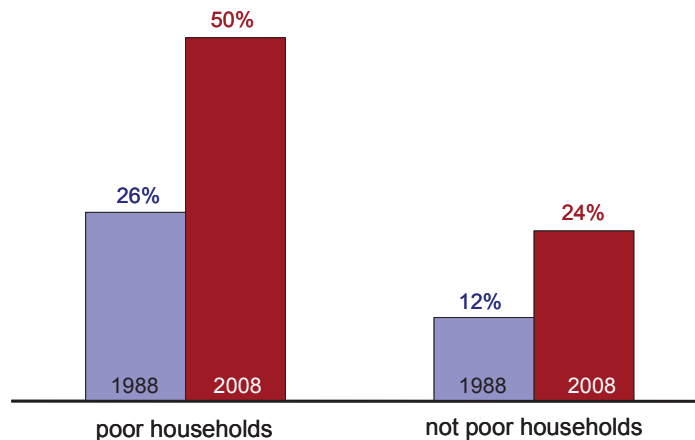
It has been argued, based on earlier studies, that single wage earner families with many children are at the highest risk of poverty, and in fact the high percentage of the working poor within the Arab sector can be explained by these two characteristics. Note the percentage of single earner families with four or more children within the Arab population in Figure 9B, and the relatively low percentage of such families among Jews as shown in Figure 9A. One cannot, however, maintain that the rise in poverty rates among working Arabs is due to a growing prevalence of families of this kind, as their actual representation within the population has decreased over the years – from 36 percent in 1988 to 25 percent in 2008. Moreover, as noted, the child allowance cutbacks had a harsh impact on large families and worsened their economic situation.

With regard to the employment characteristics of poor and not-poor people at the three chosen points in time, another interesting picture emerges. Firstly, the poor household population, during all time periods, has a higher percentage of part-time workers than does the not-poor household population (Figure 23). However, this percentage increased significantly between 1988 and 2008, particularly during the 1990s – from 26 percent in 1988 to 50 percent in 2008. The percentage of part-time workers among not-poor households doubled as well, from 12 percent to 24 percent. This increase may reflect a change in the gender composition of the working population as a whole, due to women's rising employment rates.

Regarding occupational distribution, the heads of poor households are concentrated primarily in the high-level blue-collar occupations. Although this group's representation among the poor is on the decline (from 41 percent to 34 percent over the two decades), it is still significantly higher than its corresponding percentage within the not-poor population (which dropped from 30 percent to 22 percent) (Figure 24, both parts). Even more interesting is the growing presence of white-collar employees among the heads of poor households – from nine percent in 1988 to 21 percent in 2008 while there was a much more modest increase in not-poor households, from 36 percent to 39 percent. That is, the work

skills of poor people are usually lower than those of not-poor people but skills on their own cannot prevent poverty. Moreover, the improved skill levels that characterize the Israeli population as a whole have not led to a decline in the working poor phenomenon. This is due, apparently, to several factors: the inability of poor people to obtain full-time jobs in high-level white-collar occupations; a deterioration of work conditions for highly skilled workers; or, the fact that a high percentage of women currently serve as primary household wage earners and are still concentrated in “women’s” occupations. While these occupations belong to the high-level white-collar realm (e.g., teaching and nursing, as well as a number of professions requiring advanced degrees) they typically offer shorter work days, part-time positions and lower wages.

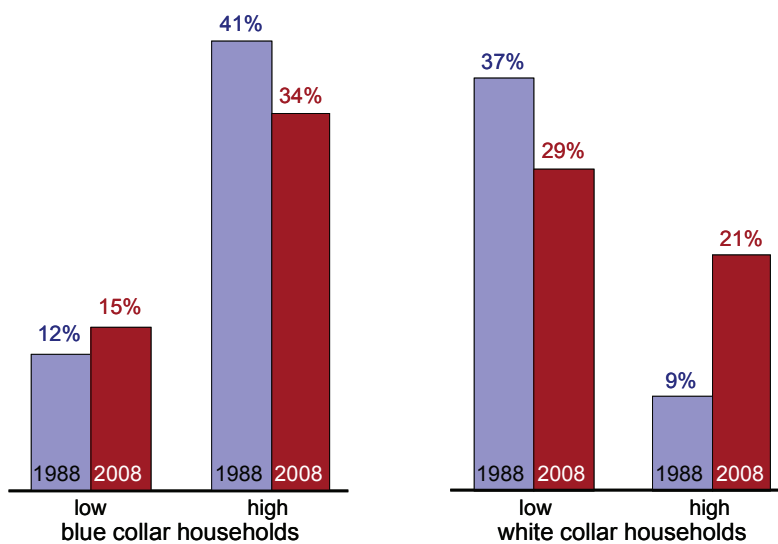
Figure 23
Percent of household heads working part-time
1988 and 2008



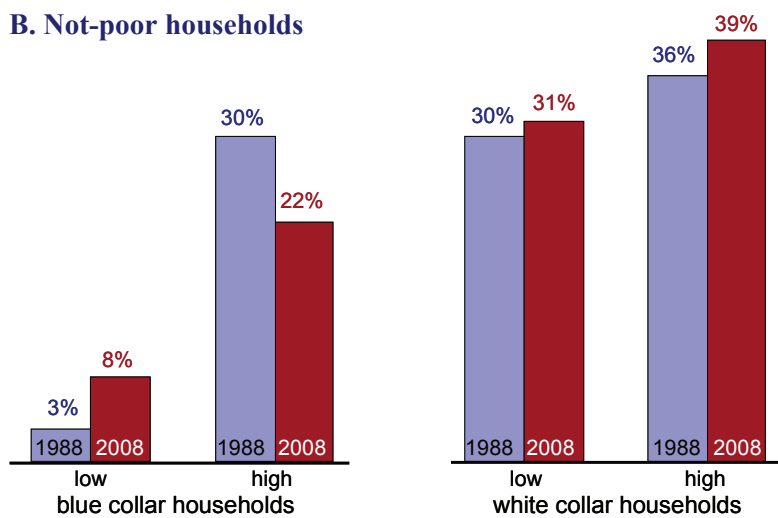
Source: Taub Center for Social Policy Studies in Israel.
Data: Central Bureau of Statistics.

Figure 24
Distribution of households by profession of household head
 1988 and 2008

A. Poor households



B. Not-poor households

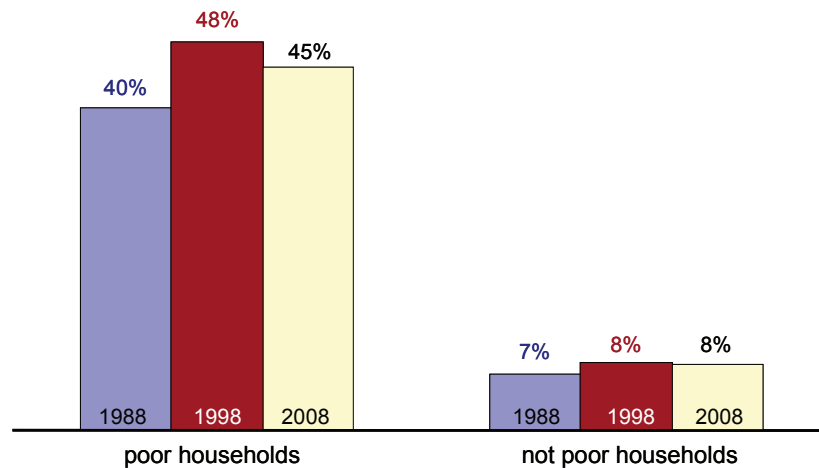


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Wages in the lowest income quintile (defined here as low wages), despite their strong impact in determining the household standard of living, do not on their own explain the growing presence of the working poor (Figure 25). Although a significant percentage of the heads of poor households earn low wages (40 percent in 1988 and 45 percent in 2008), versus eight percent of the not-poor population, trends over the two decades were inconsistent and cannot account for the growing number of working Israelis who are poor.

Figure 25
Percent of households with low incomes out of all households
1988-2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

In conclusion, on the one hand, the sharp child allowance cutbacks hurt all households with children and particularly those households with four children or more. These cutbacks deprived many families of a major income source, especially those families with only one working head of household. It goes without saying that the economic status of families with no employed members and many children worsened even more. At the same time, tightening the eligibility criteria for other allowances (such as the single-mother allowance) likely encouraged the entry into the workforce of many people whose earning ability was not particularly high. It might be assumed that in 2008 more people were working for low pay than in previous years, but the data do not bear this out. In fact, the percentage of low wage earners within the entire poor population in 2008 was not significantly different from, and was actually slightly lower than the percentage in 1998 (although it had increased relative to 1988). The deterioration in the worker situation took place primarily during the 1990s. However, the rise in poverty rates among working people over the past decade stems mainly from the welfare system's withdrawal of support and from a worsening of living conditions for groups such as large and single-parent families that had traditionally received state assistance but now experienced cuts in support and not from a worsening of labor conditions for "weak" workers.

4. Conclusion and Policy Implications

How can policy help solve the problem of the working poor? This study indicated that poverty is due to a variety of factors, and that when tracing the reasons for poverty within specific social groups one must take the groups' distinctive characteristics into account. Nevertheless, the problem of the working poor does not exist in isolation from broader forces contributing to poverty and inequality, and, therefore, cannot be resolved without reference to poverty within the population as a whole.

For the most part, poverty affects couple headed families with a single wage earner and single-parent families headed by women. With regard to families headed by couples, one must understand the reasons why the non-working partner refrains from entering the labor market. In most cases, these partners are women who face not only constraints imposed by the labor market regarding the suitability of their skills to the jobs available, but also family constraints, particularly in the area of childcare and daycare costs. These issues may either encourage or prevent women from engaging in economic activity. They are also relevant to single-parent families in which women are the sole earners.

At the most general level, policy mechanisms can be divided into two types. The first of these focuses on the labor market and aims to improve employment opportunities and income from work. The second type is intended to improve family incomes within the transfer payment framework (pensions and other means geared toward similar goals). Since one of the primary causes of poverty among working people is low wages, one of the main policy mechanisms employed to address this problem is that of raising the minimum wage.

Using a minimum wage increase as a strategy to resolve the problem of the working poor raises a number of different issues, in particular that of the strategy's impact on the demand for workers. Essentially, the minimum wage affects workers only, and has no meaningful influence on poverty rates in general (Marx and Verbist, 2008).

Similarly, tax mechanisms (like a negative income tax) affect worker wage levels but do not necessarily have an impact in terms of labor market participation. However, minimum wage increases can be an employment incentive for certain groups, such as single mothers – particularly if they cover childcare costs. It should also be remembered that salary adjustments do not resolve the central issue of low wage employment – a problem that may be caused by the absence of the necessary skills on the part of workers. A broader policy would have to take into account the importance of education and vocational training in improving worker skills.

One of the main problems faced by working poor households is their reliance on sole earners. A large portion of the disparity between Jewish and Arab households stems from the fact that most Jewish households have two earners, while Arab households in which both partners participate in the labor force are a minority (Stier, 2010). However, because the labor market participation rate of educated and married Arab women is exceedingly high (Ben-David, 2010), a policy aimed at encouraging women's labor market participation would have to focus on employment opportunities for women with low skill levels. Policies seeking to encourage labor market participation as a way of lowering poverty rates in general, should focus both on creating suitable jobs for the low skilled population (e.g., manufacturing and service jobs) and on improving these workers' skills and marketability.

One important point to be considered is the need to improve women's ability to balance work and family life, with particular attention to those sectors characterized by large families. That is particularly relevant to Arabs and the ultra-Orthodox which are the poorest groups within both the general and the working populations as well as to single-parent families headed by women. Toward this end, the supply of subsidized day care centers might be increased, and a long school day instituted. These are measures that would make employment more feasible and enable mothers to be active participants in the labor market.

A factor that has a particularly strong impact on poverty rates, both within the population at large and among working people, is the welfare system. Studies from around the world have found that poverty rates cannot be lowered in the absence of an appropriate and supportive system of government benefits (Cantillon, Marx and Van den Bosch, 2003). Moreover, the research indicates that a welfare system intended solely for poor people does not achieve its goal and is not more effective than a universal system that supports all population segments, however much a universal system may appear to divert resources from needy populations (Korpi and Palme 1998; Oxley, Dang, Förster and Pellizari, 2001).

This study called attention to the fact that the status of working people deteriorated with particular intensity after 2003, following cutbacks in child allowances, which had previously played a major role in ensuring the well-being of Israeli families, and which had helped curb poverty rates among single-parent families headed by women. The child allowance cutbacks explain, to some degree, the spiking poverty rates among working Arab families. The income support population was also hit hard during the period in question, when many families saw their benefits slashed.

Although single mothers' labor market participation rates have risen, their employed status has not adequately compensated them for the loss of income caused by the National Insurance benefit cutbacks. These families have remained poor (Achdut, 2010). It turns out that benefit cuts on their own, as a means of influencing household behavior and forcing people into the labor market with an absence of an adequate infrastructure enabling their integration into the labor market, are of little advantage. By contrast, family oriented policies that take into account the needs and constraints of different household members have proven effective in a number of countries in bettering the situation of vulnerable groups such as single-mothers. Moreover, as long as the labor market offers only inferior opportunities for earning a living, a policy of cutbacks will not only be ineffective but will be entirely incapable of ensuring that families survive. Ultimately, such a policy will raise poverty rates and widen disparities between the various groups of which Israeli society is composed.

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Welfare and Employment Among Single Mothers Israel from a Comparative Perspective

Haya Stier^{*}

Abstract

This chapter reports on the status of single mothers in the Western world from a comparative perspective, with the aim of shining a light on the characteristics and socioeconomic status of this population in Israel. Women raising their children alone attract considerable public attention as a group, due primarily to their economic vulnerability. This comparison will focus on the demographic characteristics of single mothers, both between Israel and other countries and within each country relative to mothers in two-partner families; the study will also look at single mothers' economic status and their degree of reliance on state assistance. The family-type comparison will facilitate an understanding of the difficulties and constraints faced by single-parent families. The inter-country comparison will shed light on the causes of this group's poverty, the group's economic vulnerability, and possible ways of improving its economic status.

^{*} Prof. Haya Stier, former Chair, Taub Center Social Welfare Policy Program; Department of Labor Studies and the Department of Sociology and Anthropology, Tel-Aviv University.

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1. Demographic and Social Characteristics of Single Mothers

Within the population of Israeli families living below the poverty line – most of whom participate in the labor force – families headed by single parents are among the poorest (Eliav, Endweld, Gottlieb, Heilbrun, Toledano, Kachanovski and Shmeltzer, 2009). The phenomenon is not unique to Israel. Recent changes in family composition patterns throughout the Western world have led to a rise in the number of families headed by single parents. The growing prevalence of what is termed the “single-parent” family stems primarily from two socio-demographic developments within the industrialized countries as a group. Firstly, all of these countries are experiencing a dramatic overall rise in divorce rates, with particularly high rates among families with young children. Secondly, most Western countries have witnessed a significant increase in the percentage of children born outside of marriage. Although a substantial number of births do take place in the context of non-formal two-partner frameworks, there has been a steady rise in the number of births to women who go on to raise their children by themselves. These developments have emerged concomitantly with other major changes in the societal sphere, including a steady rise in overall educational levels, particularly those of women; a rising age of first marriage, for both women and men; and a significant increase in women’s labor market participation rates.

Most single-parent families are headed by women, in accordance with the widespread perception in most countries that women are their children’s primary caregivers, and the parties bearing central responsibility for them at the time of divorce. Single-parent families headed by women are families that are economically vulnerable. This vulnerability is due both to the families’ sole wage earner status, and to women’s disadvantaged status within the labor market. Even child support payments and assistance from former partners are not enough, in most instances, to ensure that the pre-divorce standard of living is

maintained by families headed solely by mothers. Moreover, women raising their children alone face particularly severe work-family balance difficulties, due to the absence of an additional adult in the household; these women are more limited in their ability to participate fully in the labor market. As a result of these family constraints, families headed by single mothers are more likely than couple-headed families, in nearly all Western countries, to be poor and to need support from the welfare system.

In Israel, as in other Western countries, the percentage of single-parent families has risen (Flug, Kasir and Meidan, 2005), though the phenomenon is significantly less widespread here than elsewhere in the West. This may be attributed to the strong family orientation that characterizes Israeli society, an orientation that is reflected both in divorce rates and in a relatively low percentage of children born out of wedlock. In 2007, there were 128,000 single-parent families living in Israel, amounting to 13 percent of all families with children; 95 percent of them were headed by women. These families are growing in number all the time: just a little over a decade ago, in 1995, they accounted for 9.5 percent of all families with children. Israel's single-parenthood rate is lower than that of some European countries. At the beginning of the 2000s the percentage for Britain, for instance, was 17 percent, while for Sweden it was 22 percent (Eliav et al., 2009).

The economic vulnerability of single mothers has led many countries to institute policies aimed at ensuring the well-being of these families, particularly with regard to children's needs. Some of these programs provide special supports for single-mother families that are intended primarily to raise them above the poverty line and to ensure a decent standard of living. Other programs focus on encouraging single mothers to participate in the labor market (see Blank, 2001).

A few studies (Brady and Burroway, 2010; Korpi and Palme, 1998) have shown that in those countries where the needs of single mothers are addressed within universal social policy frameworks, single-parent family poverty rates are lower and the disparity between them and two-partner

families is narrower. By contrast, in those countries where policies are oriented exclusively toward the weaker population groups, disparities between single-parent families and other family types are wider, and single-parent poverty rates are higher. In a study investigating differences in the degrees of support extended to needy families, Koreh, Gal and Cohen (2007) note that Israeli assistance levels for single-parent families (through income support) are lower than those of the central European and Scandinavian countries, and exceed only those of the US and Spain – two countries whose overall levels of support for the needy are particularly low. According to that study, countries whose assistance levels are low display exceptionally low efficacy at raising families above the poverty line. The argument that excessively generous support policies constitute a disincentive to labor force participation has not been unequivocally substantiated by studies comparing different Western countries (Destro and Brady, 2010), and has been only partly substantiated by Israeli studies (see Zussman and Frisch, 2007, and also Flug et al., 2005).

Israeli patterns of support for single-parent families have changed dramatically over the past few decades. In 1992 the Single Parent Families Law was passed, within whose framework (and in the context of Israel's war on poverty legislation of 1994-1995) special eligibility conditions for income support were granted to single mothers. This legislation, whose main purpose was to raise families out of poverty, significantly improved the economic status of families headed by single mothers; at the same time, however, it increased these families' dependence on the welfare system, and heralded a certain decline in single mothers' labor market participation rates (Flug et al., 2005). This latter phenomenon mainly characterized women whose chances of success within the labor market were low to begin with (Zussman and Frisch, 2007).

The early 2000s witnessed changes in the system of supports extended to single-parent families: benefits were significantly reduced, while programs were put into place that aimed to encourage women's

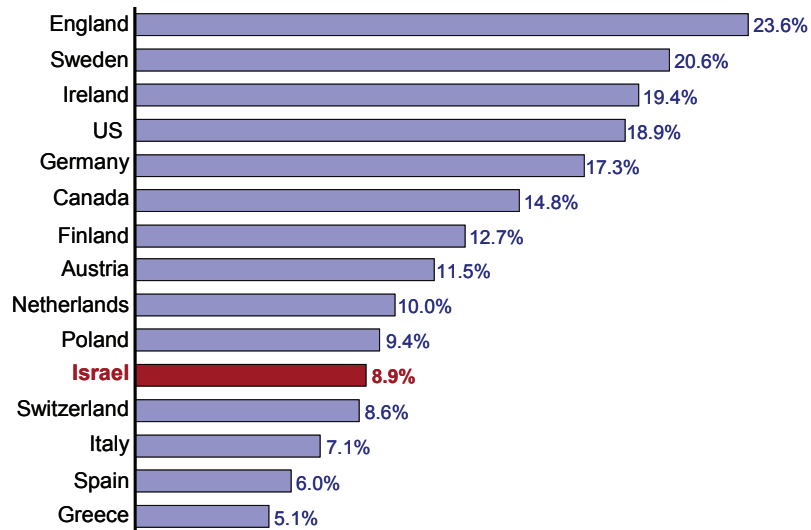
participation in the labor force. As in other countries, the basic premise that guided Israeli policy makers in their embrace of the welfare-to-work programs was that single-parent families should be freed from dependence on the welfare system (a system which, some argued, was being taken advantage of), and that single parents should be encouraged to work full-time. However, such policies do not always take into account the constraints faced by single mothers, for example, the presence of young children in the home, childcare costs, a lack of quality, subsidized childcare options, limited labor market mobility, and the like (Achdut, 2010a; Hasson, 2006).

Preliminary findings regarding job placement programs and changes in eligibility for income support benefits indicate that, although these programs help raise single mothers' labor force participation rates, they nevertheless fail to improve their household incomes in a real way (Achdut, 2010b). The period in which the Economic Arrangements Law was passed and the welfare-to-work programs were implemented also witnessed a major change in Israeli public attitudes toward single-parent families, as shown by Herbst (2009). This attitudinal change translated into a change in status for these families and the women heading them: rather than being perceived as legitimate welfare system beneficiaries whose economic plight needed to be addressed, single mothers came to be viewed as responsible for their situation, and as welfare system exploiters who did not "want" to work.

The primary goal of this portion of the study is to consider the demographic, economic and social characteristics of Israeli single mothers relative to their counterparts elsewhere in the Western world. The data provided below were taken from the Luxembourg Income Study (LIS) database, and are based on surveys conducted in the relevant countries during 2004-2005. The data refer primarily to mothers of children up to age 18, living in two-partner frameworks or as single mothers, within the age range of 18-64: mothers who are heads of households or the spouses of heads of households.

When comparing Israel to other Western countries, Israel has a relatively low percentage of single-parent families, as shown in Figure 1. About nine percent of all Israeli mothers within this study's age range fall into the "single parent" category, versus 24 percent of mothers in England, 21 percent in Sweden, and less than 20 percent in Ireland and the US (19 percent) and in Germany (17 percent). Israel's single-parent rate is very similar to those of Poland and Switzerland, though higher than the five to seven percent range exhibited by other Mediterranean countries such as Italy, Spain and Greece, where more traditional family structures also prevail.

Figure 1
Single-parent mothers as a percent of all mothers*
 2004-2005



* mothers aged 18-64.

Source: Taub Center for Social Policy Studies in Israel.

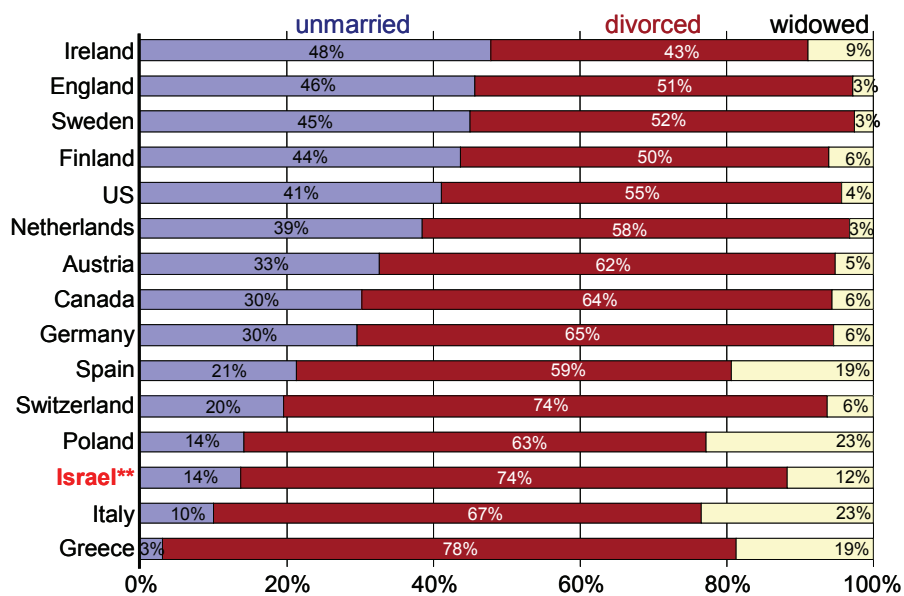
Data: Luxembourg Income Study (LIS) database.

One interesting question is that of how women come to be single mothers at all. In the past, when most women bore children within a marital framework – and when divorce was relatively rare and life expectancies were lower than today – most mothers who were sole heads of household were widows. Today, by contrast, widowhood at a young age is relatively rare, and most single mothers are divorcees or never-married women who have borne their children as single people. There is certain significance to the manner in which women become single mothers. On the one hand, some divorced women receive financial support from their former spouses, even if the amounts are small and insufficient to “maintain” the family’s pre-divorce standard of living. By contrast, single women giving birth outside of marriage do not generally receive support of this kind and may well be more vulnerable economically. Their children are entirely dependent on their employability and on government assistance. On the other hand, women who divorce after having been married for a long time are likely to have more children – children who were born when the family was in a better place economically. Moreover, these women tend to be less involved in the labor market, since during their marriage they were able to rely on their husbands’ salaries. From this perspective, the economic status of the mother who was single to begin with may be stronger, and her labor market involvement more stable, than that of her divorced counterpart.

When examining the family status of single mothers in the Western world we find that in all countries most of these mothers are divorced; that is, one may assume that they became single mothers after their marriages dissolved (Figure 2). There is great variation between countries regarding the percentage of never-married women within the single-mother population: over 40 percent of all single mothers in Ireland, England, Sweden, Finland, and the US; and, in the Netherlands, nearly 40 percent are women who have never married, although some of them may well have borne their children within two-partner frameworks of some kind. In Israel, by contrast, the percentage of never-married mothers is much smaller – 14 percent of all single mothers – and is low compared

with the other countries. Only in Italy and Greece are the percentages lower. The percentage of divorced women within the single-mother population is highest in Greece – nearly 80 percent – followed by Israel and Switzerland – 74 percent of all single mothers.

Figure 2
Single-parent mothers, by family status*
2004-2005



* mothers aged 18-64.

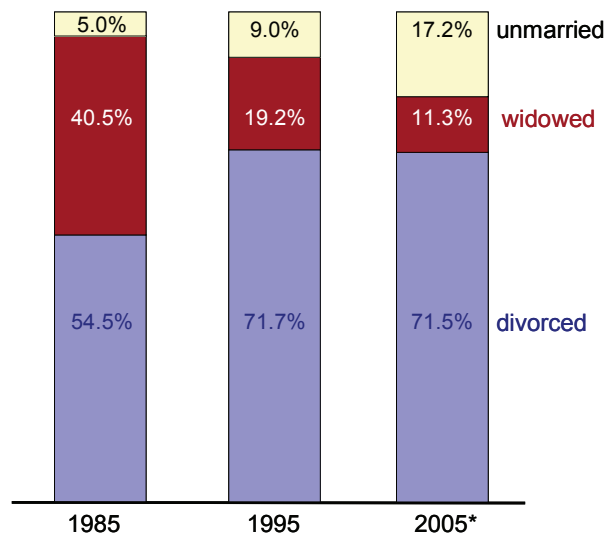
** Israel data is for 2005 only.

Source: Taub Center for Social Policy Studies in Israel.

Data: Luxembourg Income Study (LIS) database.

It should, nevertheless, be noted that the percentage of never-married mothers in Israel has risen significantly over the years. These women accounted for just five percent of all single mothers in 1985, but this figure has since risen to 17 percent (Figure 3). At the same time there has been a dramatic decline in the percentage of widows, who accounted for 40 percent of all single mothers in 1985; by the mid-2000s this figure had dropped to eleven percent (Achdut, 2007). Again, it is unclear how precisely this change in family status affects family economic status, family size, or the mother's degree of involvement in the labor market.

Figure 3
Single-parent mothers in Israel by family status
1985-2005



* These figures differ somewhat from those in Figure 2; they are from different sources.

Source: Taub Center for Social Policy Studies in Israel.

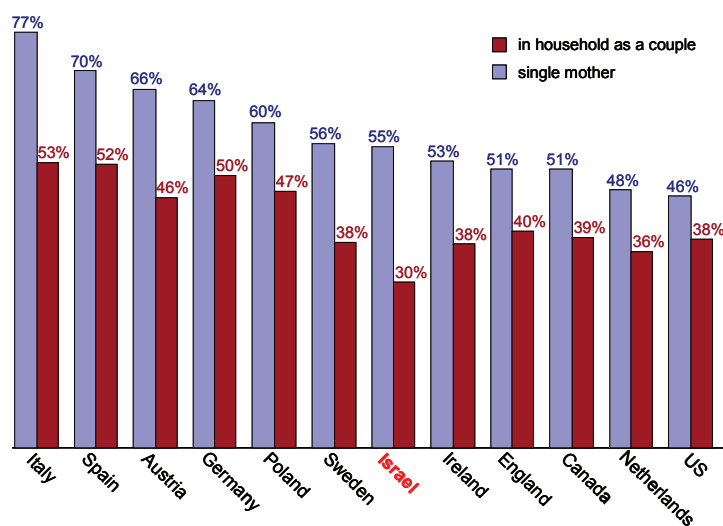
Data: Netta Achdut, 2009 (Ministry of Industry, Trade and Labor website).

Yet another dimension of the phenomenon is made clearer when the number of children per single-mother family compared with the number of children per married-mother family is examined (Figure 4, Parts A and B). In most countries a high percentage of single mothers have just one child, while only a minority of them have three children or more. By contrast, married mothers have larger numbers of children. In Israel and Sweden, for example, 55 percent of all single mothers have one child; in Austria, Spain and Germany the figure is around 66 percent, while in Italy it is 77 percent.

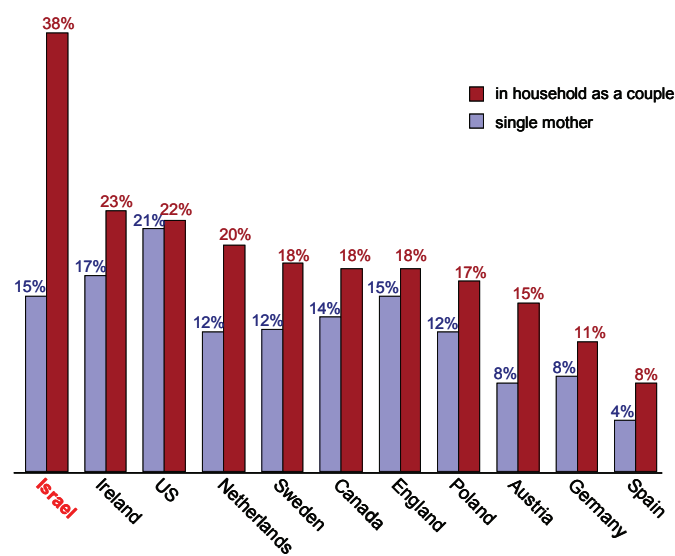
Among Israeli mothers living in two-partner households, only 30 percent have one child; in most other countries (Canada, US, Ireland, Switzerland, Sweden, England, and the Netherlands) – countries whose fertility rates are lower overall than Israel's – the only-child rate ranges from 36 to 38 percent. The figure for Israel is substantially lower than that for partnered mothers even in countries where fertility rates are exceptionally low, such as Italy, Spain and Germany, where half of all partnered mothers have just one child. In general, one finds that in most countries (except in Israel) two-partner families have one to two children; only in Israel, whose fertility rate is relatively high, do some 40 percent of families headed by couples have three or more children, compared with just 15 percent of single-parent families. However, the percentage of families in Israel headed by single mothers with three or more children is higher than that of all other countries in the sample excepting the US and Ireland. That is, Israeli single mothers have smaller families in general, and Israel is similar in this respect to other countries – although in Israel the gap between partnered and single mothers is among the highest.

Figure 4
Families by mother's family status*
 2004-2005

A. Families with one child



B. Families with 3 or more children



* mothers aged 18-64.

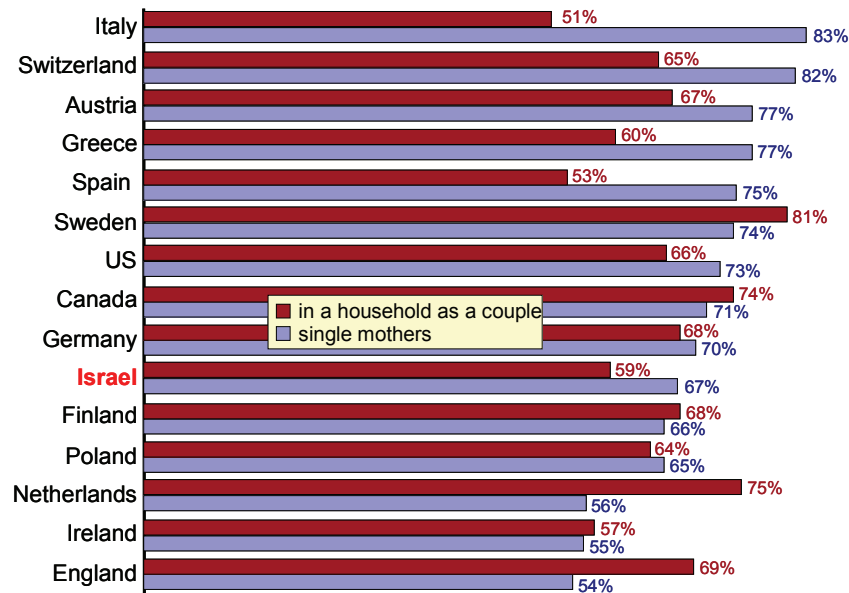
Source: Taub Center for Social Policy Studies in Israel.

Data: Luxembourg Income Study (LIS) database.

The small-family model enhances the ability of single mothers to participate in the labor force, and is likely to improve the economic status of families headed by sole wage earners. Single mothers' involvement in the labor market is regarded today, in most countries, as a major public policy objective – one geared toward reducing dependence on the welfare state and its associated allowances and benefits, and toward improving family economic status. Some countries offer these families a broad array of benefits, including single-parent family allowances, supplements to existing benefits, child support, and subsidies of various services. Labor incentive programs also exist, like wage expenditure subsidies, negative income tax, subsidized day care for children, and more. Certain countries, such as the Scandinavian and central European states, recognize these families' right to a dignified standard of living. A number of countries are distinguished by family and employment policies that encompass all mothers and are reflected in their maternity leave practices, parental leave, subsidized day care, etc. These kinds of policies, which have been found to encourage maternal employment within the population at large – and particularly policies that encourage disadvantaged groups to participate in the labor market (Mandel, 2009) – may also help single mothers to become economically active. Accordingly, Figure 5 presents employment rates for single and partnered mothers in the various countries under study. The graph reveals a high degree of variability between countries in terms of their maternal employment rates overall, and their single-mother employment rates in particular.

Italy and Switzerland have relatively high rates of single-mother labor market participation – over 80 percent. By contrast, single mothers in England, Ireland and the Netherlands display relatively low employment rates – fewer than 60 percent of these mothers work outside the home. In Israel the employment rate for this group is 67 percent, similar to that of Germany, Finland and Poland.

Figure 5
Employment rates for mothers, by mother's family status*
 2004-2005



* mothers aged 18-64.

Source: Taub Center for Social Policy Studies in Israel.

Data: Luxembourg Income Study (LIS) database.

When single-mother and married-mother employment rates are compared, major differences are found: single mother labor market participation rates do not by any means mirror those of their married counterparts. In some of the countries studied (such as Italy, Spain and Switzerland), single mothers are employed at significantly higher rates than married mothers, while in other countries they are actually less active than partnered mothers. In England, for example, 70 percent of all partnered mothers participate in the labor market, versus just 54 percent of single mothers. Even in Sweden, where mothers benefit from

employment supportive policies and where a high percentage of them participate in the labor force, the employment rate for partnered mothers (81 percent) is higher than that of single mothers (74 percent), although the disparity in Sweden is smaller than that in Britain. By contrast, other countries in the study exhibit single-mother employment rates that are significantly higher than those of mothers in two-partner households – for instance in Italy, where maternal employment rates are relatively low, only 51 percent of partnered mothers work outside the home, versus 83 percent of single mothers. Similar discrepancies exist in Spain and Switzerland.

Israel displays patterns similar to those of the latter group of countries, with single-mother employment rates exceeding those of partnered mothers in the range of eight percent. In general, Israel's maternal labor market participation rates are high.

Maternal employment rate discrepancies between the two types of household lead one to infer the existence of various factors influencing single-mothers' labor market activity. In countries whose welfare systems do not provide broad based support for maternal employment in general, the single-mother employment rate is significantly higher than that of married mothers – as may be seen in the southern European countries and the US. However, in Britain and Ireland, where government assistance is based on similar premises, it is actually partnered women with larger numbers of children who are more likely to be employed. These discrepancies may be attributable to specific differences in the types of support provided and in the eligibility criteria for benefits, which sometimes encourage women to stay out of the work force and create poverty traps; they may also be attributable to the socioeconomic attributes of these mothers, e.g. educational level.

2. Poverty Among Single Mothers and Support Provided by the Welfare System

Single mothers, as noted above, are an economically vulnerable group, both because of their status as sole wage earners for households with children, and because of the relatively low mean wage that they earn in most countries. Not only that, but the absence of additional adults and the presence of children in their households make it exceedingly difficult for these women to balance work and family life. In many cases the presence of young children and the lack of suitable childcare options make it altogether impossible for them to work.

From this perspective the countries under comparison differ greatly in the levels of assistance offered to families by their welfare and education systems. In countries where employment support for women is high, such as the Scandinavian states which subsidize day care, mothers in general, and single mothers in particular, find it easier to participate in the labor market. By contrast, in other countries where day care for young children is less readily available or more expensive, mothers find it harder to pay for childcare when they go out to work. A short school day model also makes it hard for mothers to participate fully in the labor market (Mandel and Semyonov, 2005). It is therefore not surprising that the poverty rate for single mothers is relatively high and that these mothers often find themselves in need of assistance from the welfare system. All of the countries studied have supportive systems of some kind in place, although the countries differ greatly in terms of eligibility for aid and in terms of the sums paid (See also Doron and Gal, 2000; Koreh et al., 2007).

Single-mother employment levels indicate that a significant proportion of these mothers, throughout the group of countries under study, are not dependent solely on income from work. In most countries single mothers receive some kind of support, usually based on income tests and employment levels. Figure 6 presents the array of single mother income sources, from work and from benefits paid in the various

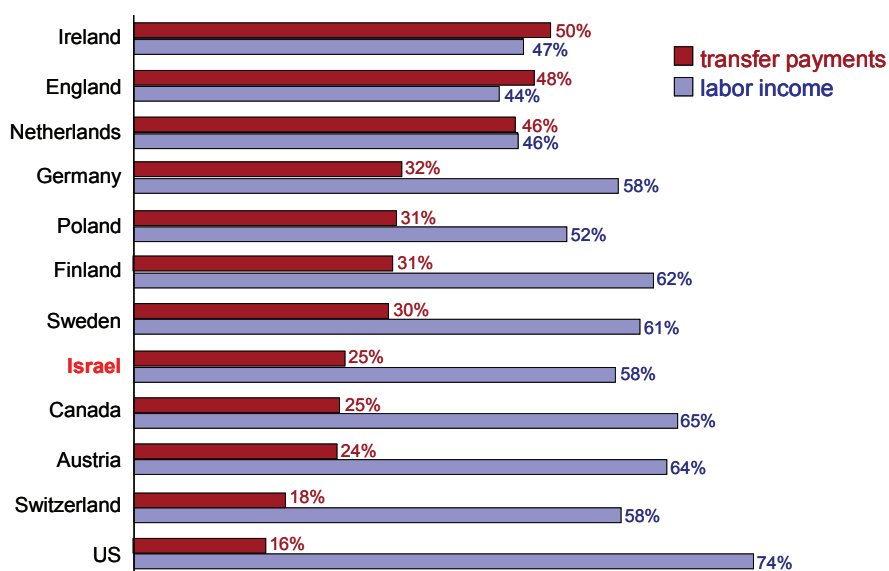
countries.¹ In the majority of countries most income is from work; there are, however, differences in levels of dependence on the state. In Israel, a quarter of the income of single-mother households comes from allowances and benefits of various kinds, and 60 percent from wages. In the US, where disadvantaged and vulnerable groups such as single mothers are offered relatively limited support, only 16 percent of all single-mother household income comes from the state, while 75 percent comes from the labor market. In Sweden and Finland, where state support is more substantial, that support accounts for a third of the income of these households, with the labor market providing nearly all the remainder. England and Ireland are distinguished by support levels that amount to nearly half of all single-mother household income, with the labor market supplying an additional 45 percent. The figures for these latter two countries correspond to relatively low rates of labor market participation for single mothers, as noted above.

In all of the countries under examination single mothers are poorer than married mothers; however, poverty rates between the countries differ, as do levels of disparity between the two population groups. Figure 7 presents poverty rates for single-parent families compared with two-partner families.² Canada and the United States have the highest single-parent poverty rates; over 40 percent of these families live below the poverty line (44.5 percent in Canada and 42.3 percent in the US), compared with an approximately ten percent poverty rate for partnered mothers in Canada (9.4 percent), and a slightly higher rate of 12 percent in the US.

¹ Households may have additional sources of income (child support, income from assets, etc.); for this reason the figures do not add up to 100 percent.

² Families with children up to age 18 and with mothers in the 18-64 age groups. The poverty line for all countries is calculated at 50 percent of the median disposable household income; in accordance with the relational approach commonly used in Israel, the equivalence scale employed is one in which the number of standardized persons per household is equal to the square root of the number of household members.

Figure 6
Income of single-parent households headed by mothers*
 by main source of income, 2004-2005



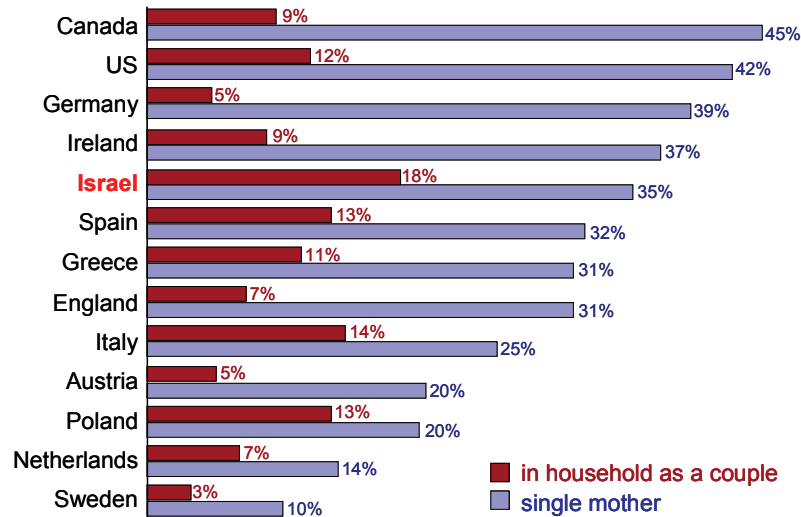
* mothers aged 18-64.

Source: Taub Center for Social Policy Studies in Israel.

Data: Luxembourg Income Study (LIS) database.

Israel resembles these latter countries in that its poverty rate for single-mother families is quite high, though lower than that of Canada: 35 percent of Israeli single mothers live below the poverty line. Israel, however, is also distinguished by its relatively high poverty rate for partnered mothers, 18 percent of whom live below the poverty line. This is the highest percentage of all the countries that were compared (Figure 7). That is to say, Israel's poverty levels are high for both family types, meaning that the disparity between them is not as wide as it is in the countries whose single-parent family poverty rates are highest of all.

Figure 7
Poverty rates in families by mother's family status*
 2004-2005



* mothers aged 18-64

Source: Taub Center for Social Policy Studies in Israel.

Data: Luxembourg Income Study (LIS) database.

This finding may be explained by the fact that Israel's high poverty rates are concentrated among families with many children (primarily Arabs and the ultra-Orthodox). However, this situation does not ease the plight of Israeli single mothers. At the other end of the international comparison spectrum, and in contrast to the high single-mother poverty rates exhibited by the aforementioned countries, certain countries are characterized by much lower poverty rates: in Sweden, fewer than ten percent of single mothers, and just three percent of partnered mothers, are poor. The situation is similar in the Netherlands, where 14 percent of

single mothers live in poverty, versus fewer than seven percent of partnered mothers.

These differences in poverty rates between the various countries cannot be explained solely in terms of single-mother labor force participation. As shown in Figure 5, American single and partnered mothers display exceedingly similar, and relatively high, labor market participation rates (over 70 percent); comparable findings are obtained for Sweden as well. Israel has a similar pattern; although its maternal employment rates are lower overall, its single-mother employment rate is higher than that of mothers in two-partner households. In England, by contrast, where single-mother employment rates are particularly low compared with those of partnered mothers, there may be more justification in attributing to this factor the relatively wide disparity between the poverty rates of single-parent families (31 percent) and two-partner families (seven percent).

Poverty rates among single-parent families, and disparities between these families and two-partner families, appear to be linked to inequality parameters and to the overall poverty rates of the countries in question. In this way it becomes possible to explain the high poverty rates and the significant disparities between the two family types exhibited by countries such as the US and Israel, compared with the much lower poverty rates and narrower gaps that characterize countries such as Sweden and the Netherlands. These differences may well be traced to demographic discrepancies between the two groups of countries – although in all of the countries included in the comparison most single mothers have just one child; only a minority of these mothers have larger numbers of children.

3. Conclusion

The international comparison of single-mother status in the Western world aimed to show degrees of similarity and difference between single-parent families headed by women, their economic status and levels of labor market participation. Since a great many structural, cultural and social factors affect economic and employment status, a comparison of single mothers with mothers in two-partner households – the group whose attributes and behaviors constitute, to a large degree, the prevailing societal norm – was done.

The review yielded several important findings: firstly, single motherhood is less common in Israel than it is in many European and North American countries. This difference may be assumed to be rooted in Israeli society's strong family orientation, as reflected in higher overall marriage rates and relatively low divorce rates, alongside relatively low rates of birth outside of marriage (Central Bureau of Statistics, 2009). The family oriented nature of Israeli society is also reflected in major fertility level discrepancies between single-parent and two-partner families, with single-parent families being significantly smaller than two-partner families.

Although in most countries single motherhood is due to divorce and is associated with low fertility rates, the gap between the two family types is particularly wide in Israel. Israeli single-mother employment rates are also higher than those of partnered women, and are similar to those of single mothers in other countries.

These findings notwithstanding, Israeli single-parent families are quite poor, compared both with Israeli two-partner families and with single-parent families in other Western countries. Israel was found to be among the lower ranking countries in terms of the level of support that it offers to single mothers, and in terms of the resources that it devotes to raising these mothers out of poverty – similar to such economically liberal countries as the US, Canada and Ireland. The international comparison

shows Israel's level of state support for single mothers to be relatively low compared to most of the countries included in the study.

It should be noted that poverty rates give only a partial picture of family economic status, inasmuch as they are based on income rather than on family expenditure levels. Policy changes that were instituted during the 2000s, including broad benefit cutbacks and stiffer eligibility criteria for income support drove many mothers of young children into the labor market without offering them any viable means of achieving a work-family balance. When mothers of young (pre-school-aged) children go out to work, they encounter high costs in the absence of subsidized day care and other mechanisms supportive of their employment. Countries that fail to address the constraints faced by single mothers, both in terms of the labor market opportunities available to them and in terms of childcare expenses, will not be able to improve these mothers' income levels significantly, even in the case of mothers who are employed. A few countries, like the Scandinavian states, have successfully dealt with these issues both by offering comprehensive support for maternal employment (through lengthy maternity leaves and subsidized day care), and by extending specific and relatively substantial financial assistance to single mothers (over and above the support provided to all families with young children), in order to help them achieve a work-family balance. Although a relatively generous benefit policy for single mothers (such as prevailed in Israel before the Economic Arrangements Law was passed) may constitute a disincentive to employment, it should be noted that employment itself does not prevent poverty – particularly when it is not accompanied by policies that ensure the availability of quality childcare while also guaranteeing an appropriate level of income.

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III. EDUCATION

Developments in Israel's Education System

Nachum Blass*

Abstract

The chapter discusses developments in Israel's education system from preschool to the end of secondary school education with an emphasis on demographic changes in the system and its components. Two prominent features are the rising share of enrollment in unofficial recognized Arab schools and the growing trend of extending kindergarten by an extra year for six-year-olds. Comparisons of teachers' pay and work conditions in Israel and other countries are based on the OECD publication "Education at a Glance." Once data from Israel are properly adjusted and corrected, Israeli teachers fare much better comparatively than is commonly thought. The chapter's final section discusses pupils' achievements on the matriculation exams. Although the percentage of pupils receiving a matriculation certificate has remained stable in recent years, when viewed along with the growing number of ultra-Orthodox and East Jerusalem Arab pupils who opt out of these exams, there is an increase in 12th grade enrollment rates and in the percentage of pupils taking the matriculation exams, earning the matriculation certificate, and meeting higher education admission requirements.

* Nachum Blass, Senior Researcher, Policy Fellow, Taub Center Education Policy Program.

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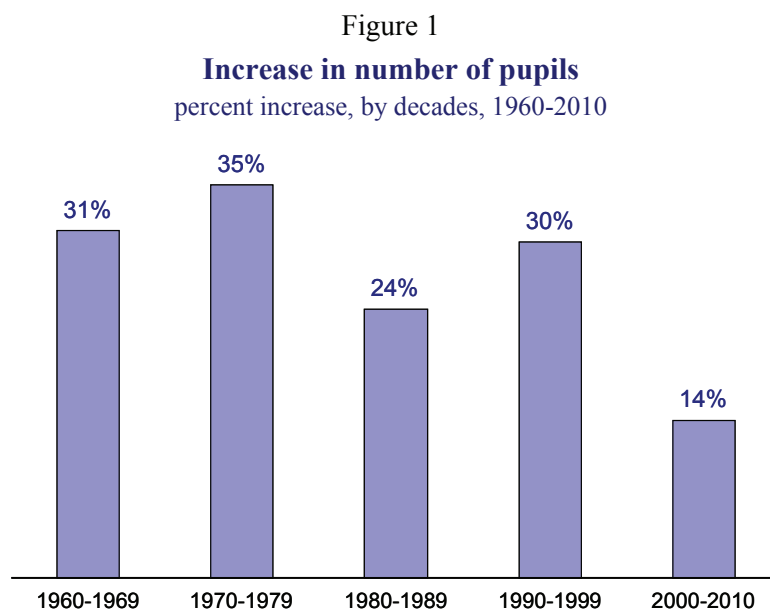
Developments in Israel's education system have been significantly affected by two main factors: major changes in the system's demographic structure, and the relative freezing of education budgets. Though both issues were discussed in the Taub Center's 2009 report ("Israel's Education System: A Domestic Perspective"), responses to the report tended to focus on the former issue at the expense of the latter. The demographic changes reported in 2010 continued at a similar pace over the past year, while education budgets have undergone improvement (see also Dan Ben-David's chapter, "Israel's Educational Achievements: Updated International Comparisons," in this *Report*).

Section 1 of the current chapter surveys changes in the pupil population. Section 2 discusses teachers' employment patterns, work conditions and compensation, with international comparisons based on the OECD's 2010 report *Education at a Glance* (henceforth *EAG 2010*). Section 3 examines pupils' achievements on the matriculation exams.

1. *The Pupil Population: Growth and Demographic Shifts*

Israel's pupil population has grown more slowly in the recent decade than in prior ones, with the rate of growth dropping from 25-35 percent in the four previous decades (1960-2000) to only 14 percent in 2000-2010 (Figure 1).

The relatively slow general rate of growth conceals, however, considerable variation across the education system's various sectors as well as within each sector. Table 1 compares the Jewish and the Arab sectors: from 2000 to 2010. The total number of pupils in primary and secondary schools grew by only eight percent in the Jewish sector and by over 40 percent in the Arab one. Since 1960, the number of Jewish pupils has multiplied by 2.6, the number of Arab pupils by 12.6. The right-hand columns of Table 1 indicate the steep decline in the pupil population's rate of growth in both sectors over the last few decades.



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Table 1. **Jewish and Arab pupils**
absolute numbers and the addition every decade, 1960-2010

	Total		Addition every decade			
	absolute numbers		absolute numbers		percent	
	Jews	Arabs	Jews	Arabs	Jews	Arabs
1960	429,586	31,905				
1970	531,698	72,018	102,112	40,113	24	126
1980	652,989	159,261	121,291	87,243	23	121
1990	799,128	207,807	146,139	48,546	22	30
2000	1,025,931	279,027	226,803	71,220	28	34
2010	1,105,208	402,660	79,277	123,633	8	44

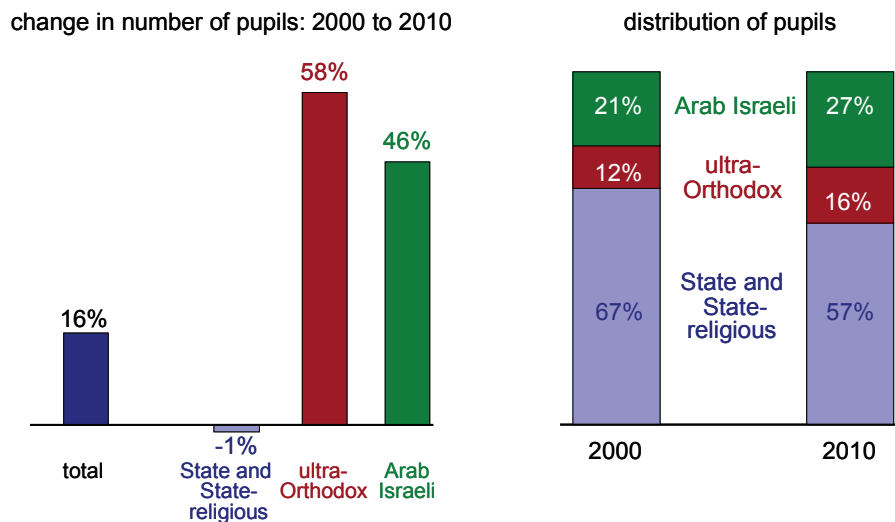
Source: Central Bureau of Statistics.

The share in the total pupil population of Jewish State schools (State and State-religious) dropped by ten percent in the last decade, while the share of ultra-Orthodox Jewish pupils increased by four percent and of Arab pupils by six percent (Figure 2). The ultra-Orthodox sector has grown more rapidly than the Arab sector in the recent decade, and is expected to grow even more rapidly in future years due to the different contribution in each sector to the two main determinants of growth: birth rates and enrollment rates. Over the years, both high birth and rising enrollment rates have contributed to the growth of the Arab pupil population, whereas the growth of the ultra-Orthodox sector has largely resulted from high birth rates. In the 1990s these trends were balanced to

Figure 2

Total number of pupils

by sector and supervisory authority, 2000-2010



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

some extent by the effect on the mix of the Jewish pupil population of immigration from the former Soviet Union, which has diminished in the recent decade. The Arab pupil population is expected to grow more slowly in future years due to falling birth rates and the exhausted potential for enrollment growth. A similar slowing is not expected in the ultra-Orthodox Jewish sector, where, as noted, the main cause of growth has been high birth.

1.A. Developments in the Jewish Sector (by school type)¹

- **State schools.** The number of pupils in Jewish State schools fell from 682,000 in 2000 to 657,000 in 2010. Different trends occurred, however, in primary and in secondary schools. The number of pupils in primary schools fell sharply earlier in the decade but then leveled off and, since 2006, resumed growth, returning in 2010 to 2000 levels. By contrast, the number of pupils in secondary schools grew until 2002 but then began to fall, and is six percent lower in 2010 than in 2000. The number of pupils in “recognized” State schools (often referred to as “private” schools) doubled, from 2,500 in 2000 to 5,000 in 2010, but, at only two percent of the Jewish State school pupil population, remains negligible and does not mark a significant shift towards private education. Sixty percent of these 5,000 pupils attend a mere handful of institutions (the Hebrew Reali School in Haifa, grades 7-8 of the Jerusalem Academy for Music and Dance, Boyer School in Jerusalem, and Aleh High School for Arts and Sciences in Lod).

¹ Data are based on the Israeli Ministry of Education's “A Broad Perspective” (published on the Ministry of Education's website). Though the data occasionally diverge from those of the Central Bureau of Statistics, we prefer to use them because the Ministry of Education updates its administrative data more frequently.

- **State-religious schools.** The number of pupils in State-religious schools grew steadily, though very slowly, from 190,000 in 2000 to 204,000 in 2010 (a seven percent increase). The growth was steeper in primary (twelve percent) than in secondary (two percent) schools. “Recognized” schools constitute a very small share of this sector as well: though the pupil population in “recognized” religious schools grew from 2,700 in 2000 to 4,000 in 2010, it still constituted only four percent of the total number of pupils in religious public schools.²

- **Ultra-Orthodox schools.** The most drastic changes occurred in the ultra-Orthodox education system, whose pupil population grew by 58 percent between 2000 and 2010. This represents an annual growth of almost five percent, a fact that led to extreme changes in the portion of ultra-Orthodox education out of the total Jewish education (Table 2).

Table 2 shows the changes in ultra-Orthodox education since 1960. From 1960 to 1980 the portion of ultra-Orthodox pupils out of all Jewish pupils in the education system was trending down. From 1980 to 2010 there has been a continuous rise in their portion. There is a large difference between the annual rates of growth from 2000 to 2005 and from 2005 to 2010: from 2000 to 2005 the numbers of pupils in the ultra-Orthodox education system entering first grade rose by 3.3 percent and from 2005 to 2010 by some two percent. This suggests a slowing down – although not a halt – in the rising trend in ultra-Orthodox education.

² The small number of pupils in “recognized” schools, both non-religious and religious, does not necessarily indicate parental satisfaction with regular public education. Rather it may indicate the scarcity and high cost of private education, on the one hand, and the availability of alternatives to regular public education within the public system itself, on the other – for example, via special schools operating within the public system, or (especially in the religious sector) via incorporating entire school networks which in effect operate as private institutions into the official public system.

Table 2. **Ultra-Orthodox education as a percent of all Jewish education,* by level of education, 1960-2010 (percent)**

	First grade	Primary	Secondary
1960	7.6	6.6	-
1970	6.2	6.6	3.7
1980	4.9	5.7	4.0
1990	6.3	7.6	5.7
2000**	19.4	20.4	14.8
2010	24.7	28.4	20.2

* All primary education goes through sixth grade except for the ultra-Orthodox education where grades seven and eight are included in primary education. For this reason, the portion of ultra-Orthodox in primary education out of all pupils in primary education is greater than its portion in first grade.

** In 2000 there was a change in data gathering: *Talmud Torahs* were included in the official statistics. For this reason it seems that the statistics for 1999 for the number of ultra-Orthodox pupils were skewed downward.

Source: Central Bureau of Statistics.

It is worth noting that ultra-Orthodox education comprises four different institutional systems: (1) the older network of “Independent schools” (*Hahinuch Ha’atzmai*); (2) the newer network of *Ma’ayan Ha’hinuch Ha’torani* schools; (3) “unofficial recognized” schools not affiliated to either network; (4) exempt schools (Table 3).³ The four

³ Israel’s Compulsory Education Law distinguishes between three types of educational institutions: official, recognized, and exempt. Official schools are run by the State or municipalities (or both) and are subject to State guidelines and regulations. Recognized schools are run by non-State, non-municipal organizations; though supervised by the State, they are subject to less regulation. Exempt schools (so called because pupils enrolled in them are recognized as satisfying the requirements of the Compulsory Education Law) are subject to minimal supervision. Lower supervision levels usually entail lower public budgets (although institutions belonging to the above mentioned ultra-Orthodox networks are an exception to this rule).

systems differ considerably, both socioeconomically and in terms of curricula and teaching methods. While the older network of Independent schools – the largest and most established of the four systems, with the relatively largest number of schools – grew between 2000 and 2010 by a “mere” 38 percent, the *Ma'ayan* network grew by 107 percent, exempt schools by 37 percent, and other “unofficial recognized” schools by a staggering 183 percent (see Figure 3). As the data reveal, most growth in the ultra-Orthodox sector has been concentrated in smaller institutions which are less closely supervised by the Ministry of Education.

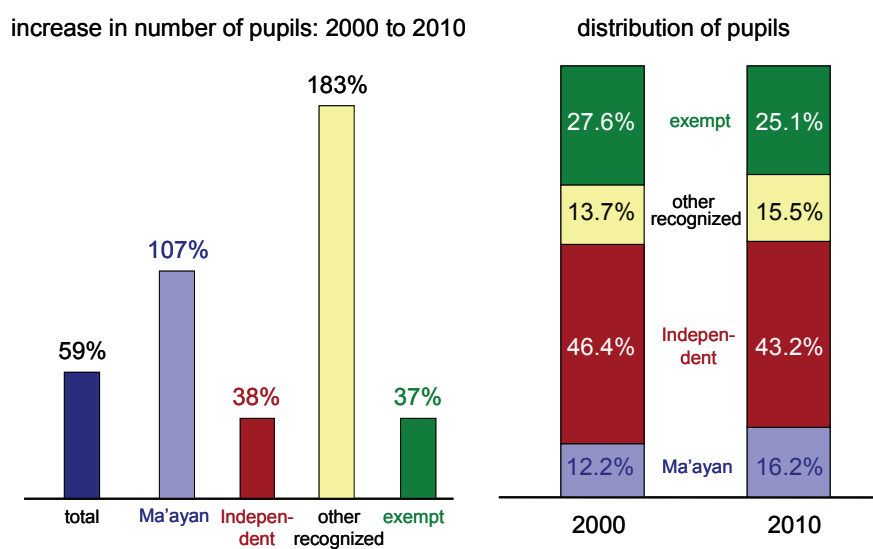
These demographic changes have significant implications. First and foremost, since ultra-Orthodox curricula stress religious studies over Hebrew, mathematics, English, computer literacy and civics, growth in the relative size of the ultra-Orthodox pupil population is tantamount to an increasing percentage of Israeli pupils whose educational experience fails to respond to the needs and values of Western democracies or to meet the demands of developed modern economies. Second, since the ultra-Orthodox population is largely poor, growth in the relative size of the ultra-Orthodox pupil population is as good as an increasing percentage of pupils whose socioeconomic background is likely to have adverse effects on academic achievements. Both of these claims are factual statements and not value judgments about the ultra-Orthodox way of life and standard of living. Finally, the growing share of non-network (exempt and unofficial recognized) schools indicates a growing trend of segmentation in ultra-Orthodox education and the proliferation of a “culture” of small and very small schools, a phenomenon contributing significantly to rising education costs.

Table 3. **Pupils in primary ultra-Orthodox education**
by sub-systems, 2000-2010

	Total	Ma'ayan	Independent	Other Recognized	Exempt
2000	111,878	13,943	55,755	9,701	32,479
2005	141,450	17,324	65,595	19,449	39,082
2010	179,812	28,800	76,824	27,483	44,573

Source: Central Bureau of Statistics; Ministry of Education.

Figure 3
Pupils in ultra-Orthodox primary school system
by sub-systems, 2000-2010



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

1.B. *Developments in the Arab Sector by Legal Status*

Non-Jewish education in Israel (often referred to generally as “the Arab sector”) is divided into four sectors by the Ministry of Education: the Arab sector (which, like its Jewish counterpart, is further subdivided into “official” and “unofficial recognized” segments) and the Bedouin, Druze, and Circassian-Samaritan sectors. (The Circassian-Samaritan sector is especially small and will not be included in the analysis.) A further, informal distinction is made between Muslim pupils, most of whom attend “official” institutions (though, as discussed below, growing numbers are making the transition to unofficial recognized schools), and Christian pupils, many of whom attend unofficial recognized institutions.

As Table 4 and Figure 4 indicate, the non-Jewish sectors differ considerably in both absolute and growth terms. While the Bedouin sector grew by 74 percent over the last decade, the Druze sector has grown by only 14 percent. The number of pupils in official Arab schools has increased by 31 percent; the pupil population in unofficial recognized Arab schools has grown by 91 percent.

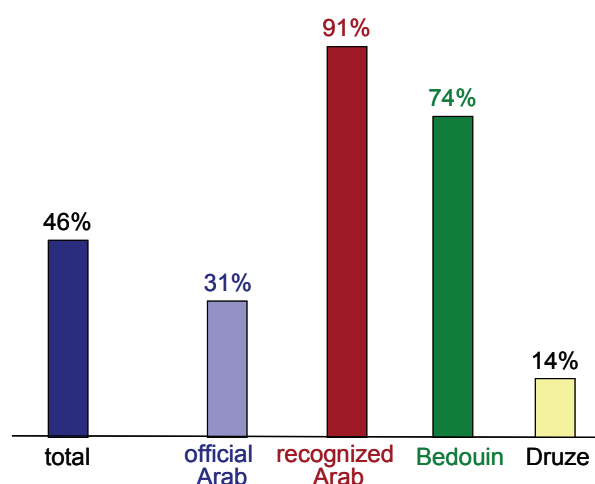
The Arab sector’s total growth rate over the last decade (46 percent) has been lower than that of the ultra-Orthodox Jewish sector (61 percent) and is expected to drop further due to the already high enrollment rates and the falling birth rates among Arab Israelis in recent years.

Table 4. **Pupils in the Arab education system**
primary and secondary education, by sub-sectors, 2000-2010

	Total	Arab	Arab recognized but not official	Bedouin	Druze
2000	276,280	159,048	42,342	45,317	29,573
2005	341,382	192,222	55,360	61,934	31,866
2010	402,660	209,138	80,735	79,037	33,608

Source: Central Bureau of Statistics.

Figure 4
Cumulative increase in number of Arab Israeli pupils
 by primary and secondary sub-groups, 2000-2009



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

The considerable growth of unofficial recognized Arab schools (often run by churches) points to an especially interesting phenomenon. In spite of supposedly catering to Christian Arabs, whose birth rates are much lower than those of their Muslim counterparts (as a matter of fact they are even lower than the Jewish rates, and this should cause a decline in their share of the pupil population) these schools have enjoyed surprisingly rapid growth. Though – until now – a handful of secondary schools with outstanding matriculation results have drawn most of the public attention directed at this sector, unofficial recognized primary education has enjoyed an even higher growth rate than its secondary counterpart (109 percent and 80 percent, respectively). This phenomenon is largely due to the steep increase in the number of pupils in unofficial recognized primary schools in East Jerusalem: from 2,908 in 2000 to 16,163 in 2010.

Contrast this with the milder increase in the number of pupils in official primary Arab schools in Jerusalem: from 22,500 in 2000 to 25,480 in 2010. The difference is probably due to the great shortfall in the construction of new official schools in East Jerusalem, which forces parents to look for alternatives. Other possible causes (though this is a mere conjecture) are the influx into East Jerusalem of new Arab residents who cannot enroll in official schools and/or the choice of non-Jerusalem residents to enroll their children in East Jerusalem schools. We have but scant information about the schools in question, but these developments are likely to have implications beyond the educational ones. The expansion of secondary education is also partly due to the rising number of pupils studying in East Jerusalem secondary education schools who did not find a place at official schools, although it is primarily due to the growing tendency among Muslim families to transfer their children from official schools to unofficial recognized Christian institutions.

Unofficial recognized Arab secondary education is yet to be studied in depth. Schools belonging to this sector are unique in many respects, not least because of their exceptional achievements on the matriculation exams. In a recent symposium on Arab education in Israel organized by the Taub Center's Education Policy Program, Dr. Khaled Abu-Asba offered various conjectures to explain the expansion of such schools. The main cause postulated was growing dissatisfaction among the wealthier members of the Muslim Arab population with official public education. They can afford to enroll their children in alternative, mostly elitist, high-tuition, highly selective schools. This trend might prove destructive for Arab public education and for the State's impact on education (and other areas as well) in the Arab sector.

Also worth noting is the relatively low growth rate of the Druze pupil population in recent years. Whether this is due to falling birth rates among the Druze population and/or to the transfer of Druze pupils to official Arab schools (in mixed municipalities) or to unofficial recognized Arab schools is not yet clear, although both explanations are probably true to some extent.

1.C. Extended Kindergarten Enrollment of Six-Year-Olds

Although legislation extending compulsory education to three- and four-year-olds had been completed in 1996, it has never been fully implemented.⁴ The Ministry of Finance and the Ministry of Education have cited insufficient funds and competing priorities to explain their slow implementation of the law. In recent years, however, the Ministry of Education has increasingly unintentionally and by default allocated millions of shekels, which could have been used to extend compulsory education to three- and four-year-olds, to funding the continued kindergarten enrollment of six-year-olds who – following the regular course of events – would otherwise leave kindergarten in order to enter the first grade.

Current regulations allow six-year-olds to remain in kindergarten rather than move to the first grade, only after receiving a recommendation by psychological services which is based on the results of school preparedness tests, or other forms of examination. The number of children who do so has increased rapidly since 2001. Spending an extra year in kindergarten may be perfectly fine in itself if parents deem their children unprepared for primary school. Given a fixed budget, however, funding the continued kindergarten enrollment of a six-year-old is quite expensive, and comes at the expense of funding free education for a three- or four-year-old, or other initiatives and programs that may be more important to education policy makers.

How widespread is the phenomenon in Israel? While Ministry of Education policies toward six-year-old children remaining in kindergarten have not changed, the actual number of six-year-olds remaining in kindergarten has increased since 2001 immensely. What is interesting for our purposes is not the increase in the absolute number of six-year-olds remaining in kindergarten, but their growing share in the total six-year-old population. This share, it turns out, rose sharply from

⁴ The evolution of the Compulsory Education Law, first enacted in 1982, is described in detail in Blass and Adler, 2004.

nine percent to 17 percent over only eight years. (Central Bureau of Statistics data for the preceding years estimate the number of six-year-olds remaining in kindergarten at roughly 4,000, or four to five percent of the six-year-old population.) A similar (though less rapidly occurring) phenomenon has been reported in the United States, where the percentage of six-year-olds attending first grade fell from 96 percent to 84 percent over a period of forty years (Demming and Dynarsky, 2008).⁵

What explains this rapidly growing trend of continued kindergarten enrollment in Israel? Such a rapid increase in the percentage of Israeli six-year-olds unprepared for primary school (even if some data do indicate an increase in the percentage of children with learning disabilities) is quite unlikely. A more likely explanation is that regulations concerning continued kindergarten enrollment by six-year-olds are not as strictly enforced as they used to be, and that – for various reasons⁶ – parents have become less eager to have their children make the transition to primary school at the age of six.

As Table 5 shows, continued kindergarten enrollment by six-year-olds has increased in both the Jewish and the Arab sectors, although the numbers are different: from twelve percent to 20 percent in the Jewish sector, and from one percent to eight percent in the Arab sector. Large differences exist within the Jewish sector as well: the phenomenon is much more widespread in the ultra-Orthodox sector than in public (State-religious and State) schools.

⁵ It is worth noting that some of the children in question start kindergarten at a later age rather than spend an extra year in kindergarten.

⁶ One such reason may be that parents today tend to be more concerned with the child's well-being and "quality of life" than with the need to "be done with school as early as possible." The prevalence of such preferences is indicated by the findings of the annual Taub Center 2010 Social Survey, presented in the last chapter of this book. Another reason is that parents concerned with their children's well-being may want them to be among the older and not the younger pupils in their class.

Table 5. **Six-year-olds who remain in kindergarten**
total and by sector, 2001 and 2008 (absolute values and percent)*

	2001		2008	
	Absolute	Percent of 6-year-olds	Absolute	Percent of 6-year-olds
Total	10,337	9	23,249	17
Jews	10,005	12	20,283	20
Arabs	332	1	2,966	8

* The Central Bureau of Statistics figures indicate a large and unexplained jump in the number of 6-year-olds remaining in kindergarten in the years 2001-2004 versus 2005-2010. Data from the Ministry of Education also points to a sizeable rise in the rate of 6-year-olds remaining in kindergarten although lower than that indicated by the Central Bureau of Statistics data. Due to a lack of agreement in the definitions between the two data sets, the data from Central Bureau of Statistics was used.

Source: Central Bureau of Statistics.

Whereas the pedagogical value of keeping a child in kindergarten for an additional year is open to question, studies in the United States (Demming and Dynarsky, 2008; Elder and Lubotsky, 2006) have shown it to have clear economic implications on the individual level: an additional year of education expenses (or, alternatively, of home rearing expenses) for the parents, and a year of delayed future earnings for the child. Our emphasis in the current context, however, is on costs to society beyond the individual level. The budgetary cost for the State of each kindergarten pupil is approximately NIS 13,000 per year, which, multiplied by the number of six-year-olds remaining in kindergarten in 2009, comes to NIS 300 million. Even assuming that some children need to stay in kindergarten for purely pedagogical reasons, a large portion of this considerable sum could go towards fully extending compulsory education to three- and four-year-olds.

The budgetary costs of allowing six-year-olds to remain in kindergarten can also be calculated in terms of the number of

kindergarten classes needed to accommodate such children. Given an average of 30 children per kindergarten, the more than 23,000 six-year-olds remaining in kindergarten take up approximately 800 kindergarten classes. If the phenomenon persists at current levels, the same number of new kindergartens will need to be added to accommodate a similar number of three- and four-year-olds. Moreover, there are the additional recurring costs of salaries and operations for some 1,000 kindergarten teachers and some 800 teacher aides, which amounts to close to NIS 250 million. The enormity of the costs requires extensive discussion of the proper priorities of pre-primary education.

2. Teachers: Changes in Employment Patterns, Work Conditions, and Salaries

2.A. Main Changes in Teachers' Characteristics and Employment Patterns

- **Rising age and seniority.** Average teacher age and seniority are largely determined by entry and retirement patterns. Several trends within the education system affect these patterns, in particular the rate of growth of the pupil population, changes in average class size, and budgetary decisions concerning the number of instruction hours allotted per class and per pupil. Trends outside the education system also affect teacher age and seniority, sometimes in opposing directions. For example, adverse economic conditions may, on the one hand, induce teachers to postpone retirement, pushing age and seniority up, and, on the other, encourage new teachers to enter the profession, bringing them back down. Upswings in the prestige of teaching relative to other professions may have a similar two-way effect.

Later retirement among older teachers and high attrition among younger teachers increase average teacher seniority, while growth in the pupil population and the addition of new schools and classrooms cause

average teacher age and seniority to fall. Various pedagogic and administrative steps which increase the demand for teachers tend to decrease average teacher age (unless the growing demand is met by increasing the workload of senior teachers, either by postponing their retirement or by the rehiring of retired teachers).

The rapid growth of the Arab pupil population (due to natural growth and rising enrollment rates) and the more moderate growth of the Jewish pupil population over the last decade have affected average teacher age and seniority in both sectors. While average teacher age and seniority in the Arab sector did not fall, they rose more slowly than in the Jewish sector. Other factors which tend to affect average age and seniority have not undergone dramatic changes.

In pre-primary education, the most striking development in the last decade has been a significant drop in the percentage of younger preschool teachers in the Arab sector, contrasted with a more moderate drop in the Jewish sector (Table 6). The percentage of teachers aged 50 and up in Arab primary schools has almost doubled, though it is still much lower than the percentage of such teachers in Jewish schools. The average age of teachers in Arab secondary schools has also gone up, though they are still younger on average than their counterparts in Jewish secondary schools. It is worth noting that despite the increase in average teacher age, average seniority does not exceed twenty years in the Jewish sector and fifteen years in the Arab and more than 60 percent of school and preschool teachers are below the age of 50. In other words, most teachers are not expected to retire in the coming decade. Average age and seniority are generally on the rise in both sectors, though teachers in the Arab sector are still younger and with less seniority than their Jewish sector counterparts. The increase in average seniority has had a direct effect on teachers' salaries, as every additional year of seniority raises salaries by two percent (and possibly by more, since salary raises are steeper during the first five years of teaching).

Table 6. **Selected characteristics of teacher workforce**
by sector, by educational levels, 2000 and 2010

	Jews		Arabs	
	2000	2010	2000	2010
Pre-Primary				
Age: up to 29 (%)	10.3	8.7	36.1	19.3
50+ (%)	18.1	33.6	4.7	6.0
Degree holders (%)	35.4	71.7	20.4	75.7
Weekly teaching hours – average	25.6	25.0	28.6	24.9
Seniority (years) – average	15.9	17.6	10.5	12.8
Primary				
Age: up to 29 (%)	18.2	14.6	33.5	23.5
50+ (%)	16.6	25.7	8.3	14.3
Degree holders (%)	50.2	72.9	37.9	79.9
Weekly teaching hours – average	22.6	25.1	24.9	28.3
Seniority (years) – average	14.3	15.6	12.5	12.8
Secondary				
Age: up to 29 (%)	11.4	7.1	23.1	17.6
50+ (%)	27.3	38.4	13.7	17.2
Degree holders (%)	76.6	85.3	80.2	87.5
Weekly teaching hours – average	21.2	23.3	24.1	25.1
Seniority (years) – average	17.0	18.9	13.3	13.7

Source: Central Bureau of Statistics.

- **Rising percentage of teachers with higher education.** The rapid academization of the teaching profession has been among the most striking developments in Israeli education over the last decade. The process has occurred more rapidly in the Arab than in the Jewish sector (Table 6): more than 75 percent of Arab and 72 percent of Jewish preschool teachers had an academic degree in 2010, contrasted with only eleven percent and 35 percent, respectively, in 2000. The percentage of college-educated teachers in Arab primary schools increased from 40 percent to 80 percent and is now higher than in the Jewish sector. Academization has been less dramatic in secondary schools, where the percentage of college-educated teachers was already very high in 2000. The percentage of college-educated secondary school teachers is again higher in the Arab than in the Jewish sector.

Does a higher percentage of college-educated teachers imply better teaching quality? Not necessarily. First, many college-educated teachers are graduates of the foreign university branches which thrived in Israel in the late 1990s and early 2000s,⁷ while many others attended non-degree-conferring teachers' colleges (requiring an additional year of study at an academic institution for completion of the degree).⁸ Since academic quality at foreign university branches was not (to put it mildly) tightly supervised, the effect of degree holding on teaching quality is doubtful in such cases. Finally, studies (e.g. Blass, 2008) suggest only a slight relation between having an academic degree, even from established, reputable academic institutions, on the one hand, and teaching quality as measured by pupil achievement and other relevant pedagogic and social indicators, on the other. Some qualifications are in order, however:

⁷ Data by the Central Bureau of Statistics and the Ministry of Education fail to distinguish between graduates of teachers' colleges, Israeli universities and foreign university branches.

⁸ The number of students completing the Bachelor's degree in continuing education programs at teacher training institutions has matched over the last decade the number of first-year students in teacher training colleges conferring B.Ed. degrees. (See Figure 8.53 in the Central Bureau of Statistics, *Statistical Abstract of Israel*.)

studies have shown that seniority tends to have a positive effect on teaching quality early in a teacher's career and that formal education has a positive effect on secondary school mathematics teaching. Academic certification clearly affects teachers' salaries, however: Israeli teachers automatically receive a 15 percent raise for the Bachelor's degree and an additional five percent for a Master's degree. The budgetary effects of linking salaries to formal education and the absence of clear evidence for the latter's effect on teaching quality have recently induced (for example in the United States) calls to cancel pay raises tied to the Master's degree.⁹

- **Rising teacher workloads.** One noteworthy change with far-reaching implications has been the dramatic increase in teaching workloads in both the Jewish and the Arab sectors between 2000 and 2010 – from 22.6 to 25.1 instruction hours per teacher in Jewish primary schools, and from 24.9 to 28.3 instruction hours per teacher in Arab primary schools (Table 6). (The increase is even more radical when 2010 is compared with 1995: see Blass, 2010b, Figure 11.) If the increase was limited to primary education, we would perhaps attribute it to the implementation of the “New Horizon” reform which has higher teaching workloads among its stipulations. Similar increases have occurred, however, in Jewish and, to a lesser extent, in Arab secondary education (ten percent and four percent, respectively). The change has yet to receive satisfactory explanation, although it probably reflects fundamental changes in the preferences of primary and secondary (though not pre-primary) teachers. It is worth noting in this context that despite frequent claims concerning an alleged teacher surplus in the Arab sector which supposedly requires

⁹ The issue was raised by U.S. Secretary of Education Arnie Duncan and by Bill Gates, an educational philanthropist, at a 2010 convention held in the United States: see <http://thegazette.com/2010/11/22/should-teachers-with-masters-degrees-be-paid-more-if-it-doesnt-help-kids> (retrieved 7 December 2010). For an important and stimulating discussion of the topic in The New York Times (16 August 2009), see <http://roomfordebate.blogs.nytimes.com/2009/08/16/education-degrees-and-teachers-pay> (retrieved 7 December 2010).

reducing the workload of existing teachers in order to recruit new ones, teaching workloads in this sector have increased.

It is feared that the rise in age and seniority and the consequently rising retirement rate will create a shortage of teachers, especially in certain subjects and locales. As a separate Taub Center publication on the topic (Blass, 2010a) indicates, however, and as further data presented below show, the teacher shortage is less severe than public discussions sometimes portray it to be.¹⁰ Strenuous efforts to recruit teachers from places other than the two traditional sources – teacher training colleges and university education departments – have achieved little (despite media fanfare) due to their limited scope and the uncertain staying power of the teachers recruited through them. Steps like establishing new teacher training programs or significantly expanding existing ones might prove expensive, redundant, and even harmful if the recruitment of unsuitable teachers lowered the profession's prestige.

Recent data from the OECD publication *Education at a Glance 2010* further support the claim that there is no real shortage of qualified teachers in Israel and that local shortages can be overcome by various structural-organizational changes and incentives. *EAG 2010* reports both the number of “compulsory instruction time per pupil” (“vertical hours” per class in the terminology of Israel's education system) and the “net teaching time in hours” (60 minutes) per teacher. Dividing the number of compulsory instruction time per pupil by the number of the net teaching time in hours per FTE (Full-Time Equivalent) teacher gives the number of teaching positions per class (Table 7 and Figure 5). According to such calculation, the current number of “vertical hours” per class requires 1.38

¹⁰ The teacher shortage issue is discussed in a recent Taub Center publication (Blass, 2010b) which shows that several oft-invoked indicators of teacher shortage (rising percentage of uncertified teachers, rising average class size, elimination and/or reduction of instruction hours in some subjects) are not found in Israel. The State, on the other hand, can take various steps to increase the supply of instruction hours while reducing the demand (incentives for higher teacher workloads, more efficient use of the instruction hours allotted to schools, recruitment of retired teachers, and so forth).

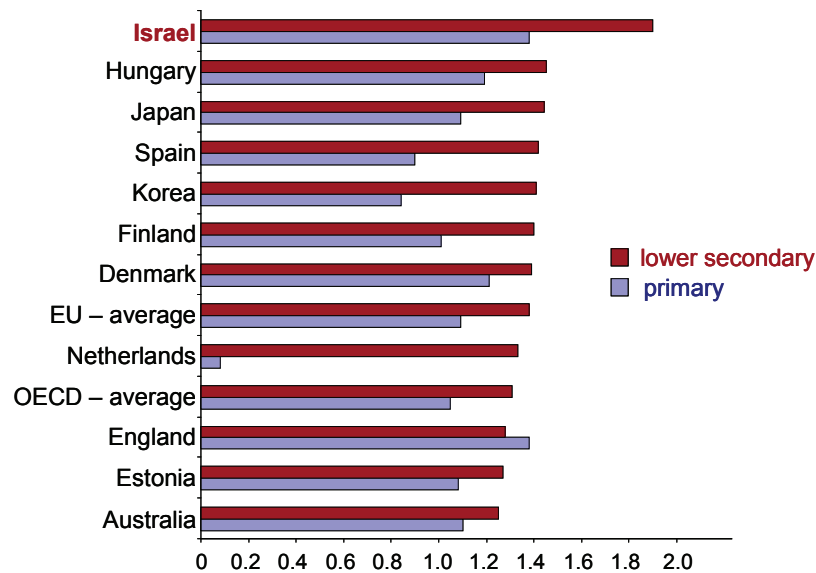
teaching positions in primary schools and 1.9 teaching positions in lower secondary schools, compared with the OECD average of 1.05 and 1.31 teaching positions, respectively.

Table 7. **Time allotted to classroom teaching, Israel and selected OECD countries**
primary and lower secondary education, 2008

Country	Hours of classroom learning yearly		Yearly teaching hours total	
	Primary	Lower secondary	Primary	Lower secondary
Israel	1,044	1,139	755	598
OECD average	822	918	786	703
Australia	959	1,011	873	812
Denmark	783	900	648	648
England	899	925	654	722
Estonia	683	802	630	630
Finland	683	829	677	592
Hungary	724	885	611	611
Japan	774	868	709	603
Korea	703	867	840	616
Netherlands	1,000	1,080	930	750
Spain	794	1,015	880	713

Source: Central Bureau of Statistics; OECD.

Figure 5
Number of full-time equivalent teaching positions per class
 primary and lower secondary education, 2008



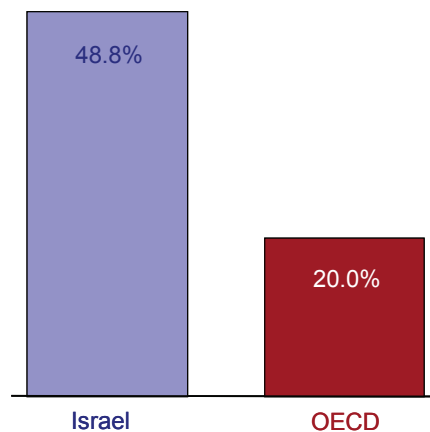
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD.

Comparisons with other OECD countries (see Klinov, 2010) show Israel to have the highest number of FTE teaching positions per “vertical hours” per class required by the regulations of the Ministry of Education in primary and lower secondary schools (matched only by UK primary schools: see Figure 5). Furthermore, the percentage of part-time teachers in Israel is higher relative to the OECD average. According to Central Bureau of Statistics data, 48 percent of Israel’s education workers were employed part time in 2009 (Central Bureau of Statistics, 2010,

Statistical Abstract of Israel, Table 12.11)¹¹ – a much higher percentage than the 2004 OECD average of only 20 percent (Figure 6) (European Commission DG, 2006). By contrast, only 16 percent of UK teachers worked part time in 2002 (Vineall, 2002) and 23 percent of teachers (30 percent of females, eight percent of males) worked part time in Canada's British Columbia in 2000. In effect, then, the number of teaches per class in Israel turns out to be even higher.

Figure 6
Part-time employees in education*
as a percent of all employees in education



* Israel (2008); OECD (2004).

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD.

¹¹ Though these figures refer to all education employees, not just teachers, the vast majority of education employees are in fact teachers. (According to estimates supported by OECD data, non-teachers constitute no more than 20 percent of all education employees, making the above figures concerning part-time workers fairly reliable.)

The above comparisons yield clear conclusions regarding the alleged “teacher shortage.” Since the number of teachers per class in Israel is one-third to one-half higher than the OECD average, local teacher shortages should be handled by increasing the average number of teaching hours per teacher and reducing the number of part-time teachers and decreasing the number of work hours per class, and not by increasing the number of teachers. (Recent teacher pay agreements seem to go in this direction, at least with regard to the number of required teaching hours.)

A different perspective on the number of teachers per class is provided by OECD data on the number of pupils per class and per teacher. The difference between the number of teachers per class as given by this calculation and as given by the calculation in Table 7 derives from different definitions of teachers’ work hours: the first calculation refers to frontal teaching hours, the second to the number of work hours per full-time teaching position.

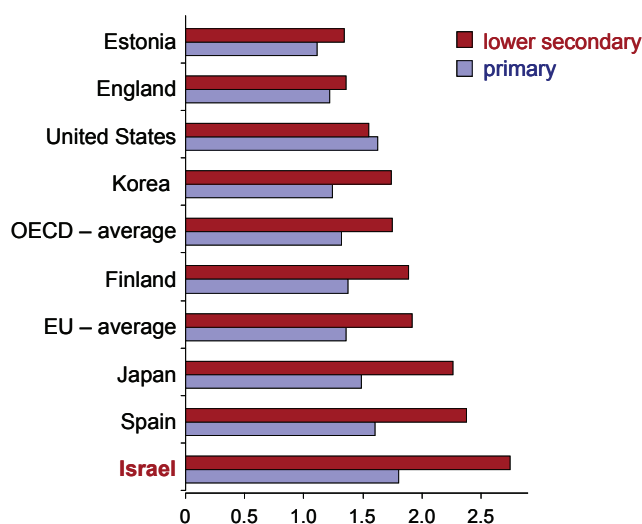
The data presented in Table 8 and Figure 7 reveal the same state of affairs presented by Ben-David (2010) albeit more acutely: the number of teachers per class in Israel exceeds the OECD average by 32 percent in primary schools (27 percent in Table 7) and by 61 percent in lower secondary schools (45 percent in Table 7).

Table 8. **Number of pupils, per class and per teacher**
primary and lower secondary education, 2008

Country	Pupils per class		Pupils per teacher	
	Primary	Lower secondary	Primary	Lower secondary
Israel	27.6	32.5	15.3	11.8
OECD average	21.6	23.9	16.4	13.7
Australia	23.7	23.6	15.8	–
Denmark	19.6	20.0	–	10.1
England	24.6	20.4	20.2	15.0
Estonia	18.3	21.4	16.4	16.0
Finland	19.8	20.1	14.4	10.6
Japan	28.1	33.2	18.8	14.7
Korea	30.0	35.3	24.1	20.2
Spain	21.0	24.4	13.1	10.3
United States	23.3	22.8	14.3	14.8

Source: Central Bureau of Statistics; OECD.

Figure 7
Number of teachers per class
 primary and lower secondary education, 2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, OECD.

2.B. Teachers' Work Conditions: Israel Versus the OECD

The work conditions of teachers in a given country are usually discussed in comparison to the work conditions of other workers in the same country or of teachers in other countries. In what follows we will focus on the internationally comparative dimension, starting with the job definitions used in various OECD countries.¹²

¹² Though the work conditions of Israeli teachers are better than is often supposed, they are still inferior in many respects to the OECD average. At any rate, in what follows we do not aim to take a partisan position in the debate about teachers' work conditions in Israel.

• **Job requirements and teaching workload.**¹³ Teaching positions are defined by the teaching workload, measured by the number of weeks and days teachers spend working and by the number of work hours included in them, including (60-minute) frontal teaching hours and other in-school work hours.

Job requirements are not defined uniformly in all OECD countries. Some (for example, Belgium, Finland, and France) count frontal teaching hours only; others (for example, Australia, Ireland, and the United States) count both teaching and other in-school work hours; yet others (for example, Norway, Portugal, and Spain) count teaching hours, other in-school hours, and work-at-home hours.

Until recently, teaching workloads in Israel were defined in terms of frontal teaching hours only.¹⁴ This has changed significantly, at least in primary and lower secondary schools, in the wake of the “New Horizon” reform. For teachers included in the reform, a teaching position now consists of 36 weekly hours, including 26 hours of frontal teaching, five hours of individual (or small group) teaching, and five hours devoted to pedagogic and other work, depending on school and teacher needs. Since not all Israeli teachers are included in the reform at this stage, this study will focus on the system’s previous job definitions.¹⁵

¹³ Unless otherwise stated, all data in this section (on Israel and other OECD countries) are based on the OECD publication *EAG 2010*.

¹⁴ Most teachers do not devote all of their time to frontal teaching. Many serve in various other pedagogic, coordinating, and administrative roles in school. These are added to classroom teaching hours for the purpose of workload calculation. Some teachers enjoy teaching reductions for age or childcare reasons. Teachers are required, however, to spend two additional weekly non-teaching hours at school, and are usually required to work a few days before the start of the new school year and to attend various after school activities during the school year.

¹⁵ The Israel Teachers Union, which includes most secondary school teachers in Israel, has recently agreed with the Ministry of Education and the Ministry of Finance to transition to a similar job requirement though with 40 rather than 36 hours per week, offset by the inclusion of hours designated to non-direct

- **Components of teachers' work.** Teachers' work consists of two main components: classroom teaching and non-teaching work, with the latter further divided into in-school and out-of-school (especially at-home) work. The total number of hours included in the job requirements consists of three categories: frontal teaching hours (including entire class, small group and individual instruction), administrative and other non-teaching work hours, and what we shall call "professional hours."¹⁶ Hours belonging to the first two categories are by definition work hours; professional hours are not counted as work hours.

The current situation in Israel is as follows:

- **Classroom teaching hours.** A full teaching position in Israel formally consists of 30 weekly hours of teaching at primary schools and 24 weekly hours of teaching at secondary schools (excluding teachers in the "New Horizon" reform program). The term "teaching hours" is equivalent to "class periods" though any comparison with the OECD's *Education at a Glance* must measure the teaching workload in terms of 60-minute hours. Since the average class period in Israel is 48 minutes, converting the Israeli teaching workload to "class periods" as defined by the OECD requires multiplying the number of class periods in Israel by 0.8.
- **Management responsibilities.** These work hours, the number of which is not precisely defined, are subtracted from the aforementioned frontal teaching hours. They are primarily devoted to administrative and coordination tasks, homeroom hours, and preparation for the

teaching duties of the homeroom teacher and other professional tasks. Details of the agreement are yet to be formalized.

¹⁶ The term "professional hours" is not part of the official Ministry of Education terminology; it has been devised for the purposes of the current study. If such hours were counted as work hours, a full teaching position would consist of 30 hours a week in primary schools and 24 hours a week in secondary schools. When they are not counted as work hours, a full teaching position consists of fewer hours, depending on particular circumstances. This distinction is especially relevant to discussions of the student-teacher ratio, in which case "professional hours" are usually not counted as work hours.

matriculation exams. They count as work hours, but are not included in the number of classroom teaching hours.¹⁷

- **Professional hours.** These are subtracted from the total number of work hours comprising a full teaching position (teaching hours plus administrative and other non-teaching hours) without lowering compensation. They include age-related reductions in work hours (two hours per week for teachers aged 50 and over and four hours per week for teachers aged 55 and over) and motherhood reductions for teachers with a 79-percent to full-time position.¹⁸ (In other words: in primary schools, mothers working 27 hours a week, teachers aged 50-54 working 28 hours a week, and teachers aged 55 and up working 26 hours a week are all compensated for 30 weekly hours. Secondary school teachers enjoy similar benefits on a 24 hours per week basis.)

According to data preceding the most recent OECD report (*EAG 2010*), the average Israeli teacher taught an annual total of 1,025 hours at primary, 788 hours at lower secondary, and 665 hours at upper secondary schools. According to recent estimates by the Ministry of Education, the average full-time teacher teaches a weekly total of 25.5 hours at primary, 21.5 hours at lower secondary, and 19 hours at upper secondary schools.¹⁹ It follows that the average number of weekly contact hours is 20.4 in primary, 17.2 in lower secondary, and 15.2 in upper secondary schools. The number of annual contact hours is thus 755 in primary, 598 in lower secondary, and 541 in upper secondary schools. (These figures match the data in *EAG 2010*.) Figure 8 compares the rate of frontal teaching hours

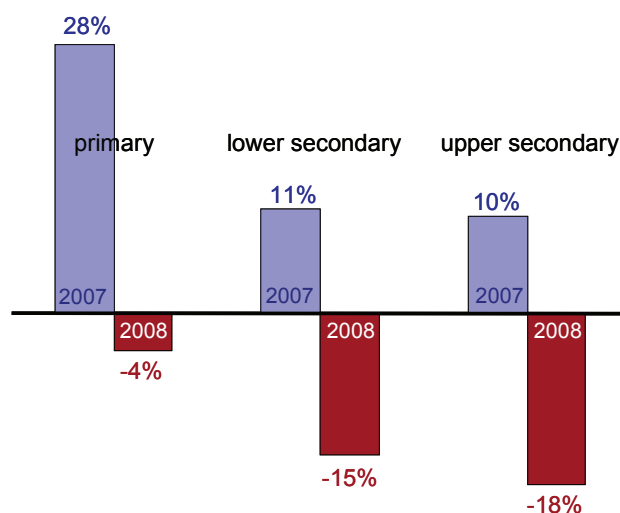
¹⁷ School work includes many additional roles and responsibilities not mentioned here. A 2004 standards inspection report counts over fifty roles, though most require few work hours to complete.

¹⁸ This privilege is intended for mothers only (at least it is phrased so).

¹⁹ These data do not necessarily conflict with the data on the average position workload since they do not include administrative and other non-teaching responsibilities.

in Israel with the average number of frontal hours a teacher teaches in OECD countries.²⁰

Figure 8
The difference in the time teachers spend in frontal instruction
 Israel and the OECD, 2007 and 2008*



* by level of education, in 60-minute increments, before and after corrections to the data.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD.

²⁰ The transition to the “New Horizon” program will obviously require these calculations to be modified. Primary school teachers will work 930 annual teaching hours (26 hours of frontal teaching plus five hours of individual instruction, multiplied by 37.5 work weeks per year) and 1,350 at-school hours (36 weekly hours multiplied by 37.5 weeks per year).

Teacher workloads are often discussed in terms of “Full-Time Equivalent” (FTE) positions. This category involves a distinction between the number of full-time positions that are needed to complete the education system’s designated tasks (FTE) and the number of teachers who need to work full-time in order to complete all of these tasks (FT). The two “values” are usually different since many countries, including Israel, offer arrangements which allow some teachers (depending on age, seniority, family status, etc.) to work less than the time defined for fulfilling a post while receiving compensation for a full-time position. Meeting the education system’s quota of work hours thus requires more teachers working full-time (FT for salary purposes) than FTE positions. (The formula for the latter will be the total number of required work hours – divided by 30 hours in primary and 24 hours in secondary education.)

The FT category is very important since it determines the actual number of teachers working full time (since as we have seen many work part time the actual number of teachers is much higher) needed in order to carry out the education system’s designated tasks. This affects, in turn, another important measure of education statistics, namely the pupil-teacher ratio, given by dividing the number of pupils by the number of FTE teaching positions.

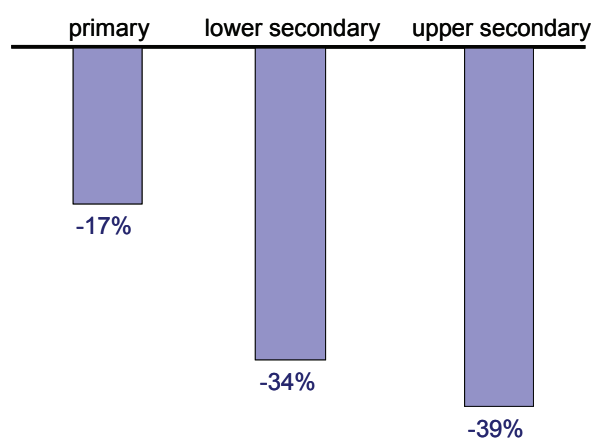
According to a recently completed Central Bureau of Statistics check,²¹ the number of weekly hours per FTE position (after deducting the “professional hours”) in 2009 was 27.1 in primary, 20.9 in lower secondary, and 21.9 in upper secondary schools.²²

²¹ Internal unpublished information.

²² These findings ought to be qualified since they include “homeroom” time which is an important part of the “administrative work hours” category, and during which teachers carry out tasks integral to their work, such as meeting parents, handling social, academic, and other problems, treating pupils’ various difficulties (sometimes by referring them to other professionals), and so forth. The fact that teachers need not be physically present at school in order to carry out such tasks has no bearing on whether they should count as administrative work hours. If these hours do count as administrative work

As the new data reported to the OECD plainly show, Israeli teachers teach fewer hours and spend fewer hours at school than their OECD counterparts, with the gap widening as teachers age. The widest gap is in the number of hours spent at school – 39 percent lower in Israel than the OECD average (Figure 9).

Figure 9
Differences in in-school hours for teachers
Israel and the OECD average (percent difference), 2008



Source: Taub Center for Social Policy Studies in Israel.
Data: Central Bureau of Statistics, OECD.

hours, the difference between a full-time position and an FTE position diminishes to roughly six percent.

2.C. Teacher Compensation: Israel Versus the OECD²³

Teacher compensation is among the topics dealt with in the OECD's *EAG 2010*. The most noteworthy finding on this topic in the OECD's previous publications (2009 and earlier) was that Israeli teachers with fifteen years' seniority earned 62 percent of the GDP per capita, far lower than the OECD average of 117 percent.

Is this, however, an accurate representation of reality? A recent reassessment, initiated by the Ministry of Education and the Central Bureau of Statistics with the cooperation of the Taub Center, has produced revised and updated data which were communicated to the OECD in 2010. The updated data offer a new, fundamentally different view of teacher compensation in Israel compared with other OECD countries (Klinov, 2010).²⁴

- **Salary supplements for academic degree holders.** Prior reports from Israel to the OECD presented teachers who finished four year teaching colleges that did not confer academic degree as typical. While this was true in the past, the growing academization of Israel's education system has produced greater numbers of teachers with baccalaureate or post-baccalaureate degrees who now better represent the norm.²⁵

²³ Estimates of teacher compensation may seem numerically precise, but should be treated as approximations due to inconsistent definitions, different data gathering times, and various other data gathering difficulties. This is clearly true with respect to Israel and presumably true with respect to other countries. Disparities of a few percentage points should thus be viewed with utmost caution. This chapter presents only the gist of our findings. A more detailed analysis comparing Israel with other OECD countries will be included in a separate Taub Center publication.

²⁴ Fully accurate data would need to take account of the fact as reported in the OECD publication teacher compensation in Israel is expected to increase by 44 percent.

²⁵ As early as 2003, teachers graduating from non-academic teacher training institutions constituted less than 3.5 percent of all teachers in the education system. Most of them were older veteran teachers. Teachers with the non-academic Teacher's Certificate constituted less than two percent of primary

Adjusting Israel's reports to this new reality has significant implications due to the fact that holding a Bachelor's degree adds 15 percent to the basic salary.

- **Employer contributions to in-service training funds.** The compensation data reported by Israel have not included employer contributions to teachers' in-service training funds, which amount to nine percent of the total compensation.²⁶ (This has been an ongoing error: the OECD explicitly instructs countries to include all pay supplements automatically added to the official compensation scale.)

- **Dual degree bonuses.** Teachers with an academic degree as well as the Teaching Certificate are eligible for dual degree bonuses. Most teachers in Israel are currently eligible for dual degree bonuses of 10.5 percent of base salary, though this has not been reflected in Israel's reports to the OECD.

- **Pay supplements included in the most recent pay agreement.** These amount to ten percent. The changes raised the salary of teacher's with 15 years of experience and with a "minimum" training from 62 percent of GDP per capita, as presented in *EAG 2009*, to 73 percent in *EAG 2010*. Accurate reporting of all teacher pay components may raise the ratio of teachers' salaries to as much as 87 percent of GDP per capita.

Table 9, based on the work of Ruth Klinov (2010), shows the corrected data's effect on comparisons between Israel and other countries. So, for example, the ratio of teacher compensation to GDP per capita turns out to be not much lower in Israel than in the United States or Finland, though still considerably lower than in South Korea, New Zealand, and Spain (Figure 10).

school teachers with up to fifteen years' seniority, and less than one percent of lower secondary school teachers.

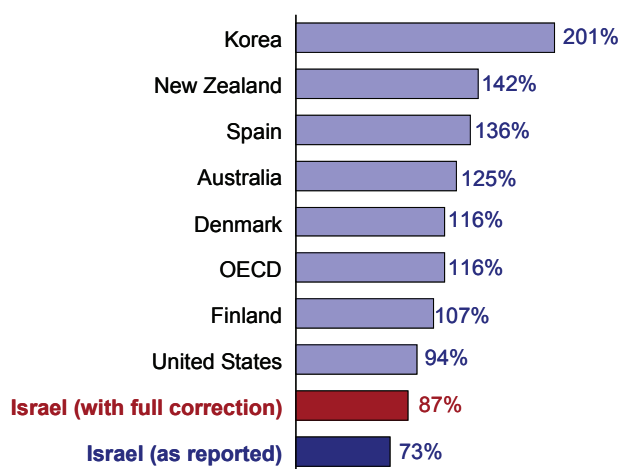
²⁶ Though the figure is ostensibly 8.4 percent, various benefits to teachers on maternity leave and in "national priority" areas raise the average to nine percent.

Table 9. **Yearly salary for teachers in primary education**
in annual terms, in PPP adjusted dollars, 2008

Country	Teacher salary (15 years experience, minimum training)	GDP Per capita (absolute terms)
Israel (reported)	19,868	27,216
Israel (with full correction)	23,711	27,216
OECD – average	39,426	33,988
Australia	46,096	36,877
Denmark	42,308	36,472
Finland	38,217	35,717
Korea	54,569	27,149
New Zealand	38,412	27,051
Spain	42,796	31,468
United States	44,172	46,991

Source: Klinov, 2010.

Figure 10
Ratio of teacher salaries to GDP per capita
in primary schools, 2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD.

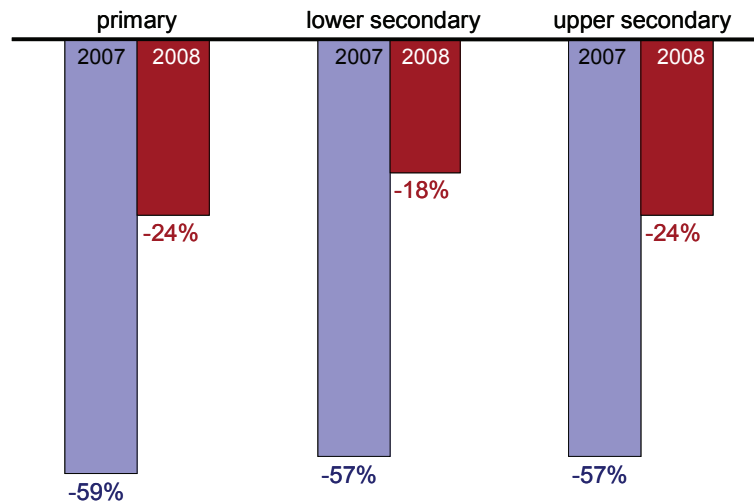
- **Compensation per work hour.** Changes in monthly compensation, on the one hand, and in the number of teachers' monthly work hours, on the other, result in changes in compensation per work hour. Teacher compensation per work hour in Israel turns out to have almost doubled from 2007 to 2008. Though still lower than the OECD average, it is now two-thirds of that average rather than one-third as previously reported (Table 10 and Figure 11).

Table 10. **Hourly teacher wage**
teachers with 15 years experience and minimum training
in PPP adjusted dollars, 2007 and 2008

	2007	2008	2008 (adjusted)
OECD			
Primary education	49	50	50
Lower secondary	61	60	60
Upper secondary	72	71	71
Israel			
Primary education	16	26	31
Lower secondary	21	37	40
Upper secondary	25	41	44
Ratio of salary: Israel versus OECD			
Primary education	0.33	0.52	0.62
Lower secondary	0.34	0.62	0.67
Upper secondary	0.35	0.58	0.62

Source: Central Bureau of Statistics; OECD.

Figure 11
Hourly work wages in Israel versus the OECD
 controlling for living standards, 2007 and 2008*



* ratio of salary divided by GDP per capita in Israel to salary divided by per capita GDP in OECD.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD.

In summary, the data reported in OECD publications, including the most recent 2010 report, significantly underestimate teacher compensation in Israel. Past reports underestimated teacher compensation by approximately 30 percent for new and 45 percent for veteran teachers. With other pay supplements (e.g., in-service training funds) taken into account, teacher compensation in Israel is 50 to 60 percent higher than the figures reported in *EAG 2009* and 30 to 40 percent higher than the ones reported in *EAG 2010*. Data from other countries may also be skewed downward or upward, of course. Since we are unable to check

such inaccuracies, it would be rash to draw definitive conclusions concerning teacher compensation in Israel relative to other countries.

3. Matriculation Achievements in the Total Population and by Sector

Eligibility for the matriculation certification upon graduation from high school is a significant milestone in the lives of Israeli youths. The matriculation certificate continues to serve as the main *de facto* path of social mobility in Israel, and is perceived as such by the majority of parents and pupils regardless of pedagogic, social, or professional perspective or background.

For years, Israel's efforts to reduce educational inequality and much of its affirmative action policy focused on improving the matriculation success rates of lower achieving groups in the population. One result of such efforts is that as of 2009, 80 percent of Israeli 17-year-olds were enrolled in the 12th grade at State schools, with approximately 72 percent taking the matriculation exams. Forty-six percent earned a matriculation certificate upon graduation from upper secondary school, and 39 percent received a matriculation certificate that enables them to apply for further studies at institutions of higher education.²⁷

These figures do not fully reflect, however, the results of the education system's efforts. A fairer, more accurate assessment would need to take into account the demographic shifts in Israel's pupil population, especially the rapid and continuous growth of certain population segments whose members tend to opt out of the matriculation exams, in particular the ultra-Orthodox population and the East Jerusalem Arab population. The education system's success or failure cannot be assessed accurately as long as the system is not allowed to operate in the

²⁷ There is also a possibility to receive matriculation certificate that does not enable its holder to apply to the universities (though some colleges will admit its holder). Still this certificate is a valuable document in the labor market.

first place, as has been the case among these population segments. The fact that 20 percent of Israel's 17-year-olds do not enroll in the 12th grade or take the matriculation exam is no doubt a failure, responsibility for which, however, rests on the national political system and not on the education system, despite unfair accusations against the latter.²⁸

The education system is responsible, however, for the persisting educational gaps between those who do enroll in it. To be sure, economic inequalities within Israeli society are also to blame. The education system must nevertheless make better use of its resources to minimize the resulting educational gaps.

Once the ultra-Orthodox and the East Jerusalem Arab populations are taken out of the equation, 97 percent of Israeli 17-year-olds enroll in the 12th grade, 87 percent take the matriculation exams, 56 percent earn the matriculation certificate, and 48 percent qualify for higher education.

In addition, approximately one-third of pupils who had taken the matriculation exams in 1998 but had not earned the matriculation certificate by graduation retook the exam within the first eight years after high school graduation and completed all diploma requirements (Central Bureau of Statistics, 2007). Since there is no reason to suppose that fewer pupils have taken this route in the following years (the opposite is true), we can assume that two-thirds of the relevant age group have earned the matriculation certificate. This is a significant accomplishment. In what follows we will focus on assessing the education system's accomplishments, as measured by the percentage of secondary school graduates earning the matriculation certificate, relating especially to the population that is defined as the "relevant population."

²⁸ Our view on the matter differs fundamentally from the one expressed in Adva Center's important publication on the matriculation exams (Konor and Abu Khala, 2010).

In this context it is worth noting:

- Although the percentage of pupils earning the matriculation certificate has increased consistently since the 1960s, the rate of increase has slowed down considerably over the last decade almost to the point of leveling off.
- Although differences between various population groups (with respect to 12th grade enrollment rates, matriculation exam taking, diploma earning, and eligibility for higher education) have become smaller, they are still considerable.

The matriculation exams have undergone many organizational changes in recent years in order to accommodate exam takers: exam dates are more widely dispersed over the years, material is announced in advance and more focused, and so forth. In addition, special accommodations are offered to pupils with learning disabilities. (There is also some evidence of easy grading of tests leading to “test score inflation.”) These changes have increased the percentage of pupils earning the matriculation certificate. Still, there is no research-based evidence for a decline in the examination’s level of difficulty although there is evidence of a quantitative drop in the amount of material. There is also growing evidence that university applicants across various disciplines are not at the same level as previous students, requiring universities to offer remedial classes in order to bring students up to an appropriate level. According to a commission on mathematics in Israeli universities (Council for Higher Education, 2010), faculty at all Israeli universities complain about the declining level of knowledge displayed by new students. Though the commission admits it has no firm basis for determining the severity of this trend, it recommends adjusting university curricula to the level of new university students. Similar claims were made in a prior Council for Higher Education report on the state of physics teaching in Israel (Council for Higher Education, 2007), albeit again without an adequate basis in research.

3.A. *Matriculation Examinations: Pupil Enrollment, Exam Taking and Certification*

In 2010 610,000 pupils were enrolled in Israeli secondary schools (260,000 in lower secondary and 350,000 in upper secondary schools). Whereas Jewish enrollment rates have leveled off in recent years, Arab enrollment rates have grown significantly. (The impression that Jewish enrollment rates have fallen is due not to a genuine falloff but to an increase in the number of ultra-Orthodox pupils attending non-State-supervised schools.)

The education system's strenuous efforts to prevent drop-outs have enjoyed particular success over the past decade in the Jewish sector, in which enrollment rates have nearly fulfilled their potential (taking into account the number of children who either live abroad or are unable to attend school), and in the Arab sector, in which enrollment rates are also high. Still some gender disparities exist in both sectors, with higher enrollment rates for girls than for boys: 972 versus 931 per thousand in the Jewish sector, 925 versus 864 per thousand in the Arab sector (Central Bureau of Statistics, 2010).

As Table 11 shows, Israel's 17-year-old population has increased by 17 percent over a period of fifteen years. This increase has been exceeded, however, by the increase in the number of 12th grade pupils (24 percent), of matriculation exam takers (38 percent), of matriculation certificate earners (40 percent), and of certificate earners enabling academic education (46 percent). It is worth noting that the percentage of pupils earning the matriculation certificate has remained almost stable in the last five years: at 45 percent of the entire age group and 55 percent of the relevant age group.

Table 11. **Matriculation applicants, by level of entitlement**
by course of study, type of school supervision, gender and
sector, 1995-2009 (absolute numbers and percent)

	1995	2000	2005	2009	Change (%)
All in age group	100,100	107,800	113,189	116,996	17
<i>of this:</i>					
Ultra-Orthodox and East Jerusalem	8,000	11,100	19,068	20,865	161
Relevant age group*	92,100	96,700	94,121	96,477	5
<i>of this:</i>					
Learning in 12 th grade	75,075	83,976	92,814	93,311	24
Applying for matriculation	61,061	73,412		83,997	38
Entitled to matriculation	38,539	43,982	52,520	53,895	40
Qualified for university	31,497	37,913	43,804	46,134	46
Percent of total age group					
Learning in 12 th grade	75	78	82	80	
Applying for matriculation	61	68	74	72	
Entitled to matriculation	38	41	46	46	
Qualified for university	32	35	39	39	
Percent of relevant age group					
Learning in 12 th grade	82	87	91	97	
Applying for matriculation	66	76	82	87	
Entitled to matriculation	42	45	56	56	
Qualified for university	34	39	43	48	

* Only a small percent of ultra-Orthodox apply for the matriculation examinations and their success rates are also relatively low.

Source: Central Bureau of Statistics.

The education system's accomplishments, and the fruits of its pedagogic work, are manifested in the fact that the percentage of 12th grade pupils has grown more steeply than the percentage of the age group, as well as in the fact that the percentage of exam takers, certificate earners, and certificate earners able to enroll in higher education has grown more steeply than the percentage of 12th grade pupils. Accessibility to and success rates on the matriculation exams have increased as well.

3.B. Success in Increasing Matriculation Certification

Several factors have contributed to these accomplishments relating to the matriculation exam:

- Pupils and parents are increasingly aware of the importance of earning the matriculation certificate, in particular one meeting the requirements of academic education.
- Communications from the heads of the education system to schools have emphasized the importance of matriculation achievements, while lessening selectivity at the school admission point and encouraging dropping out of weaker or hard to handle students during the course of schooling – two trends that were prevalent in secondary education.
- The education system has expanded resources for programs and activities designed to improve the chances of pupils' to succeed in the matriculation exams.
- Several structural changes have been introduced into the matriculation exams: the amount of material was trimmed or "focused," the number of external exams was reduced, and the exam load was dispersed over several years.
- Budgets have been transferred from vocational/technological to academic education.
- Special accommodations have been extended to pupils with learning disabilities (see more in the Spotlight section).

Spotlight: Accommodations and Modifications for Pupils with Learning Disabilities

Pupils with learning disabilities taking the matriculation exams are currently offered various special accommodations. They no longer need to cope with the same conditions as other pupils, as they had to in the past. This is a worldwide development, the result of an ongoing process of educational democratization and of efforts to integrate pupils with various disabilities in society as citizens with equal rights and duties.

The U.S. Department of Education estimates that roughly 20 percent of American pupils have a learning disability of some sort, though only five percent are diagnosed. According to one study, more than 2.5 million American pupils are currently classified as having learning disabilities; accommodating these disabilities requires additional education expenditures estimated at \$3.25 billion per year. Pupils with learning disabilities enjoy various accommodations, such as extended exam time, homework assistance, and exemption from subjects deemed particularly difficult, especially mathematics and, at some universities, foreign languages (Sternberg, 1998). According to some studies, 25 to 40 percent of pupils requesting such accommodations eventually graduate from high school without any special assistance (Allen, 1996).

The eight types of accommodations available at present in Israel are: reading to tape (English), leniency regarding spelling errors, oral testing, transcriptions, extended exam time (25 percent), questionnaire reading, school questionnaires, and permission to use a dictionary. The most common of these are the first four, with extended exam time and leniency on spelling errors alone constituting over 75 percent of all accommodations. (Both could be made redundant by entirely canceling exam time limits and by allowing the use of word processors on exams.)

The frequency of special accommodations for matriculation exam takers has increased in recent years. In 1997, 12.2 percent of all matriculation exams (131,785 of 1,075,699) were with special accommodations. In 2008, 26 percent of all pupils (Or Kashti, *Ha'aretz*, 9 December 2009) received special accommodations. In 2007, 23.1 percent

of all matriculation exam takers enjoyed accommodations. Similar findings were reported by Schiff et al. (2010) in a recent Central Bureau of Statistics study.

Schiff et al. also found a clear and positive relation between exam takers' socioeconomic status and maternal education, on the one hand, and exploiting the opportunity for special accommodations, on the other. Eligibility rates of accommodation takers also vary across different municipalities: the higher a municipality's socioeconomic status, the higher their rate. The rate of accommodations users are thus 39 percent in Kockhav Yair and 34 percent in Shoham (which enjoy the highest and second highest matriculation success rates in Israel, respectively), and 33 to 36 percent in other wealthier municipalities such as Modi'in, Ra'anana, and Ramat Hasharon (which likewise enjoy high matriculation success rates), but it drops to roughly 20 percent in less wealthy municipalities such as Be'er Sheva, Kiryat Malachi, and Ashdod, and to 25 percent in "development towns" in the Negev such as Ofakim and Netivot.

The rate of accommodations users also varies across different sectors of the education system: 31 percent of Jewish but only nine percent of Arab, seven percent of Druze, and three percent of Bedouin pupils are eligible for special accommodations on the matriculation exams.

We have yet to study differences in special accommodation eligibility rates across socioeconomically similar schools, which would allow us to assess how special accommodations affect matriculation grades. According to Schiff et al. (2010), special accommodations barely affect grades (other things being equal). If this is true, then even if some students abuse the availability of special accommodations (especially such common ones as extended exam time and leniency on spelling errors), this does not significantly distort the exams' accuracy in reflecting pupils' knowledge and should not be considered as lowering their quality.

Each of these developments has had negative aspects as well. Emphasis on matriculation certification has promoted a narrow functional view of the education system. The structural changes noted above have pushed preparations for the matriculation exams earlier, from the final third of the 12th grade back to the 10th grade, introducing a teach-to-the-test environment into earlier stages of secondary education. Efforts to trim the exam material have left certain important subjects out. Finally, accommodations for the learning disabled are sometimes abused, becoming a goldmine for some of those who issue the certifying documents. It seems, however, that the advantages outweigh the drawbacks.

Among the recent changes in secondary education have been efforts to cut secondary vocational/technological education, on the one hand, and to expand academic tracks leading to the matriculation certificate within vocational/technological education, on the other (Figure 12). These efforts have been supplemented by a massive expansion of small classes for pupils from lower socioeconomic classes to help increase their matriculation eligibility and success rates. These efforts have helped increase matriculation eligibility in both the Jewish and the Arab sectors, but in different ways – in the Jewish sector due to the transfer of resources from vocational/technological to non-vocational/ academic education, in the Arab sector due to the development of vocational/technological education and the resultant increase in enrollment rates (replicating the Jewish sector's development in the 1960s and 1970s).

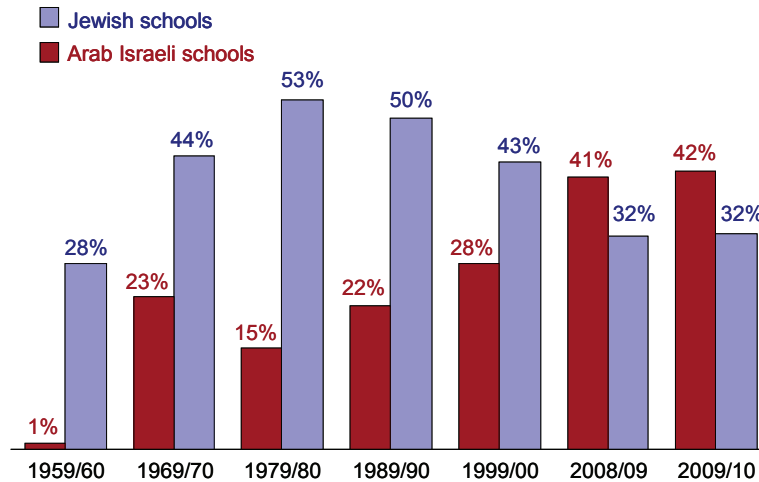
Is the education system's success – the increase in the percentage of pupils, exam takers, and certificate earners – due, either partly or entirely, to these structural changes in the matriculation exams? Or is it rather the result of grade inflation and lower exam standards?

Since these questions have yet to be studied thoroughly in Israel we cannot answer them with certainty. Comparisons between the quality of education in the past and at present are not unique to Israel: the question of declining quality is much discussed in the American literature as well.

Figure 12

Pupils in the vocational track

as a percent of all upper secondary pupils, by sector, 1960-2010

**Source:** Taub Center for Social Policy Studies in Israel.**Data:** Central Bureau of Statistics, OECD.

Answers to these questions are divided, however. According to some researchers, pupils' achievements are higher now than they were several decades ago, despite oft-made claims to the contrary (Schrag, 1998). Other education scholars claim, however, that both secondary and post-secondary education have suffered from lower academic quality and grade inflation (Estrich, 1998). A recent publication by the U.S. Department of Education (IES, 2009) compares reading and mathematics achievements in three age groups (9, 13, and 17) between 1971 and 2008. While the average achievements of all 17-year-olds and of pupils from higher socioeconomic background barely changed over this period, those of pupils from weaker minority groups improved significantly. This curious phenomenon is explained by changes in the demographic makeup

of the U.S. pupil population, specifically by the increasing share of socioeconomically weaker groups in the overall population (a development characterizing Israel as well).

Have matriculation achievements improved or deteriorated over time? Answering this question requires thorough research comparing the exams' difficulty over time in terms of the depth and complexity of exam questions, the breadth of material, grading strictness, the weight of different exam components in the final grade, and various other features of the exam-taking environment (exam duration, structure, etc.) Such research has yet to be carried out.

It is worth noting, however, that reducing the number of exams and the amount of material does not necessarily lower academic standards. According to numerous education experts, the academic overload that characterized past eras promoted superficial rote learning at the expense of genuine understanding. Reducing the number of exams and the amount of material could contribute, then, to deeper, more substantial learning.

Furthermore, since the exams' proper aim is to examine pupils' knowledge and ability to cope with intellectual tasks, rather than their ability to cope with such tasks under stress, relaxing the exams' "environmental conditions" does not necessarily lower academic standards and may give pupils of varying abilities a more equal opportunity to deal with the challenges.

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Education Reform and Narrowing Educational Gaps in Israel

Yossi Shavit and Vicki Bronstein *

Abstract

In Israel, as in many other countries, there are substantial gaps in education between those of varying socioeconomic status, as well as between Arab and Jews, and men and women. The education system tries to minimize these gaps with its emphasis on the accomplishments of weaker socioeconomic sectors. Nevertheless, stronger groups in the population have an advantage in attaining an education.

This study examines the rate of education for those born between 1955 and 1981, and offers a method of tracking the gaps in education from the 1970s until the turn of the millennium. The results indicate a certain narrowing of the gap for matriculation eligibility between the varying socioeconomic levels. Within higher education, even with its significant expansion, socioeconomic inequality remains. The gap between Jews and Arabs in higher education that actually increased at the start of this period, decreased among those born in the 1970s and onwards as the rates of higher education among Arabs increased greatly. The gender gap for matriculation and academic rates among those born in the second half of the 1970s increased significantly in favor of women.

* Prof. Yossi Shavit, Chair, Taub Center Education Policy Program; Department of Sociology and Anthropology, Tel-Aviv University.

Vicki Bronstein, Department of Sociology and Anthropology, Tel-Aviv University.

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1. Background: Education Gaps Between Population Groups

In Israel, as in many other countries, there are clear existing educational gaps between different groups in the population that overlap sub-groups within the population; the gaps are primarily between Jews and Arabs, women and men, and groups of differing socioeconomic status. The education system tries to close these gaps, placing particular emphasis on improving the accomplishments of socioeconomically weaker groups. However, it is not a simple task to narrow the gaps, as the stronger groups in the population have a clear advantage in access to quality education. Parents of children from stronger socioeconomic groups tend to be more educated than parents of children from weaker groups; overall, they are more familiar with the material studied and especially with the learning process, and they are able to assist their children in coping with the demands and parameters of the education system. Such parents tend to place far greater importance on the educational achievements of their children and can help them to get ahead, either through their personal example or by encouraging them to succeed in school and climb the academic ladder. Moreover, educated parents tend to be more financially established than parents with fewer years of education, and children who grow up in a financially secure environment develop relatively better learning capabilities in comparison to those who grow up in more impoverished conditions (Duncan, Yeung, Brooks-Gunn, and Smith, 1998).

One of the most common measures that the education system uses in order to improve the achievements of weaker sectors is to increase teaching or instruction hours for those sectors – to give them “more education.” This has been standard policy in Israel too, where a consistent policy has been implemented for the past several decades to increase eligibility for the matriculation certification. Moreover, since the 1990s, consistent policies to increase instruction hours in higher education have also been implemented (Ayalon and Yogev, Shavit, Chachashvili-

Bolotin, Ayalon, Menachem and Tamir, 2006). However, it is not enough to increase instruction hours to ensure that the gaps between social groups will be narrowed, since “strong” sectors generally benefit by taking advantage of the new opportunities the system offers, and tend to do so more efficiently than those from the “weaker” sectors. For this reason, an increase in education tends to perpetuate the inequality, or even to exacerbate it. The exception to this is when the increase in educational instruction concerns the accessibility of certification or a saturation in the level of education for those on a higher rung of the socioeconomic ladder (Raftery and Hout, 1993). In this way, for example, the increase in teaching hours in high school education, which took place in Israel since the 1970s and continues to this day, has contributed to reducing the gap among high school graduates from educated families and non-educated families, since the number of high school graduates among stronger families was already very high in the 1970s.

Indeed, several international studies that followed the correlation between the expansion of education and the measure of the inequality of education between various social groups, demonstrated a reasonably stable correlation over time. They concluded that the education system finds it difficult to compensate weaker groups for their relative disadvantage (Shavit and Blossfeld, 1993).¹ The current study tries to determine if and to what extent educational gaps in Israel have narrowed throughout the period of large reforms in the matriculation exams and higher education, that is, since the late 1970s and through the 1980s and 1990s.

¹ Nonetheless, two more optimistic studies have recently been published that report that over the last decades a reduction in education gaps between social classes has occurred in Western Europe (Breen, Luijkx, Muller, and Reinhard, 2009; 2010). That said, the causes for the optimistic development are not sufficiently clear.

2. Important Reforms in the Israeli Education System

Since the 1970s, the Israeli education system has experienced change and reform intended to contribute to the narrowing of educational gaps between social groups. A number of reforms have been particularly deserving of attention. The first has been a reform in the occupational/technological branch of the education system, whereby the occupational tracks were expanded to lead to the matriculation exams. This step was intended to increase the eligibility to matriculate among the “weaker socioeconomic groups” which tend to be over-represented in these fields of study.

Throughout this period, significant reforms in the matriculation exams themselves were being put into place, specifically to meet the demand for matriculation eligibility. This was apparent in reducing the number of the external exams required, as well as in using the material that was included in the curriculum as the main focus of the material for the examination.

The third prominent area of reform was related to the expansion of higher education. The change began in the late 1970s, which saw the start of the academization of teaching colleges, and gathered momentum in the early 1990s with the rapid expansion of local and private colleges as well as local branches of foreign universities. The number of first degree students more than tripled, from 50,000 in the mid-1980s rising to 129,000 in 2000 and then to 168,010 in 2008 (Council for Higher Education, 2008: p. 56). The requirements in most colleges are less stringent than in universities, with many colleges accepting matriculation certificates alone without psychometric exams or a minimum score requirement on the psychometric exams. The demands of the branches of overseas universities are even less stringent and even matriculation exams may not be required for admission. Shavit and colleagues (Shavit, Bolotin-Chachashvili, Ayalon and Menahem, 2007) researched the consequences of this expansion on the shift in inequality between social

groups on everything pertaining to entering higher education. They found that new institutes, which were less selective, accepted students from “weaker groups” and thus contributed to narrowing the inequality gap among various socioeconomic groups in the rates of entry to higher education. Nonetheless, at the same time, they found that universities maintained and even increased their social selectiveness.

3. Presenting the Current Research: The Expansion of Education and the Changes in Educational Gaps

A number of studies have been conducted in Israel on the long-term changes in education gaps between socioeconomic groups, especially between Jews and Arabs, and men and women. Most of the studies were based on data gathered from the population census that was conducted in 1983 and in 1995, and followed the trend of the change until only the 1990s. The study published by Shavit and associates in 2007 (Shavit et al., 2007) was also based on data from 2002 and related primarily to the developments that occurred throughout the 1990s. The intention of this current study is to provide an update to 2008, with information pertaining to the shift in educational inequality in Israel.

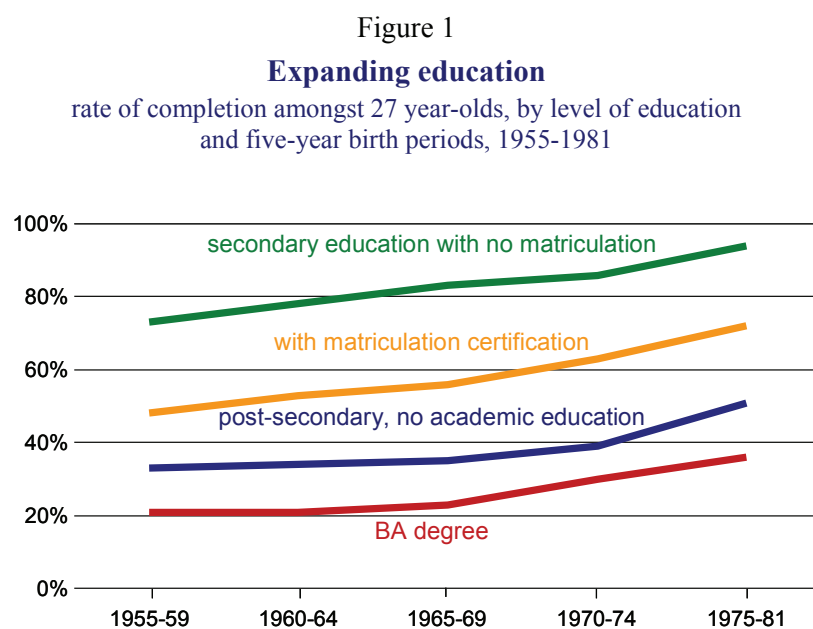
Objectives: The study relates to the following research questions: (1) What were the patterns of change between the 1970s and the new millennium in high school education rates, matriculation eligibility, non-academic tertiary education and higher education? (2) To what extent have matriculation eligibility and higher education rates changed and to what extent has any inequality between them shifted within various social groups, between men and women, and between Jews and Arabs? (3) What have been the effects upon them of the educational reforms in the 1980s and 1990s, and has there been any shift in their degree of inequality?

Data: For purposes of this study four groups of data bases were combined that included a representative sample of residents in Israel divided by educational achievement, sector (distinctions between Arabs and Jews), and by gender using the highest level of education attained by the parents of the subjects in the study (the last variable providing an indication of the socioeconomic background of the subjects).² The data was gathered in 1995, 2001, 2002 and 2008 in order to investigate educational inequality in education among native-born Israelis during the period 1955 and 1981.³ (Immigrants who moved to Israel after age six were not included in the analysis, as their education was, at least to some extent, obtained abroad, and is therefore not relevant to the educational developments that were assessed in Israel or the developments characterizing “Israeli pupils.”)

² The data from 1995 is data from a sample including 20 percent of the population census conducted that year. The listings of those analyzed from the census were combined by the Central Bureau of Statistics with the listings of their parents from the previous census (1983). Data from 2001 was gathered by Professor Yehuda Matras, Professor Rebecca Reichman, and Professor Haya Steir, and data from 2002 and 2008 were taken from the European Social Survey, conducted in Israel, and funded by The National Academy for Sciences and executed by the B.I. Cohen Institute for Public Opinion Polls at Tel-Aviv University. The samples of the age groups between 1955 and 1981 included: 19,248; 469; 802 and, 922 people, respectively. Since the first group is much larger than the others and there was some concern that it might distort the findings of the study, it was weighted at 0.04 of its size (its weighted size is 770).

³ Most of the members of the young age-group who planned on completing their tertiary or academic education did so before 2008, the year the last survey available to us was undertaken. A significant percentage of the younger age group had not yet completed their studies by this year and so are not included in this analysis.

- Findings about the expansion of education.** The educational expansion rate among the age-group born in Israel from the mid 1950s through the early 1980s is presented in Figure 1. The data is representative of five age-groups – those born between 1955-1959, those born between 1960-1964, those born between 1965-1969, those born between 1970-1974, and those born between 1975-1981. In each age group we studied the educational distribution of persons 27 or older by the time of the surveys. The educational categories are: graduating high school without a matriculation certificate, graduating with a matriculation certificate, graduates of non-academic tertiary education, and university graduates (with a first degree).



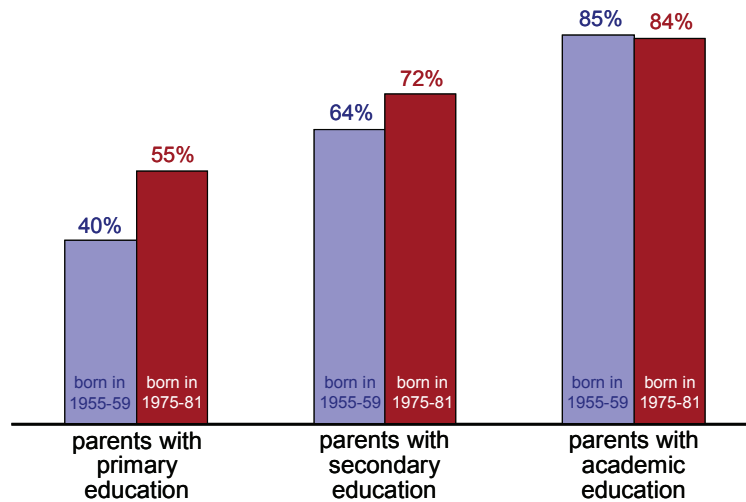
Source: Shavit and Bronstein, Taub Center and Tel-Aviv University.

What emerges is that the number of those with a matriculation certificate and above has risen from approximately 47 percent among those born in the late 1950s, to approximately 70 percent among those born between 1975 and 1981, and the number of university graduates (holding a first degree) rose from approximately 21 to approximately 35 percent among that age-group. It is interesting to note that the rate of academic degrees accelerated slightly among the younger age-groups. This is most likely explained, as mentioned, by the expansion of colleges and overseas university branches that began to operate in Israel during the 1990s.⁴

• **Changes in education gaps between groups according to their parents' education.** Figure 2 presents the differences between those born in the late 1950s and those born in the late 1970s in matriculation eligibility for various social groups as divided by their parents' education. Results indicate something of a decrease in the gap between these groups in the number of those eligible for matriculation certification, primarily as a result of the increase in the rate of eligibility among those from weaker sectors (whose parents have only primary education) and among the mid-level education group (whose parents have secondary education).

⁴ Since the data relates to native-born Israelis and to those who immigrated before age six only, they do not match the data published from time to time on the education rates amongst the whole population.

Figure 2
High school graduates*
 by parents' education and birth period, 1955-59 and 1975-81



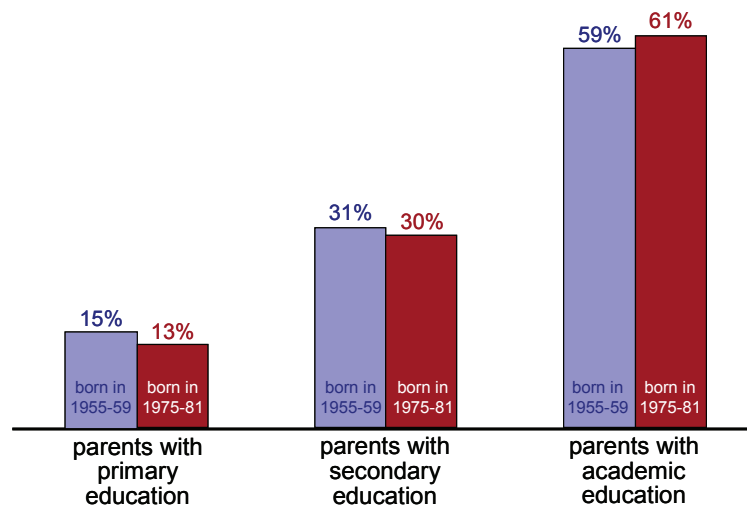
* successfully passed matriculation examinations.

Source: Shavit and Bronstein, Taub Center and Tel-Aviv University.

The number of those eligible for matriculation certification among the “most educated” hardly changed throughout this period. Figure 3 presents the higher education rates among the three education groups; the degree of stability in the gaps between the groups in the rates of higher education is very marked. It turns out that despite the significant expansion in higher education, the rate of higher education within each group remains relatively stable throughout the period and the degree of inequality between them is unaltered. What this implies is that any expansion in education derives from a “class” upgrade in Israeli society. In other words, there has been an expansion in the middle to upper class, whose children apply to higher education in increasing numbers, and there has not been a rise in the participation rates in higher education from each

socioeconomic level. It is interesting to note that even though there was a rise in matriculation eligibility among the lower and middle class, the rates of higher education among these groups were not seen to rise.

Figure 3
College graduates*
 by parents' education and birth period, 1955-59 and 1975-81



* successfully attained undergraduate degrees.

Source: Shavit and Bronstein, Taub Center and Tel-Aviv University.

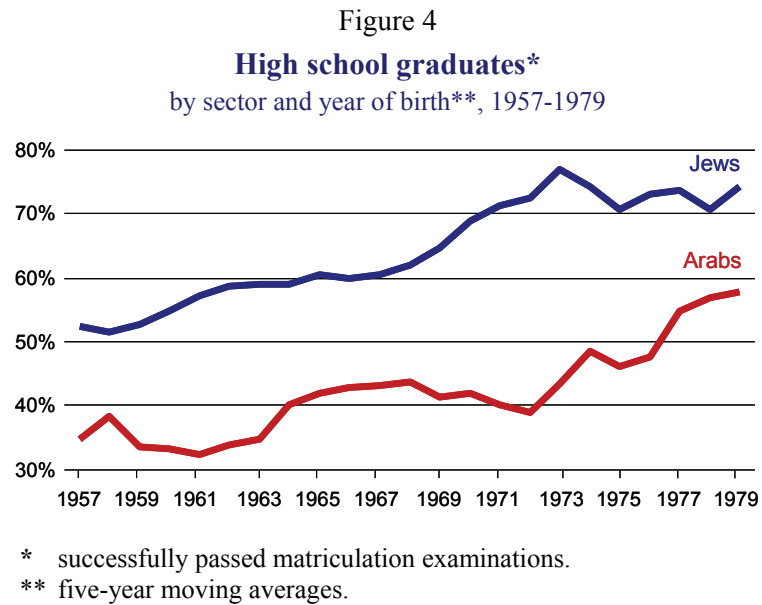
• **Changes in gaps according to sector – educational gaps between Arabs and Jews.** Figures 4 and 5 show rates of matriculation eligibility and the rates of higher education by sector and year of birth.⁵ Among

⁵ In contrast to Figures 1-3, where year of birth was grouped into five categories, Figures 4-7 relate only to year of birth. Some of the interesting changes identified in the data occurred between the year of birth age-groups of the late 1970s, and not amongst the groups categorized. That said, it should be remembered that with every time analysis the differences between

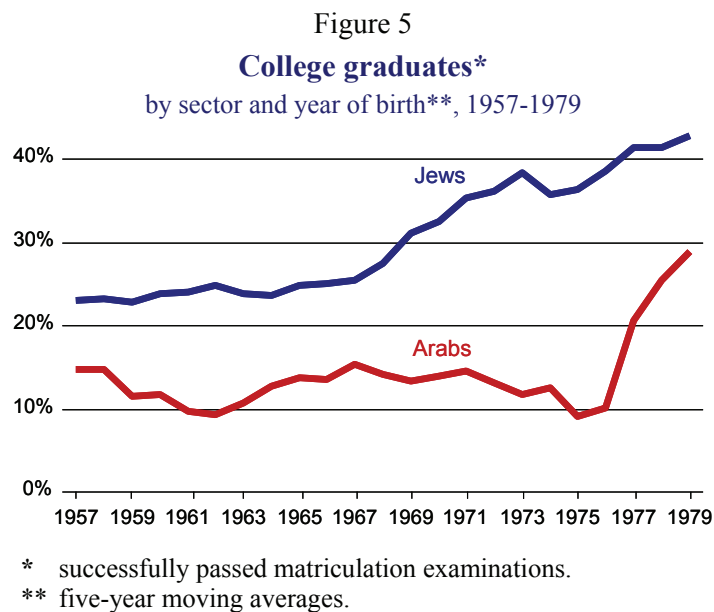
those born in the late 1950s, 1960s, and early 1970s, the gap between Arabs and Jews in matriculation and higher education grew slightly, but from the mid-1970s age-group, after a consecutive rise in matriculation rates among Jews, the rates stabilized and even decreased slightly (more on this later in the study), while among the Arab sector, the rates rose from approximately 40 percent among those born at the start of the decade to approximately 60 percent among those born at the end of the decade.

Simultaneously, the gap between Jews and Arabs in higher education continued to rise until the age-group of those born in the mid-1970s. Then for those born from the mid-1970s and after, the rate of higher education rose considerably in the Arab sector, and the gaps between Jews and Arabs were greatly narrowed. It should be noted that since the late 1990s, the number of Arab students studying in Arab countries, especially the Palestinian Authority and Jordan, has risen greatly. There are some who estimate the number as being approximately 4,000 a year (Abu-Asba, in private conversations). The number of Arab students in Israeli universities and colleges has remained at approximately 17,000 a year (Council for Higher Education, 2008, p.75). The implications are that the number of Arab students, Israeli citizens, studying abroad is far from insignificant and may be an important factor in the rise in higher education within this sector (the data clusters available to us do not allow a distinction between those studying abroad and those studying in Israel).

individual age groups in any dependent variable (for example, matriculation and higher education rates) reflect two components: a systematic trend of growth or reduction and random change expressing errors of sample or evaluation. As is standard practice, there was an attempt to neutralize the element of random change through the customary systematic method of calculating moving averages: for every age group year of birth, its average matriculation and higher education rate and that of its four adjacent age groups (as shown in Figures 4-7) was calculated.



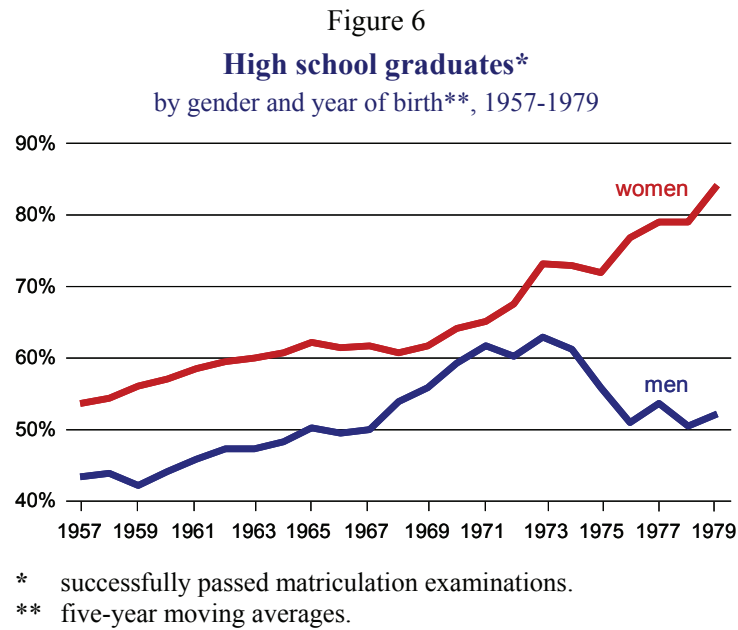
Source: Shavit and Bronstein, Taub Center and Tel-Aviv University.



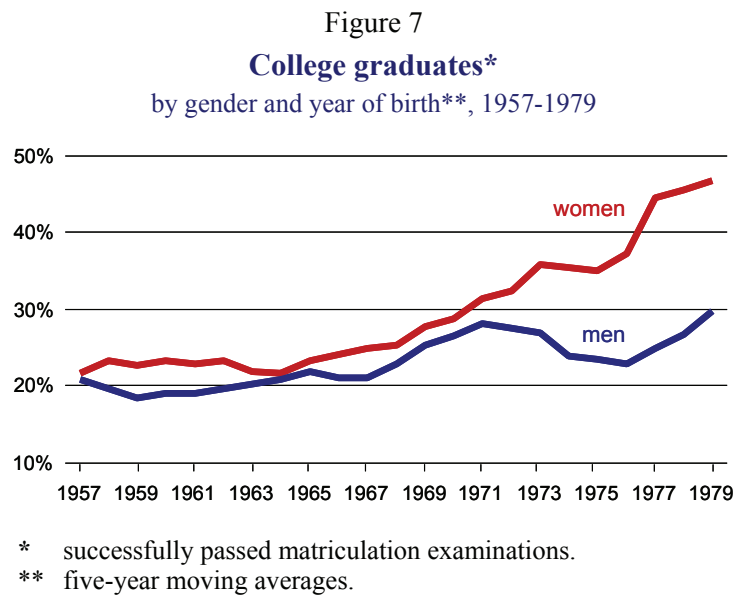
Source: Shavit and Bronstein, Taub Center and Tel-Aviv University.

• **Changes in the gaps according to gender.** Figures 6 and 7 present the rate of matriculation and academic degree eligibility for men and women according to the year of birth. The results are not surprising. The rates of eligibility among women have consistently risen, except for a slight decrease in the 1975 age-group. In contrast, among men born in the second half of the 1970s, significant decreases in the matriculation eligibility rates have been recorded. The decrease began with the 1974 age-group and continued for three years. The decrease was even expressed in the higher education rates, even though there were some signs of recovery among those born at the end of the decade. As a result of the gender differences in the strength of these changes, the gender gap in matriculation and university graduates rose among those born in the second half of the 1970s (see the following for more on this matter).⁶

⁶ The significant rise in higher education amongst women is in part due to the academization of teaching colleges, where most of the students are women. Therefore, the administrative decision to award an academic degree to college graduates contributes greatly to the rise of women university graduates.



Source: Shavit and Bronstein, Taub Center and Tel-Aviv University.



Source: Shavit and Bronstein, Taub Center and Tel-Aviv University.

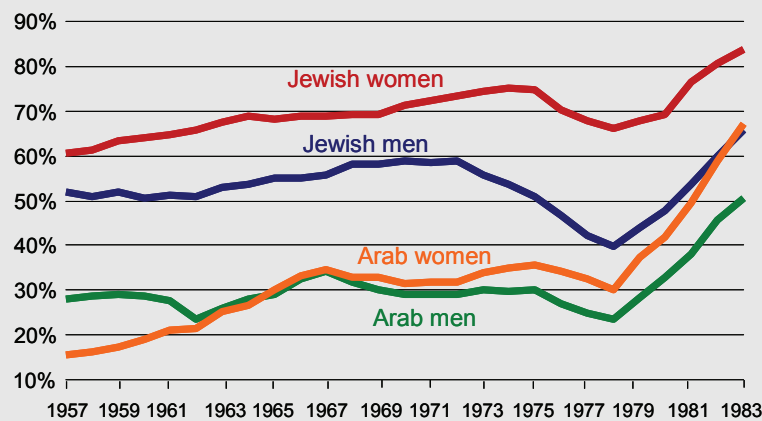
Spotlight: Examining the Decrease in Matriculation Eligibility Rates Among Those Born in the Mid-1970s

To the best of our knowledge, the decrease in matriculation eligibility among those born in the mid-1970s has not yet been discussed in the literature pertaining to the development of education in Israel. The evidence needs to be tested to check for any errors in sampling or measurements and in accordance with this, two comprehensive tests were carried out: the first test consisted of a survey of relevant statistical publications, in order to examine whether there had been a significant decrease in the matriculation eligibility in the early 1990s, when those born in 1975 began taking the matriculation exam. It turns out that in 1992 there was an approximately three percent decrease in eligibility rates across the whole age-group (Schaik, 2003). The second test included an analysis of two data clusters from human resource surveys at the Central Bureau of Statistics for 2006 and 2007. This data makes it possible to estimate the matriculation eligibility by gender and sector for those born in the 1960s, 1970s, and 1980s. Indeed, a similar and even more remarkable pattern to our findings has been found – among those born in the mid-1970s there was a decrease in the eligibility for matriculation among both sexes, among Jews and Arabs, with an even more marked decrease among men (Figure 8).

The explanations for these findings are far from clear. Throughout this research a number of alternative explanations were examined. The first possible explanation is that in the 1990s exam regulations began to change and proved detrimental to the rates of success and eligibility. We interviewed former Director-Generals from the Ministry of Education and others within the matriculation system, yet were unable to find proof to support this assumption. Another explanation that was explored is that the decrease in matriculation rates is linked to the accelerated growth of the percentage of ultra-Orthodox from the 1970s age-groups. It is a known fact that among the ultra-Orthodox, who study in Independent and exempt institutions, the number of men who take the matriculation exam is low. Among ultra-Orthodox women the rate is indeed higher, but it is still comparatively lower than those studying in State education system. Among ultra-Orthodox in age-groups born in the 1970s the number studying in (Independent) ultra-Orthodox high schools grew, from 5.7 percent in the 1990-1 academic year (the 1972-74 age-

groups) to 8.0 percent in the 1995 academic year (1977-79 the age-groups). Eligibility for matriculation is calculated according to the ratio between the number eligible and the number in the age-group. The assumption was that the substantial natural increase in the ultra-Orthodox population contributes to the size of the age-group but does not contribute in the same ratio to the number eligible and it may explain the drop in matriculation rates among those born in the late 1970s. However, an analysis of the data from the CBS's Human Resources Survey shows that the decrease in eligibility rates occurs not only among Jews, but also among Arabs (and it appears in a more moderate degree in Figures 4 and 5). Since there is no reason to assume that eligibility rates among Arabs are influenced by the rates of Orthodox Jews, the assumption was rejected.

Figure 8
High school graduates*
 by gender and sector, by year of birth**, 1957-1983



* successfully passed matriculation examinations.

** five-year moving averages.

Source: Shavit and Bronstein, Taub Center and Tel-Aviv University.

Analysis of the Human Resource Survey also showed that matriculation eligibility rates recovered among the age-group born in the 1980s. This apparently reflects the success of the reform in matriculation exams that occurred during the time when Amnon Rubinstein served as the Minister of Education. The number of students eligible grew so much that it made up for the decrease that occurred in earlier years.

4. *Summary*

The study brought to the fore some findings that are less widely-known and worth emphasizing: firstly, despite the expansion of the higher education system in past decades, the number of university graduates (those who hold a first degree) among various socioeconomic groups has remained reasonably stable throughout the period. The expansion of the higher education system has enabled the absorption of increased demand coming from the growth of the educated “middle class.” Among the age-groups born between 1955-59 only about 13 percent of Israeli pupils (that is native-born Israelis and those immigrating before the age of six) were born to parents with a secondary or academic education, whereas among age-groups born between 1976-81 there are approximately 46 percent of Israeli pupils (three times more). The higher education system tripled in size during that period and was therefore able to respond to the increasing demand for higher education by the sons and daughters of the educated class. Nevertheless, the gap between the “classes” in higher education remained stable throughout the quarter of the century that was researched in this study.

Second, much has been said of the ongoing discrimination of the Arab Israeli citizens in general and of the Arab education system in particular (for example, Abu-Asba, 2007). In light of this, it is surprising and encouraging to see that the gaps in education between Arabs and Jews have to some extent narrowed over the years. It is important to identify the factors at the basis of this positive development. The

assumption raised in the study was that the gap narrowed due to the increasing number of Arab students leaving to study in colleges in the Palestinian Authority and Jordan (and abroad in general). Another possibility is, of course, that the increase in the rate of higher education has been possible due to the expansion of the colleges in Israel. Moreover, part of the narrowing of the gap is caused by the decrease in education that began among the Jews born in the mid-1970s.

Finally, during the data analysis a surprising finding emerged of a decrease in matriculation rates among boys and girls, both Jews and Arabs, among those born between 1975 and 1978. This finding was reinforced in a number of data bases but has yet to have been explained at this stage and one must hope that it will be examined and explained in a further study.

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The Demographic Cost

Birth Rates and Achievement

in International Tests

Yariv Feniger and Yossi Shavit*

Abstract

*The birth rate in Israel is high compared to other developed countries. As a result, Israeli families are larger and classrooms are more crowded. Research has shown that these two variables, family size and class size, adversely affect academic achievement. International studies show that pupils' achievements are lower in Israel than in other developed countries. An analysis of PISA 2000 and PISA 2006 data shows that the relative size of Israel's young population which is related to high birth rates explains most of the gap between the average score of Israeli pupils and the international average. The influence of the size of the young population on pupil test scores is correlated to family size and classroom crowding. Whereas, other studies have sought the explanation for low achievement in features of the education system itself, the current study shows the significant contribution of the broader demographic context to the comparatively low achievements of Israeli pupils.***

* Dr. Yariv Feniger, Policy Fellow, Taub Center Education Policy Program; Department of Education, Ben-Gurion University of the Negev.

Prof. Yossi Shavit, Chair, Taub Center Education Policy Program; Department of Sociology and Anthropology, Tel-Aviv University.

** A more comprehensive paper on the findings of this study is forthcoming in the journal *Israeli Sociology*.

International achievement tests from the last two decades have shown that, on average, Israeli pupils' scores are below those of their counterparts in other developed countries. These findings have been consistent across all PISA studies (which measure achievement in reading comprehension, mathematics, and science) and TIMSS studies (which measure achievement in mathematics and science). Though these results have received widespread media exposure and sparked public and political debate, no detailed research attempt has been made to explain Israel's low standing relative to the other participating countries. The current study aims to analyze PISA 2000 and PISA 2006 data in order to understand why Israeli pupils achieve below their counterparts from countries at a similar level of economic development. The study's findings are then used to suggest policy measures which may improve the achievements of Israeli pupils in international tests.

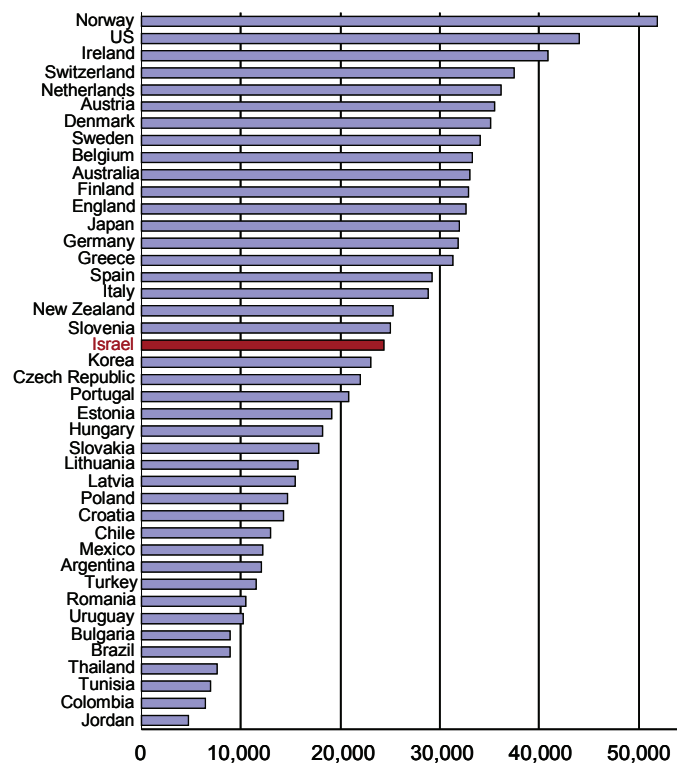
Yogev, Livneh, and Feniger's (2009) analysis of the PISA 2000 data has shown that varying academic achievements in different countries are closely correlated with (1) the level of economic development and (2) the relative size of the school-age population in those countries. Their study further shows that these two variables predict most (approximately 80 percent) of the variance in average scores across countries.

Taking the findings of Yogev et al. as the starting point, this study aims to offer a more detailed explanation of Israeli pupils' achievements in the international tests. In particular, the analysis of the results goes beyond the aggregate national level. The methodology makes it possible to examine statistically the effect of multiple variables on multiple levels of analysis. Variables are tested on the individual pupil- and family-level (micro-level variables) as well as on the national or country-level (macro-level variables). (For further elaboration, see the Spotlight section.)

A country's level of economic development, typically measured by gross domestic product (GDP) per capita, affects its ability to finance education costs and to invest in achievement-enhancing educational resources. Figure 1 compares Israel's GDP per capita in 2006 (standardized for purchasing power) with the GDP per capita of the other

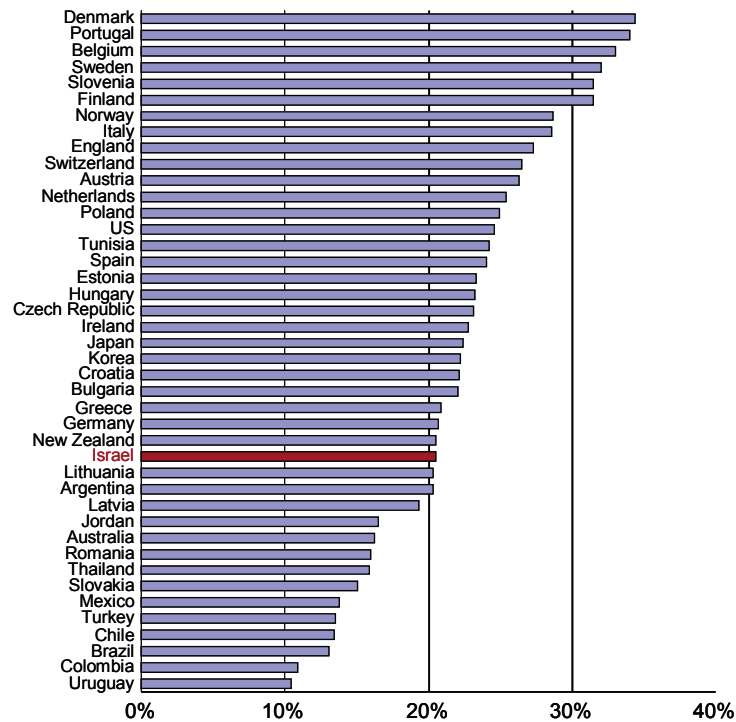
participant countries in PISA 2006 (data are from the United Nations Development Programme [UNDP] website). Figure 2 shows expenditures per pupil on secondary education as a share of the GDP per capita in Israel and in the other participant countries in PISA 2006 (data are from the UNESCO website). As the two figures indicate, Israel is not among the wealthiest participant countries, and its level of expenditure per pupil is not particularly high by international standards.

Figure 1
GDP per capita
 PPP adjusted dollars, 2006



Source: United Nations Development Programme.

Figure 2
Annual per pupil expenditure on secondary education
 as a percent of GDP per capita, 2006



Source: UNESCO.

Educational expenditure per pupil is affected by the demographic structure of a country's population. In countries with high fertility rates, school-age children constitute a large share of the population and national education expenditures required are relatively high. Israel's fertility rate is higher than the world average and especially high relative to fertility rates in developed countries. This finds expression in the total fertility

rate, which measures the average number of children a woman is likely to bear in her lifetime. In 2009, this rate in Israel was 2.96, compared with the world average of 2.58, the European Union average of 1.51, and the United States figure of 2.0. Even compared with its neighboring countries, Israel has a high total fertility rate. The figures for Lebanon, Jordan, and Egypt are 1.85, 2.39, and 2.66, respectively. Only neighboring Syria, at 3.14, has a higher rate than Israel's. (All data are from the United States Central Intelligence Agency website.) School-age children thus constitute a large share of Israel's population: about 28 percent of the Israeli population is aged 0-14, compared with 15.4 percent in the European Union and 20 percent in the United States (see Figure 3).

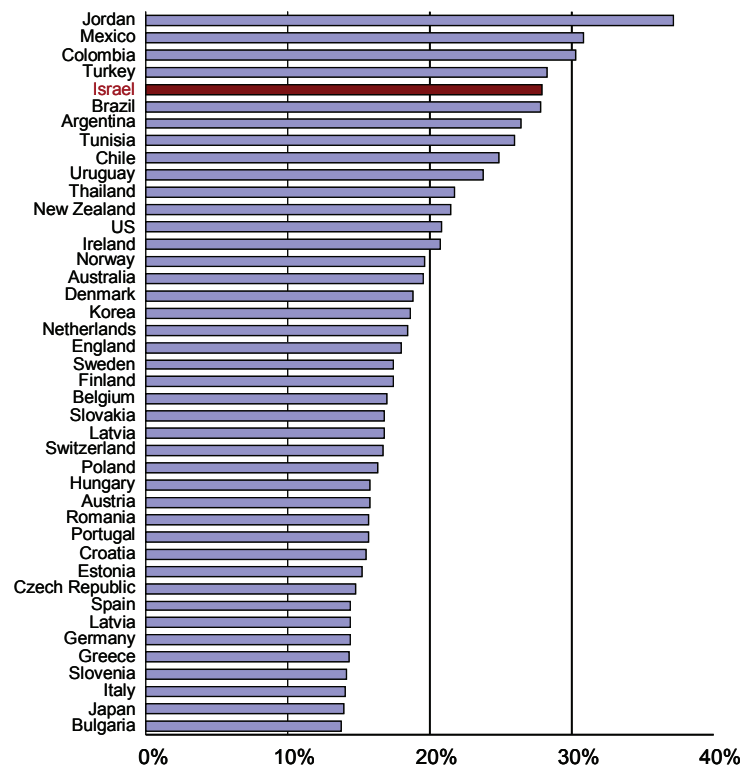
These figures underscore not only the methodological importance of standardizing educational expenditure for the number of pupils in the education system, but also the dynamic nature of a country's demographic structure. Education systems must budget not only for current, but also for future pupils. Governments must plan and build educational facilities, recruit and train new teachers, and so forth. In Israel, with its young demographics, the forecasted number of future pupils imposes further budgetary burdens on the education system.

Birth rates can affect academic achievements in ways other than through public expenditures per pupil. Many studies show that the number of siblings in a family is inversely related to their cognitive development and academic achievements. The resource dilution hypothesis states that children raised in small families enjoy a larger share of the family's resources, including parental attention, which enhances their cognitive development (Blake, 1989). Resource dilution within the pupils' families may thus explain lower academic achievements in countries with high birth rates. The share of the young population in a country's total population may further affect academic achievement through its effect on class size. Class size is determined not only by the demographic burden on the education system, but also by education policy. In the United States, for example, the last two decades have witnessed a marked reduction of class size, with many resources

allocated to this goal (Loveless and Hess, 2007). Proponents of such reduction argue (among other things) that smaller classes enable teachers to devote more time to each pupil, to improve the learning atmosphere in the class, and to respond more adequately to the needs of pupils with either special needs or high aptitude. Studies disagree, however, on the exact effect of class size on academic achievement.

Figure 3

Percent of 0-15 year-olds in the population
2006



Source: United Nations Development Programme.

Analysis of PISA data, which is detailed in the Spotlight, indicates a correlation between the share of the young population in Israel and the relatively low achievements of Israeli pupils, with the negative effect of the former on the latter largely explained by two further variables, family size and class size.

Spotlight: Study Description

The analysis is based on data drawn from PISA 2000 and PISA 2006. PISA surveys focus on pupils aged 15, most of whom are in the tenth grade. All pupils participating in PISA 2000 were tested in reading comprehension, with sub-samples tested in mathematics and science. PISA 2006 tested all pupils in all three subjects. Scores were reported on a standardized scale in which the mean was set at 500, with a standard deviation of 100. The current study focuses on reading comprehension only; note, however, that the scores in all three subjects are closely correlated. All pupils tested by PISA filled out a detailed questionnaire with questions on family and school background: these questionnaires served as the source for the pupils' background variables. Variables drawn from the PISA data have been supplemented by macro-level (country-level) variables drawn from international databases.

Several statistical models were used to examine the effect of both individual- and country-level variables on pupils' achievements in general and on the achievements of Israeli pupils in particular. The models were estimated for 34 countries with PISA 2000 data and for 41 countries with PISA 2006 data. Figure 4 shows the gap between the achievements of Israeli pupils and the international average based on PISA 2000 data. (Only PISA 2000 data are shown here, since PISA 2006 data provide no information on family size and class size. The other models yielded very similar results for both PISA databases.)

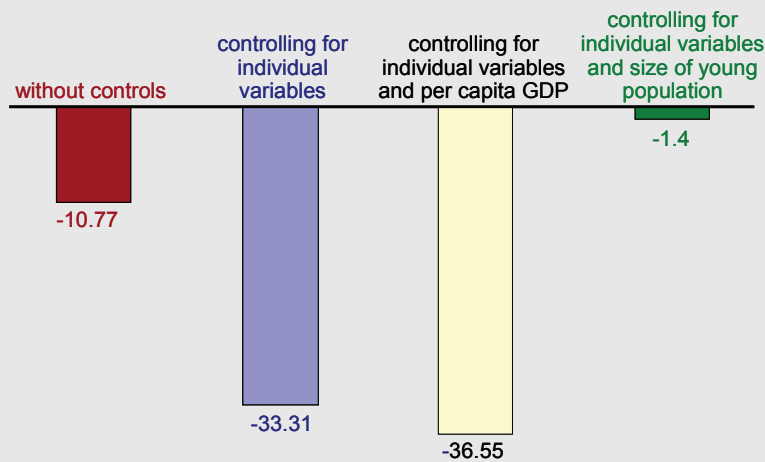
The first model estimated the achievement gap between Israeli pupils and pupils from other countries without controlling for other variables, making it possible to isolate the effect of each variable. The average score for Israeli pupils was found to be about eleven points lower than the international average.

The second model controlled for the following individual variables: pupil's age, gender, parental education, parental occupation, and number of books at home. This model increased the gap between Israeli pupils and the international average by more than 20 points. That is, for pupils with similar background characteristics, residing in Israel predicted a score about 30 points lower than the international average. In particular, Israeli pupils scored lower, on average, than non-Israeli pupils with similar family background.

Figure 4

The achievement gap

the gap in scores between Israel and the OECD countries*
controlling for individual and country variables, 2006



* OECD countries that participated in the PISA 2006 tests.

Source: Feniger (Taub Center and Ben-Gurion University) and Shavit (Taub Center and Tel-Aviv University).

The third model controlled for GDP per capita. This slightly increased the gap between Israeli and non-Israeli pupils. In other words, the achievements of Israeli pupils were lower than those predicted by the country's level of economic development. This indicates that the level of economic development is not the main cause of Israel's relatively low academic achievements. The next stage examined whether the share of children aged 0-15 in the total population can be an explanation for Israel's relatively low academic achievements. This fourth model shows that after controlling for this variable (alongside all other individual variables), the gap between Israeli pupils and the international average disappeared almost entirely.

In light of this finding, the next aim of the research was to explain which mechanisms might mediate between the share of the young population and the pupils' achievements. Several hierarchical models were used to test the hypotheses that investment per pupil, class size, or the number of siblings might be the mediating factors. The analyses found that while investment per pupil did not explain the influence of the size of the young population on pupils' achievement, each of the other two variables, class size and the number of siblings, did.

In summary, the analysis of the data indicates a correlation between the share of the young population in Israel and the relatively low achievements of Israeli pupils, with the negative effect of the former on the latter largely explained by two further variables, family size and class size.

Policy-oriented studies typically seek the causal variable for low achievement in features of the education system itself, such as teacher quality or curricula. Such studies tend to underestimate the importance of the social context within which the education system operates. The current study focuses on Israel's unique social structure, particularly on the country's demographic structure and its implications for pupils' achievements. The study highlights a fundamental constraint of the education system, namely the very rapid growth of the pupil population.

Government policy aiming to change the fertility rate is unlikely to have much influence on the majority of the population; changes in Israel's fertility rate are not to be expected in the short or medium term. Public attention should instead be focused on significantly reducing class size. Classes in Israel are very large by international standards: PISA 2006 reported 32 pupils per class in Israel, compared with 25 in the United States, 23 in Italy, and 21 in Finland (the latter topping PISA's international rankings on this measure). Such a step will incur great costs (Blass, 2008) but is not impossible to achieve.

Class size in Israel is in large part a consequence of the education system's inconsistent budgetary policy. Data on class size in Israel reveal that certain population groups with particularly high fertility rates nevertheless enjoy relatively small classes: these groups include ultra-Orthodox Jews, whose children attend independent (recognized and unofficial or exempt) schools, and modern Orthodox Jews whose children attend State-religious schools. Average class size is smaller in each of these education sectors than in Israel's State (secular) schools (Weissblau, 2005).

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School Discipline and Scholastic Achievement in Israel

Yossi Shavit and Carmel Blank*

Abstract

Israel's reputation as an unruly society has made school discipline a concern among educators, policymakers and the public at large. The current paper briefly summarizes a larger study on school discipline in Israel, its determinants, and its relation to pupil achievement based on TIMSS 2003 data. The fuller study is part of a nine-country international study on the relation between school discipline and pupil achievement. Its findings show Israeli pupils to be less disciplined than their international counterparts. Moreover, Israeli pupils have been found to be lower achievers despite higher levels of parental education than in the other participating countries. Can poor discipline explain the relatively low achievements? The study's conclusion is that if discipline among Israeli pupils matched the international average, the achievement gap between Israel and the other participating countries would diminish considerably but not completely vanish.

* Prof. Yossi Shavit, Chair, Taub Center Education Policy Program; Department of Sociology and Anthropology, Tel-Aviv University.

Carmel Blank, Policy Fellow, Taub Center Education Policy Program; Department of Sociology and Anthropology, Tel-Aviv University.

Our thanks to Yulia Cogan at the Taub Center for preparing the graphs.

In recent years school discipline has come to the forefront of public, academic, and even political discourse in Israel. Researchers from various disciplines have expressed concern about the rising violence and poor discipline in schools (Amar, 2008; Benbenishty and Astor, 2005). The leaders of Israel's education system share this concern, not only because they consider discipline an intrinsically important educational value crucial to children's socialization, but also because they believe discipline problems are among the causes of Israel's low scores on international tests such as the TIMSS and PISA (*Knesset* Education, Culture, and Sports Committee, Nov. 19, 2003, Jan. 28, 2004, July 15, 2009; Sa'ar, March 18, 2009). Neither is the public in Israel indifferent to the poor discipline in the country's education system, especially in the form of school (and, more generally, juvenile) violence. Seventy-seven percent of respondents to surveys on this issue have expressed dissatisfaction with the level of discipline in the education system, while approximately 80 percent believe that Israel's education system is incapable of handling discipline and drug- and alcohol-related problems (Katz and Yablon, 2001). The Taub Center's Social Survey suggests that almost half the Israeli public (46 percent) consider violence the primary problem facing the education system, while the problem of academic achievement is of less importance to Israelis (Nachshon-Sharon and Blass, 2011).

The present article briefly summarizes a longer study on school discipline in Israel, its causes, and its relation to pupils' academic achievement (Shavit and Blank, forthcoming). The longer study is part of a comparative international study, headed by Professor Richard Arum of New York University, on the relation between school discipline and academic achievement in nine countries: Canada, Chile, Israel, Italy, Japan, the Netherlands, Russia, South Korea, and the United States. In what follows, the focus will be on the relation between school discipline and academic achievement in mathematics and science.

1. *Background: An Undisciplined Culture*

Israeli society is considered undisciplined in many respects. Kfir (1997) and Smootha (in Mendel, 2007) claim that diaspora Jews living under hostile governments developed a sense of alienation from law and authority, tending to rely on special favors and informal “short-cuts” to achieve their aims. Such norms, brought by the Jewish immigrants to Israel, combined with the iconic figure of the Israeli *sabra* – sweet on the inside but thorny on the outside, flagrantly independent, rebellious, daring, and brazen – formed an ethos derisive of formality (Almog, 2004). From these cultural roots grew the prevalent Israeli patterns of irreverence for formal practices and noncompliance with the law, along with the tendency to act informally in order to “work things out” (Kfir, 1997). Other likely contributing factors to the lack of discipline in Israel are the country’s great ethnic and national diversity and its large income gap (which exceeds that of most Western countries). These significant cultural and economic gaps are likely to decrease agreement on social rules, making it even more difficult to enforce existing laws and regulations.

Exacerbating these cultural and social factors are certain features of Israeli schools which contribute to discipline problems among pupils. Classes are usually large, and their (poorly paid) teachers often complain about the difficulty of imposing order and discipline in the classroom. Teachers, like the general public, rate violence and discipline-related issues as the education system’s most serious problems (Smith and Paniel, 2003). Prior to 2009 the Israeli education system, seeking to protect its pupils’ dignity, imposed various restrictions on teachers’ punitive authority in dealing with discipline and violence problems (Student’s Rights Law, 2000; Circular of the Director General of the Ministry of Education, 4(A), 2000; Vilnai Commission Report, 2001). Ironically, by protecting the pupils’ right to avoid inappropriate punishment, such progressive legislation failed to protect the right of both students and teachers to a quiet, safe, and orderly learning environment.

This trend was reversed to some extent in 2009 (Sa'ar, March 18, 2010; Circular of the Director General of the Ministry of Education 2009 (A)). This study, however, focuses on the preceding period.

2. Findings: Discipline and Achievement in Mathematics and Science Tests

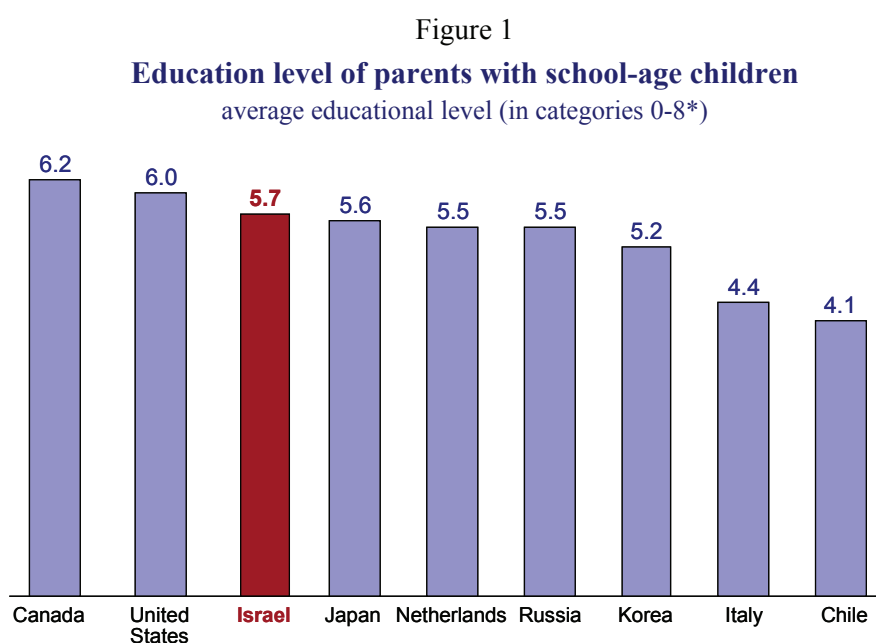
Data gathering process: The current study is based on data from TIMSS 2003, an international survey of achievement in literacy, mathematics, and science among eighth grade pupils. Israel was represented by 4,318 pupils from 146 schools (including 69 State schools, 39 State-Religious schools, and 38 schools in the Arab sector). Pupils in all schools were given self-administered questionnaires in their science and mathematics classes. Additional data were gathered from 390 science and mathematics teachers and school principals. The questionnaires completed by principals, teachers, and pupils were used to measure school discipline, pupils' personal victimization, and various background variables.

School principals were asked to report on various aspects of discipline at their respective schools, including the frequency of late arrivals, full-day absences, and skipped classes. "Disciplinary infraction" scores were given on the basis of these reports. Teachers were asked to report the frequency of classroom disruptions that interfere with their ability to teach. Pupils were asked to answer a series of questions designed to reveal to what extent they had been victimized by violence in the preceding month (e.g., whether anything was stolen from them, whether they were beaten-up, etc.) High scores on the above measures represented poor discipline and high victimization levels.

Achievement in science and mathematics was measured by tests administered as part of the science and mathematics curriculum. For the purposes of the study, a pupil's achievement was measured by his or her average test score in both subjects. Pupils' background variables included gender, age, parental education, and country of origin (Israel or other).

School variables included percent of immigrant pupils, percent of female pupils, average parental education, number of pupils, and population of the school's community (for complete details, see the full article).

The findings: A comparison between Israel and the other participating countries reveals a striking result. Though parental education in Israel was higher than the average in the nine countries (see Figure 1), the achievements of Israeli pupils were lower than average. Studies have shown parental education to be a central determinant of pupils' achievement, leading us to expect that Israel's high level of parental

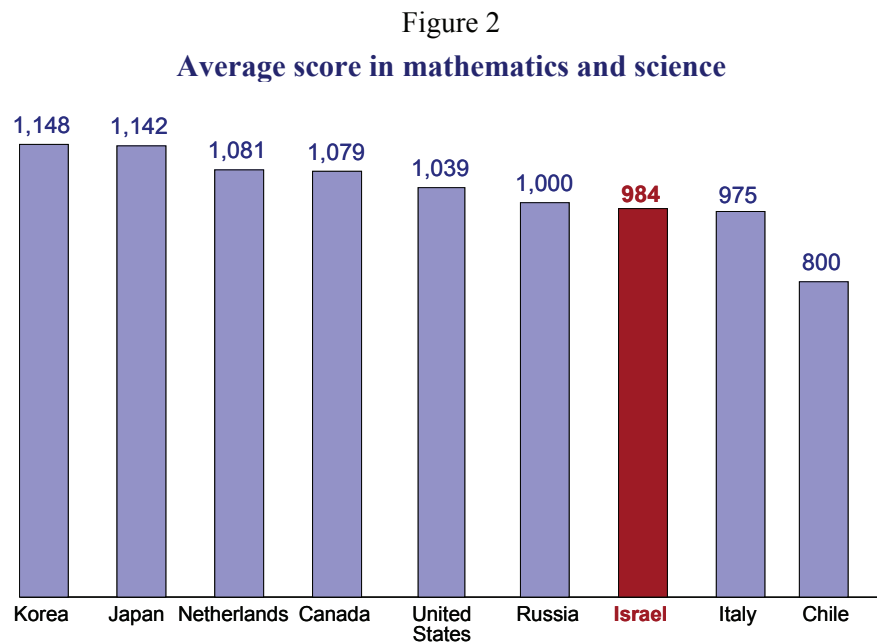


* parents' education level is standardized into 8 categories for comparisons between countries (0 represents primary education or less; 8 is an academic education).

Source: Shavit and Blank, Taub Center and Tel-Aviv University.

Data: TIMSS 2003.

education would be accompanied by high academic achievement.¹ Figure 2, which compares average science and mathematics scores in the various countries, shows a picture contrary to expectations: academic achievement in Israel was lower relative to the other countries and lower than the international average by some 1028 points. What explains this gap between Israeli pupils' relatively favorable educational background and their average achievements relative to other countries?



Source: Shavit and Blank, Taub Center and Tel-Aviv University.

Data: TIMSS 2003.

¹ Parent's education was determined by the highest course of study completed by the pupil's father or mother (or other adult guardian or "parent substitute"), standardized on an eight-category scale to enable international comparisons,

As Figure 3 shows, discipline among Israeli pupils, as measured by pupils' reports on victimization and by teachers' reports on classroom disruptions, is lower relative to the other participating countries. Discipline problems were more frequent than in most of the other countries. (Principals' reports on disciplinary infractions yielded similar findings not included in the figure to avoid confusion.)²

These findings may reinforce the concerns among Israeli policy makers that poor discipline in schools is among the causes of poor academic achievement. More complex analysis is required, however, to determine the extent to which discipline problems affect pupils' achievements.

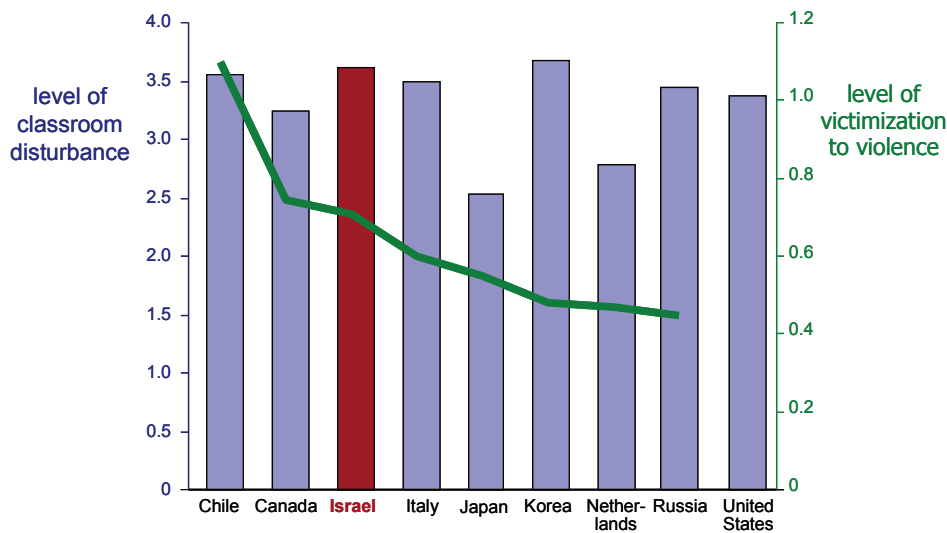
Further analysis, not presented in this brief paper, examined the contribution of various factors to the level of school discipline. A correlation was found between discipline and certain features of school population: the percentage of female pupils and the average level of parental education were negatively correlated with discipline problems (i.e., discipline problems fell as the percentage of female pupils and the average level of parent's education rose). State and State-religious schools had similar discipline levels. Schools in the Arab sector had lower rates of disciplinary infractions and classroom disruptions than

where 0 = "no or incomplete primary education" and 8 = "education beyond a first degree (B.A.)."

- ² Victimization levels were calculated by summing up the pupil's answers to the relevant questions (i.e., whether anything was stolen from him or her, whether he or she was beaten-up or harmed by another pupil, and whether he or she was mocked or called names by another pupil in the preceding month. Answers were given on a scale of 0-3, with $\alpha=0.56$ for all the participating countries.) Higher scores represented higher victimization levels. The frequency of classroom disruptions was measured on the basis of teachers' reports on the frequency of disruptions interfering with their ability to teach (none, few, some, much). School averages were calculated both separately for mathematics and science classes, and jointly for the entire school. Higher scores represented higher frequencies of classroom disruptions.

Jewish ones, although the levels of violent victimization were similar. (For more information, see the full study.)

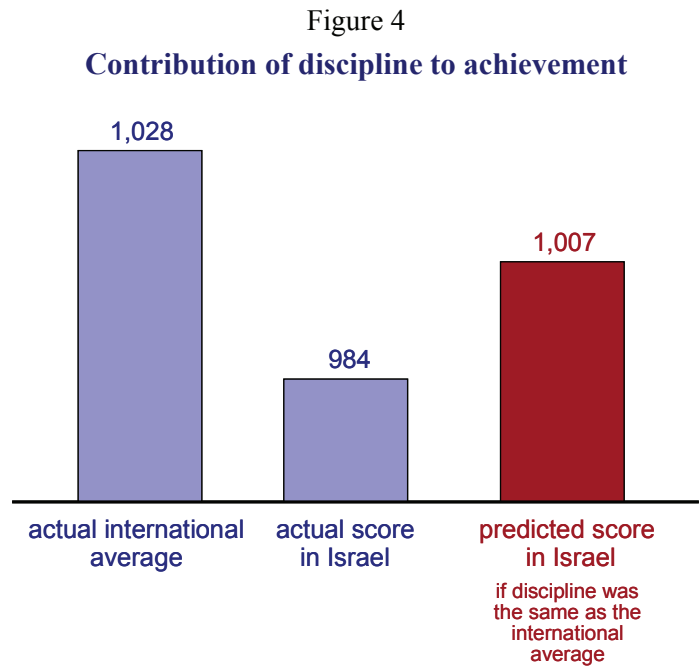
Figure 3
Frequency of classroom disturbances and level of victimization



Source: Shavit and Blank, Taub Center and Tel-Aviv University.
Data: TIMSS 2003.

Statistical analysis was used to assess the effect of school discipline, classroom discipline, and personal victimization on pupils' achievements, after statistically controlling for pupils' background and other school variables. Discipline problems were found to contribute negatively to achievement: higher rates of school-wide disciplinary infractions and classroom disruptions and higher victimization levels were found to be correlated with lower academic achievement.

Figure 4 presents a simulation based on the current analysis and shows how improved discipline among Israeli pupils may affect their average academic achievement. The middle column shows Israel’s average science and mathematics scores on TIMSS 2003. The left-hand column shows the average scores for each of the nine countries participating in the study. The right-hand column indicates the scores Israel would obtain if discipline levels were at the same level as the international average and not lower than it.



Source: Shavit and Blank, Taub Center and Tel-Aviv University.
Data: TIMSS 2003.

The average score for Israeli pupils on TIMSS 2003 was 984, while Israel's discipline level was lower than the international average. The simulation indicates that even if Israel's discipline level matched the international average of the nine participating countries, Israeli pupils would score 23 points higher on average. While this improvement may seem insignificant to some, it would half the 44-point gap between the average Israeli and the average international scores.

3. Summary and Conclusions

School discipline in Israel is poor relative to the other countries participating in the study. Israeli pupils are also lower achievers than pupils in the other countries, despite their parents' comparatively high level of education. Israeli policymakers and the Israeli public are concerned with Israel's relatively poor achievements on international tests, tending to attribute them to poor school discipline. Based on the results of TIMSS 2003, this study indicates that improved discipline would indeed lead to significantly higher achievements.

The present study examined whether Israeli pupils' low achievements are the result of poor school discipline in light of the clear correlation between the two. The findings suggest that if Israeli discipline levels were similar to the average discipline levels in the other participating countries, Israeli achievements would come significantly closer to (while remaining lower than) the average achievement in those countries.

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Israel's Educational Achievements

Updated International Comparisons

Dan Ben-David*

Abstract

Results from the recently published international PISA exams indicate that the level of educational achievement in core curriculum subjects amongst Israel's children is at the bottom of the Western world. Even without the inclusion of ultra-Orthodox boys – who do not participate in the exams – the Israeli average achievement is lower than in every one of the 25 OECD countries that are relevant for comparison in the West. Likewise, gaps in achievement among the Israeli pupils are greater than the gaps within each of the 25 countries. While the country's weakest pupils score below the weakest pupils in all of the 25 OECD countries, the level of Israel's top pupils is lower than in 24 out of the 25 Western countries.

In large parts of last year's *State of the Nation Report* and in this year's Report, there is considerable evidence highlighting the strong link between education and employment, wages, poverty, income inequality, and economic growth. While the primary emphasis is on the quantity of education (for example, the number of school years), there is a large and increasing body of evidence showing the importance of educational

* Prof. Dan Ben-David, Executive Director, Taub Center; Department of Public Policy, Tel-Aviv University; Research Fellow, CEPR, London.

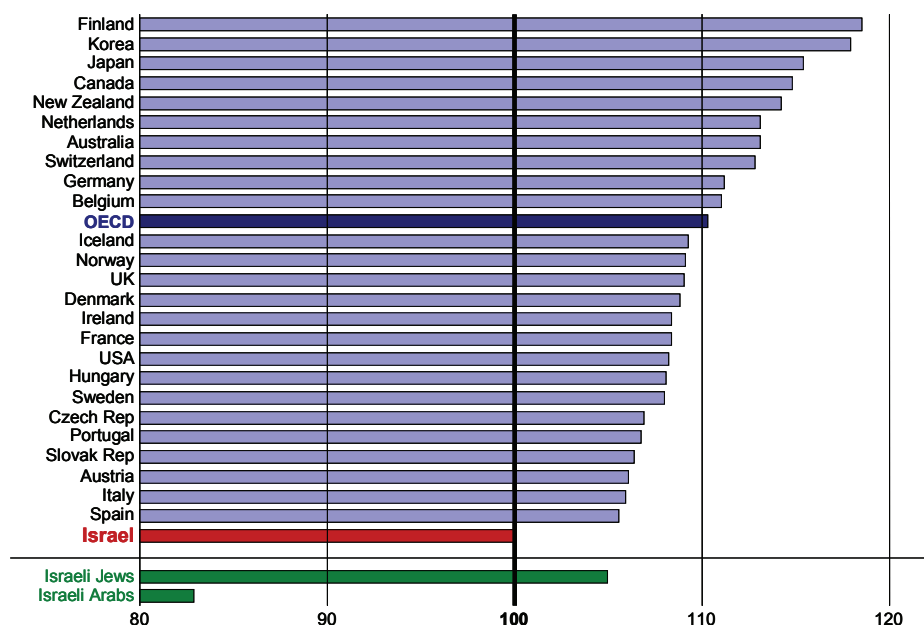
I would like to thank Nachum Blass and Ayal Kimhi for their comments and suggestions.

quality. In this realm – as measured by achievements in standardized examinations – Israel's current education picture is quite sobering.

In last year's *State of the Nation Report* (Ben-David, 2010a), a comparison was made between the educational achievements of Israel's children and the achievements of children in 25 OECD countries since 1999. In four of the five international exams administered in the years 1999-2007, the average level of achievement in Israel was below each of the 25 OECD countries. The disparity in educational achievements among the children of Israel was greater than the disparity within each of the 25 OECD countries in every one of the five exams. A comparison of the weakest pupils – those in the bottom five percentiles in each country – showed that Israel's weakest pupils were far weaker than the weakest pupils in each of the 25 OECD countries in each of the five exams. Even a comparison of the top pupils in each country – those in the top five percentiles – does not portend well. The achievements of Israel's top pupils placed them at the bottom, or close to it, compared to the top pupils in the 25 OECD countries.

In December 2010, the OECD published the results of the most recent international exam, the PISA test given in 2009. As can be seen in Figures 1 to 4, the most updated picture of the achievement level of Israel's children in the core fields is similar to the results of the entire past decade. Although there were some slight improvements, Israel is still ranked below all of the relevant Western world. The country with the lowest achievement levels among the 25 OECD countries is Spain (Figure 1). That said, the achievements of the Spanish children were six percent above the achievements of the Israeli children. The OECD average was ten percent higher while the average achievement levels among the leading countries, Finland and Korea, were 19 and 18 percent higher, respectively.

Figure 1
Average level of education
 average achievement levels in 25 OECD countries and in Israel
 PISA 2009 exams*, base: Israel = 100



* National average in math, science and reading exams. Israeli data does not include *haredi* boys in all subjects or *haredi* girls in science.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: PISA; Israel's National Authority for Educational Measurement and Evaluation.

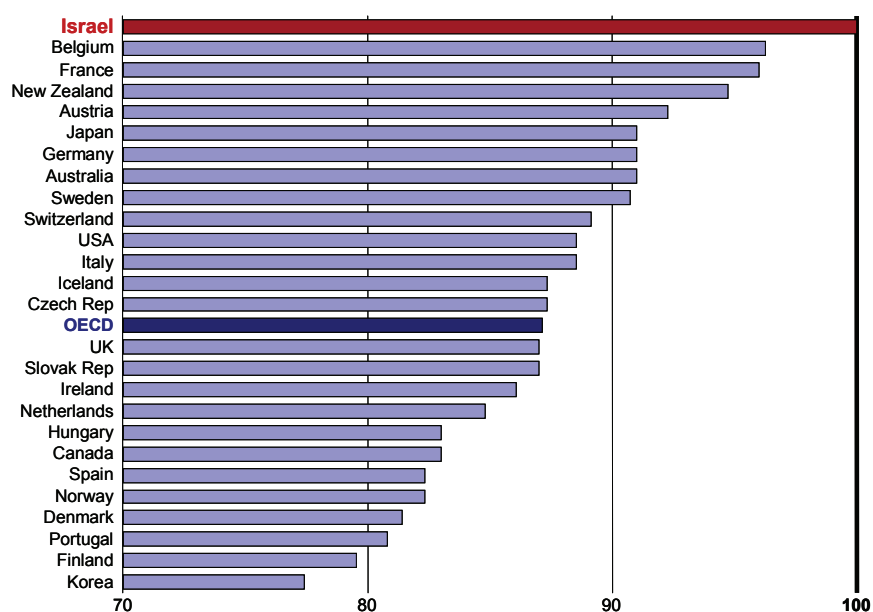
It is important to emphasize that the actual Israeli average is even lower since the Jewish ultra-Orthodox (*haredi*) children – who comprise roughly one-fifth of the country's pupils – do not study the material, do not take the exams, and are not included in the Israeli average that would no doubt have been even lower had the *haredi* children participated in the

exam. This and more: the average for non-*haredi* Jewish children was also below each of the 25 OECD countries. The achievement level of the Arab Israeli pupils was 17 percent below the Israeli national average. In fact, Arab Israeli pupils placed below Third World countries like Jordan, Tunisia, Indonesia, Kazakhstan, Brazil, and Colombia.

For three and a half straight decades, labor productivity in Israel grew at a slower rate than the average for the G7 countries (the leading Western countries) despite the existence of hi-tech sectors and basic and applied research in which Israel is at the cutting edge (Ben-David, 2010b). As a result, Israel's standard of living has been rising more slowly – i.e. declining in relative terms – than the living standards in the leading Western countries. This is not a coincidence. While there are additional reasons for the relative decline, one primary factor underlying this is the level of education that Israel provides its children. When this is the Israeli level in the core subjects, and when this has been the level for at least a decade, it is difficult to see how Israeli pupils who are struggling to compete with children in the West in the educational realm will be able to compete successfully on the future global economic playing field utilizing their limited educational toolboxes.

Israel's socioeconomic problems are not limited to just an economic growth rate that has been relatively low for decades. Income inequality within the country is among the highest in the Western world. The more the educational system represents a springboard into the labor market, educational disparity today will be reflected by economic disparity tomorrow. Therefore, while the low average Israeli achievements *vis-à-vis* the West reflect the general national level, the very high gaps in achievement within Israel – which continue to be higher than in each of the 25 OECD countries – point to severe future problems in reducing income inequality (Figure 2).

Figure 2
Educational inequality
 standard deviations in achievements in 25 OECD countries and in Israel
 PISA 2009 exams*, base: Israel = 100



* National average in math, science and reading exams. Israeli data does not include *haredi* boys in all subjects or *haredi* girls in science.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

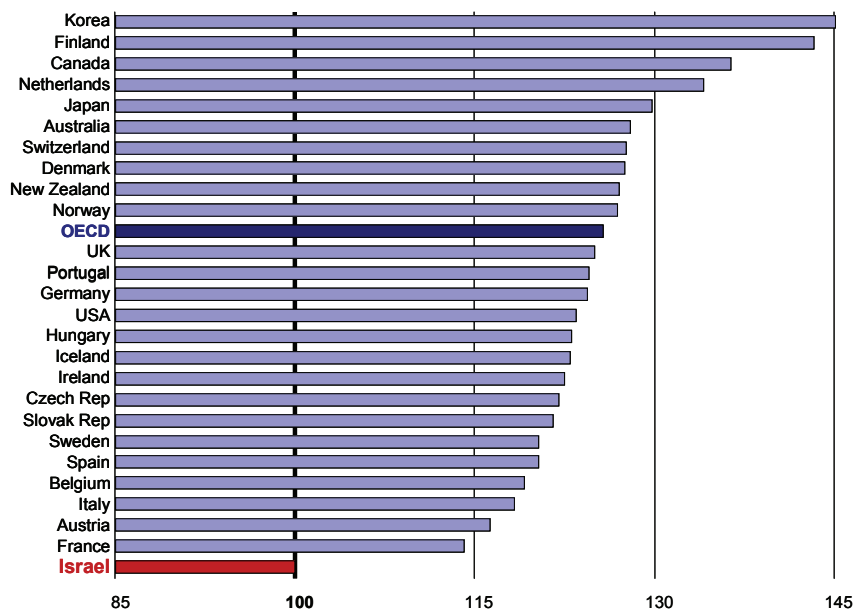
Data: PISA; Israel's National Authority for Educational Measurement and Evaluation.

Figure 3 compares between the weakest pupils in the Western world in the core curriculum subjects. The Israeli average in the bottom five percentiles is substantially lower than the averages for the same percentiles in each of the 25 OECD countries. When this is the level of education provided the weakest pupils in Israel, what kind of future poverty level can be expected when they will have to compete in a modern and competitive labor market with only the inferior educational tool box that they have at their disposal?

Figure 3

Comparison of weakest pupils

average achievement levels of bottom 5th percentile in
25 OECD countries and in Israel, PISA 2009 exams*
base: Israel = 100



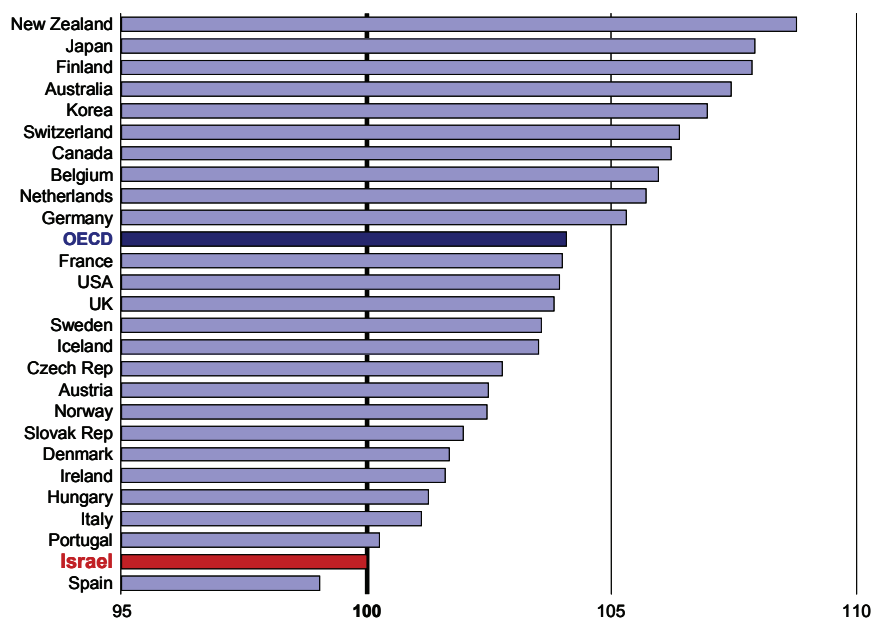
* National average in math, science and reading exams. Israeli data does not include *haredi* boys in all subjects or *haredi* girls in science.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: PISA; Israel's National Authority for Educational Measurement and Evaluation.

A comparison of the top pupils can be found in Figure 4. It shows how the average level of achievement among the top five percentiles in Israel compares to the average among the top percentiles in each of the other countries. Israel's top pupils are ranked below the top pupils in every one of the other countries except Spain.

Figure 4
Comparison of top pupils
 average achievement levels of top 5th percentile in
 25 OECD countries and in Israel, PISA 2009 exams*
 base: Israel = 100



* National average in math, science and reading exams. Israeli data does not include *haredi* boys in all subjects or *haredi* girls in science.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: PISA; Israel's National Authority for Educational Measurement and Evaluation.

A country in perpetual danger since its birth cannot allow itself to wither economically or technologically and it will continue to be required to develop abilities that do not exist in other countries. A small economy that needs to withstand existential pressures in such a hostile neighborhood must understand that its economic future depends on technological, scientific and medical innovation. In this kind of a reality, it is not too difficult to understand the future implications of providing its top pupils with an educational toolbox of poorer quality than that provided by 24 of the 25 Western countries with whom Israel must compete in the global marketplace.

The recently signed wage agreement between the secondary school teachers' union and the government is supposed to substantially increase teachers' wages. Nachum Blass discusses this agreement in his chapter "Developments in Israel's Education System" in this volume, so only a few related points will be highlighted here. It is vital that the teachers' compensation be sufficient to attract good teachers to the educational field. One question that arises is whether, in order to attract a good math teacher (for example), Israel must pay the same amount as it needs to attract a good physical education teacher (for example)? Is the amount needed to draw someone to teach a class of children from a poor socioeconomic background the same as what is needed to draw someone to teach a class of children from wealthier backgrounds? Are the extra hours that each teacher must work in order to receive higher wages – as is the case in both teachers' unions' agreements – necessary in equal amounts across all teaching fields, or could it have been possible to utilize the additions to the wages and instructional hours in a manner that would have primarily emphasized an improvement in the teaching of core curriculum subjects that have turned out to be so difficult for so many Israeli children?

The primary points that need to become the basis for any systemic educational reform in Israel appear in last year's Report (Ben-David 2010a). They include a change in curricular emphasis and the provision of a greater share of resources and instruction time in the core subjects –

especially in schools belonging to the *haredi* and Arab Israeli educational systems, and in the poorer neighborhoods and towns of Israel, regardless of religion or degree of religious observance. Similarly, a greater number of high quality teachers are needed in the core subjects. They need to come with better professional training in their respective fields and possess university-level B.A. or B.Sc. degrees (depending on the subject) at least, and receive compensation that is competitive with the alternate job opportunities that they would have in their field.

Without serious systemic reform, it will be difficult to implement the kinds of policies needed for changing the types of results that are seen in the figures shown here – with all that this implies for the country's future society and economy.

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IV. HEALTH

Israel's Healthcare System

Dov Chernichovsky*

Abstract

Israel's national healthcare system suffers from structural flaws to which the State has contributed. These include a lack of both the resources and the administrative flexibility to cope with rising demand for care as supply has declined. Rather than aiding the public part of the system to cope with the challenge, the State has exacerbated the situation by reducing the share of public funding and by encouraging the private insurance funds to provide these services. The result is an uncontrolled rise in service demand in the private part of the system that is largely met by personnel who are also employed in the public part.

Thus, not only has the healthcare system declined in efficiency, reflected in a relative inflation of healthcare prices due to double pay and waste, but the situation has also worsened in terms of income distribution and access to medical services. This deterioration also manifests in growing disparities between poor and rich, between central Israel and its periphery, and between incomes of interns, who cannot do privately paid work and those of specialists who can. Worst of all, early indications of these systemic flaws are becoming apparent at the public health level, as seen in a rise in infant mortality among the Bedouin of the Negev and other weaker groups in society.

* Prof. Dov Chernichovsky, Chair, Taub Center Health Policy Program; Department of Health Systems Management, Ben-Gurion University of the Negev.

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This chapter was written in the shadow of a physician's strike, the first in a decade, organized for the declared purpose of "rescuing the Israeli public health system." The strike reveals the depth of the structural crisis that has emerged within the healthcare system – a crisis unlikely to be resolved by the strike.

The Israeli healthcare system has been at a crossroads for several years. Israel now has the option, on the one hand, of rejoining the family of countries characterized by well-developed healthcare systems. On the other hand, the option exists of completing the "Americanization" process – a process that the US itself is trying to reverse – and joining the cluster of countries whose healthcare systems are less well organized (these countries include the US and various other economies in transitional states). Unless something changes, there will be an erosion – early indications of which are already visible – of the Israeli healthcare system's impressive achievements, including those relating to public health.

This crisis and some of its ramifications form the background against which the chapter was composed. The first section begins with a survey of, and update on, the healthcare system from two perspectives. The first of these is the health of the Israeli population, as reflected in life expectancy and infant mortality, compared with the 22 more highly-developed OECD member countries (OECD-22¹); the second is the Israeli population's degree of satisfaction with the system. Within the context of these two indices, the chapter discusses equity, expenditure

¹ OECD-22 includes the following countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, South Korea, Luxembourg, the Netherlands, New Zealand, Norway, Spain, Sweden, the United Kingdom. Countries excluded from the comparison: Turkey, Mexico, the Czech Republic, Slovakia, Hungary, and Poland. Thus, the comparison is with the most highly-developed countries, those whose income levels and, most importantly, medical technologies are on a par with those of Israel.

control, and efficiency, as well as scope of choice. The second section addresses (against the background of the system's achievements as well as the physician's strike) the structural problems of a system facing rising demand for health services at a time when the supply of medical manpower in the population is continually declining – problems that have actually been aggravated by the State. The remainder of the chapter, sections 3 and 4, deals with two main issues that stem from the current situation: the effect of rising private expenditure on income distribution and poverty; and the ramifications of the crisis for Israel's geographic and social periphery.

1. The System's Achievements and Performance

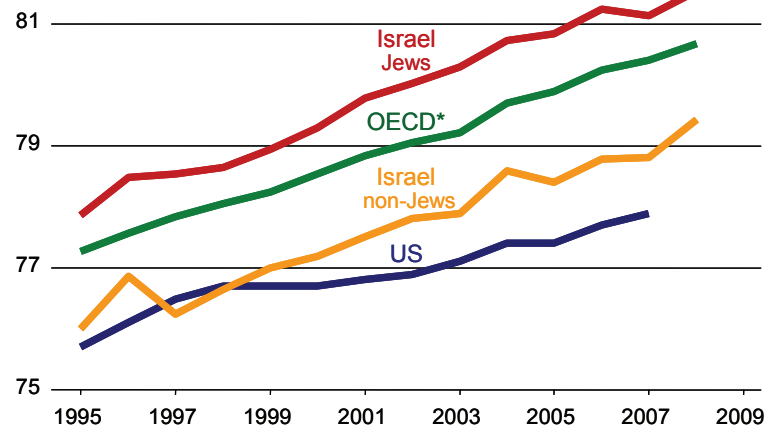
The achievements of Israel's healthcare system are measured in terms of two main parameters: the population's health, and its satisfaction with health services. These parameters are complemented by a number of "secondary" factors that may be defined as intermediate objectives: equity, cost containment, economic efficiency, and freedom of choice. These objectives have a socioeconomic dimension which both serves the system and enhances its performance.

1.A. Health Status of the Population

The population's health status is measured in this chapter by two basic indices: life expectancy and infant mortality. Life expectancy in Israel, for both Jews and non-Jews, is continuing its upward trend of past years (Figure 1). The high level of health that characterizes Israel's Jewish population compared with the OECD-22 countries is striking; at the same time, the health status of Israel's non-Jewish population is continuing to improve as well. The life expectancy of non-Jewish Israelis is high compared with that of Arab and Muslim countries, at least those in Israel's vicinity (Figure 2).

However, considerable potential still exists for closing the gaps between Israel's Jewish and non-Jewish populations, by improving the non-Jewish population's health status.

Figure 1
Life expectancy at birth
1995-2008

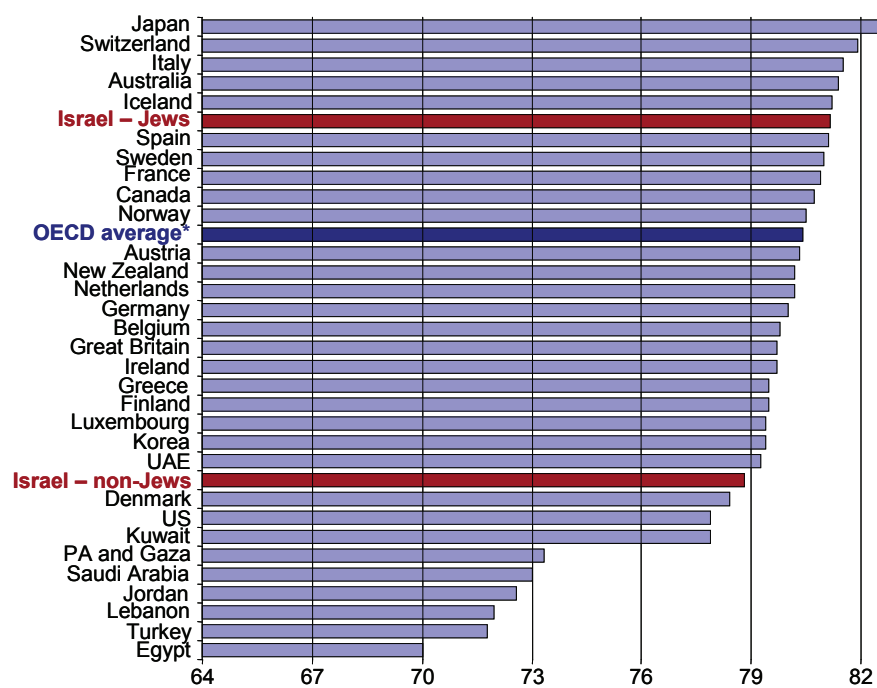


* average of the 22 most developed OECD countries excluding the US.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD Statistics Portal.

Figure 2
Life expectancy at birth
 2007



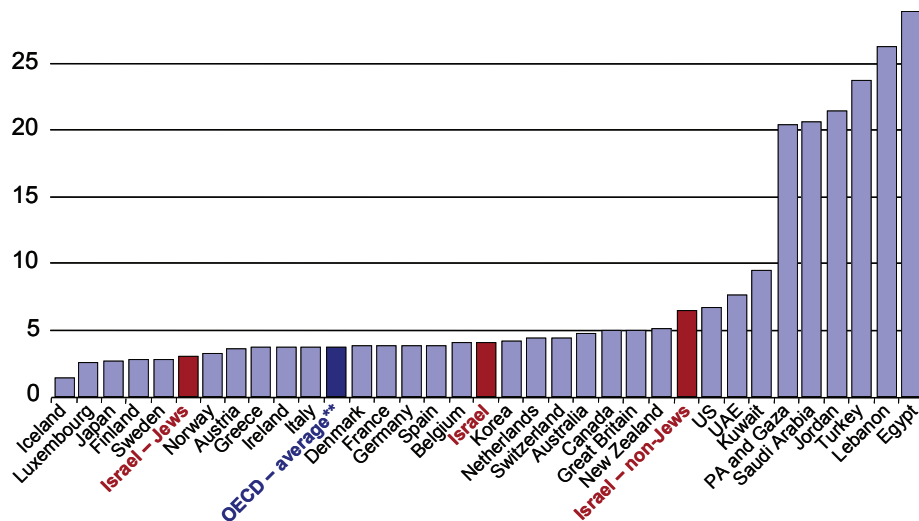
* average of the 22 most developed OECD countries excluding the US.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD Statistics Portal.

The improvement in, and relative status of, Israeli life expectancy indicators, reflects changes in infant mortality levels – an index that has steadily improved but which, again, is still characterized by disparities between Jews and non-Jews, whose infant mortality levels are higher (Figures 3 and 4). These infant mortality disparities pose a major challenge for Israel's healthcare system.

Figure 3
Infant mortality*
2007



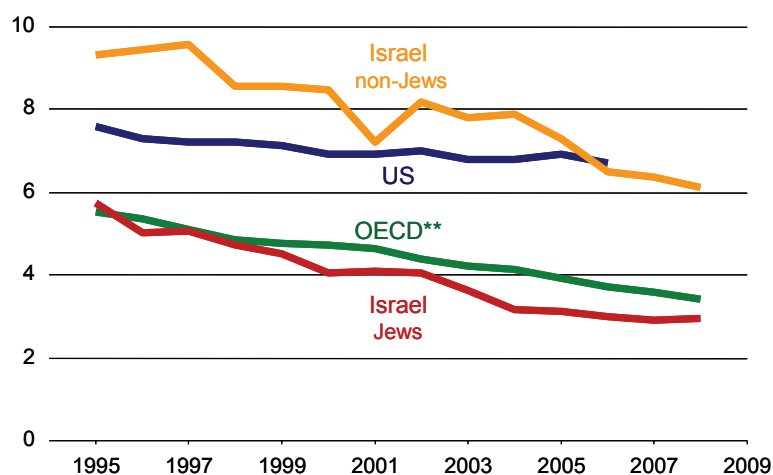
* infant deaths up to age 1 per thousand live births.

** average of the 22 most developed OECD countries excluding the US.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD Statistics Portal and the World Bank.

Figure 4
Infant mortality*
 1995-2008



* infant deaths up to age 1 per thousand live births.

** average of the 22 most developed OECD countries excluding the US.

Source: Taub Center for Social Policy Studies in Israel.

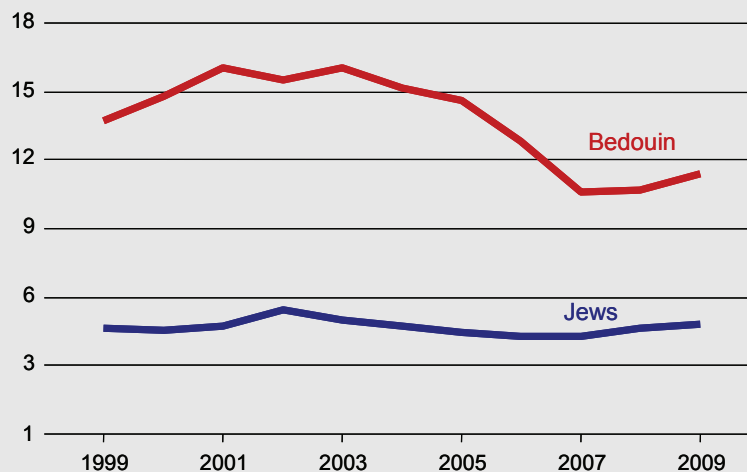
Data: Central Bureau of Statistics; OECD Statistics Portal.

However, as will be shown, the challenge of narrowing disparities is growing within all population groups, both Jewish and non-Jewish, particularly along socioeconomic lines that also reflect place of residence. The ability to meet this challenge has recently been called into question in light of a worrisome rise in infant mortality, particularly among the Negev Bedouin (Spotlight A). It should be noted that this development has emerged after years of impressive gains, particularly in this area (Chernichovsky, 2010b), and it may signal an unwelcome trend toward erosion of the healthcare system's achievements, discernible early on in Israeli society's weaker segments.

Spotlight A: Infant Mortality of Bedouin and Jews in the Negev*

The infant mortality rate for Bedouin in the Negev was 13.6 per thousand live births in 2010, compared with 4.1 per thousand for Jews. Both population groups have been experiencing a rise in infant mortality since 2008, following a period (starting in 2003) characterized by a significant decline in infant mortality, particularly among the Bedouin (Figure 5). In 2010, the leading cause of death for Bedouin infants was congenital defects and hereditary diseases; for Jews, it was premature birth and related complications.

Figure 5
Infant mortality for Jews and Negev Bedouin*
 1999-2009



* infant deaths up to age 1 per thousand live births; three-year moving averages.

Source: Taub Center for Social Policy Studies in Israel.

Data: The Health Sciences Faculty, Ben-Gurion University of the Negev; District Health Division, Southern District.

Although there is no unequivocal explanation for the phenomenon, one cannot ignore the severe crisis of maternal-child preventive-service delivery to the Bedouin population, a crisis spawned by the Negev's manpower shortage relative to the rest of the country. Data on rising percentages of Bedouin women who come to give birth at Soroka Medical Center without having received any prenatal care support this hypothesis.

* Thanks to Prof. Ilana Shoham Vardi, Dr. Ilana Belmaker, Dr. Hagit Peretz, Dr. Natalya Bilenko, Dr. Daniela Landau, Dr. Farhan Alesana, and Liora Shahar-Rothberg, who provided updated figures and enabled this spotlight to be presented in the current report.

1.B. Satisfaction Level with the Healthcare System

Assessing the population's satisfaction with healthcare – and, in particular, presenting satisfaction levels in a context of international comparison – is a complex task. It is, nonetheless, important to look at satisfaction levels over time within each individual country.

The Taub Center's Social Survey 2010 reports a high degree of satisfaction with healthcare, both generally and with regard to the health services available to families (this is taken up in depth in the section on Health in the Social Survey 2010, in this report). The Survey, which has been conducted continuously since 1999 and monitors public satisfaction levels on a regular basis, points to a very high level of public satisfaction with healthcare – 41 percent of Israelis feel that the level of service that they receive has improved, while 84 percent are happy to varying degrees with the services available to themselves and to their families. Interestingly, higher-than-average satisfaction levels were found among the ultra-Orthodox and the Arab Israelis, a phenomenon that was noted in earlier surveys as well.

The Myers-JDC-Brookdale Institute Health Services Utilization Survey conducted in Israel in late 2009, which compared its findings with an earlier survey from 2007, also points to high levels of public satisfaction with the services provided by Israel's health funds (Gross, Brammli-Greenberg, Weizberg, 2009). However, the survey's overall satisfaction picture is disturbed when one looks at the level of difficulty experienced in obtaining medical services in times of need. The overall percentage of respondents who said it was "difficult" or "very difficult" to "obtain medical care when I needed it" was 14 percent in 2009. However, when population groups are divided up, one finds a rise in the percentage of those answering "difficult" or "very difficult" among low-income respondents (18 percent in 2009 versus 13 percent in 2007), Arabic speakers (12 percent in 2009 versus only four percent in 2007), and the elderly (17 percent in 2009 compared with 22 percent in 2007). These findings are of special importance in the context of increased private expenditure on healthcare, an issue that will be discussed along with additional relevant findings at a later point.

1.C. The Healthcare System's Medium-Term Socioeconomic Objectives

As noted above, the system's medium-term goals relate to socioeconomic issues that both serve the system and contribute to its performance: equity, cost containment, efficiency of operations, and scope of choice. These issues also have value in and of themselves.

Equity. Equity in the healthcare system refers to progressive nature of service funding or to the degree to which funding reduces the relative burden of expenditure on poor families. Equity also relates to the issue of a positive association between level of income and access to medical care.

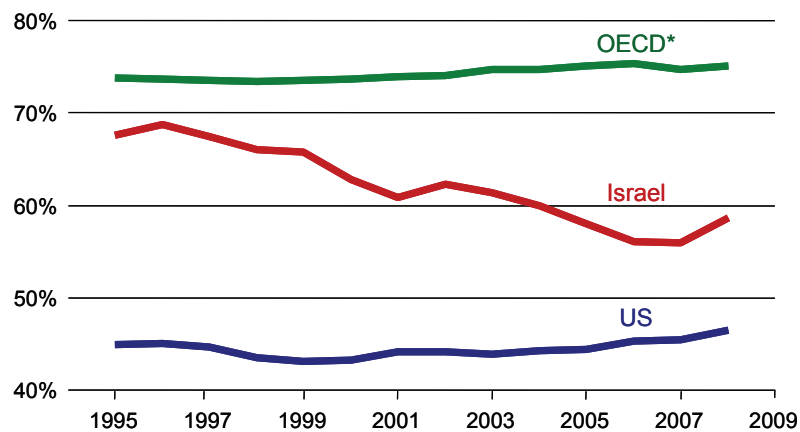
Despite the macro-level rise indicated by the 2008 data, the decline in the share of public funding of the system is particularly evident over time, at least in international comparison (Figure 6). Moreover, within the

realm of public funding itself, there has been a decline in the share of general taxation as a component of total public funding, which also includes the earmarked “Health Tax.” As will be discussed, particularly in Section 3, these trends are being reflected in household budgets: the need to fund the system translates into a worsening income-distribution situation and deeper poverty among sectors that were poor to begin with. It also results in less accessibility to services among these groups.

Figure 6

Public expenditure for healthcare services

as a percent of national expenditure on healthcare services, 1995-2008



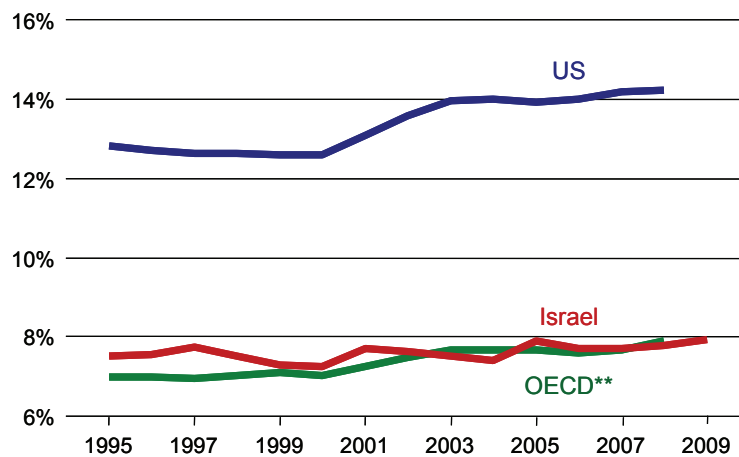
* average of the 22 most developed OECD countries excluding the US.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD Statistics Portal.

Expenditure control. Israel's national expenditure on healthcare in 2009 was NIS 60 billion, accounting for 7.9 percent of the GDP. This figure is, as in previous years, similar to the mean for the 22 most highly-developed OECD countries, except the US which deviates from this picture with a high rate of health expenditure as a percentage of GDP (Figure 7). The figure shows stability for Israel in health expenditure as a percentage of GDP, both over time and in comparison with other developed countries, since the National Health Insurance Law was enacted in 1995.

Figure 7
National expenditure on healthcare services
 as a percent of GDP*, 1995-2009



* standardized per capita expenditure (using the old capitation formula) as a percent of per capita GDP.

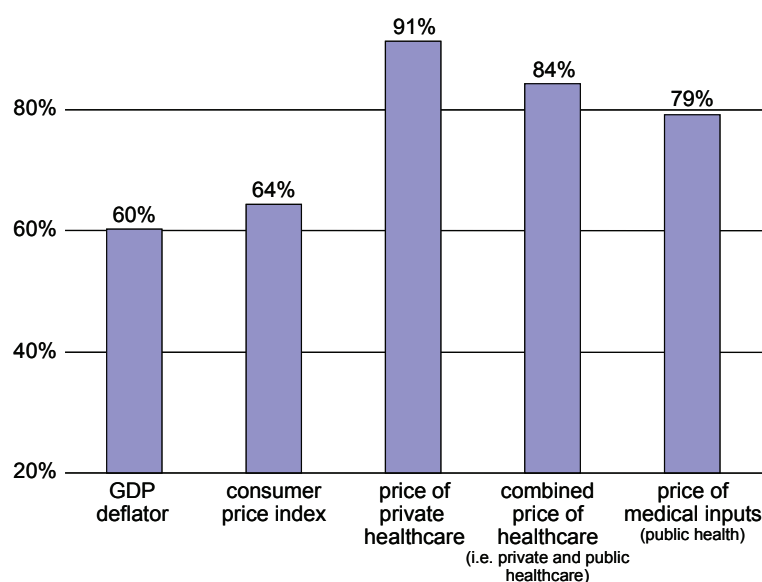
** average of the 22 most developed OECD countries excluding the US.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD Statistics Portal.

However, due to Israel's changing funding structure, the system has paid a heavy price in all respects in order to maintain this expenditure level, as will be discussed in depth in the next section that is devoted to structural changes undergone by the system. One price that can be discerned, even at this stage, is that of a relative increase in the price of healthcare – a growing inflation of the price of medical services in Israel, driven by inflation of the prices in the private healthcare sector (Figure 8). This points to a continued loss of expenditure control within the system, and to a loss of efficiency.

Figure 8
Changes in various price indexes
1995-2009



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, Ministry of Health.

Scope of choice. Data are not available regarding the degree to which the Israeli healthcare system is characterized by choice. However, in the context of the discussion of structural changes undergone by the system, and of major issues on the Israeli public agenda – particularly that of privately paid medical services (“*SHARAP*”) – it is important to emphasize that, in contrast to normal practice in the various healthcare services available in the community, Israelis have no freedom of choice with regard to physicians in publicly-funded hospital settings (hereinafter: “public hospitals”), except for the Hadassah and Shaarei Zedek medical centers in Jerusalem, where choice is possible via *SHARAP*. This is despite the fact that hospitalization is frequently essential to ensure survival and well-being.

2. Structural Issues

The discussion of the system’s structural issues will be based on several fundamental facts related to the Israeli economic and social conditions, as well as to the development of resources available to the healthcare system and the way in which they are funded. These facts affect both supply and demand for healthcare. The crisis in the system can be attributed to the rising tension between the two.

2.A. Rise in Demand

Rise in per capita income and income distribution. During the period 1995-2010 per capita income rose by 1.7 percent on average. A rise in standard of living itself leads to increased demand for healthcare, usually translating into a slightly higher percentage than the percentage by which income rose. For similar reasons, a rise in income distribution that takes place during the period of economic growth will intensify an increase in demand for care. That is, one may anticipate that a rise in income and changes in income distribution will have increased the demand for

healthcare by at least 7.1 percent per year, or to a level 30 percent higher than that of 1995.

Population aging. Israel's population is aging. The wave of immigration from the former Soviet Union (FSU) having ended, and fertility rates being relatively high, this process has slowed somewhat. However, the overall trend remains one of population aging. This clearly intensifies the demand for care.

To conclude, Israel should have been expected to experience a per capita rise in demand for healthcare, at least through the middle of the last decade, of two to three percent, per year. This was the anticipated result of processes – desirable in themselves – that contribute to a rise in demand for healthcare, not in terms merely of quantity but also of technological quality and consumer quality: a growing desire on the part of the public for freedom to choose physicians and treatment modalities.

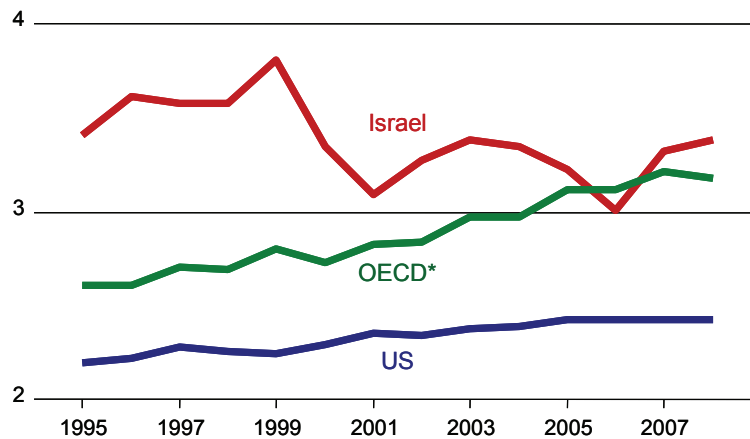
2.B. Reduced Growth in Supply

Physicians. Israel has traditionally enjoyed a high physician-to-population ratio compared with other developed countries, and compared with the US (Figure 9). Since the late 1990s – once the great wave of immigration from the FSU dwindled – there has been a clear trend downward in the Israeli physician-population ratio, in the direction of the OECD average.² Obviously, the average does not reflect more precipitous declines in certain specialties, e.g., anesthesiology, or in specific geographic regions, such as the periphery. It should be noted that Israel's physician-population ratio is still relatively high in comparison with other countries, particularly the US.³

² The annual fluctuation in physician numbers is related to the waves of immigration and to physician licensing and registration.

³ Countries differ in how they define their physician numbers. In Israel physicians are defined as those holding medical licenses, while in other countries they are defined as those practicing medicine. However, these differences are not enough to contradict the trend with regard to disparities.

Figure 9
Physicians per 1,000 population
 1995-2008



* average of the 22 most developed OECD countries excluding the US.

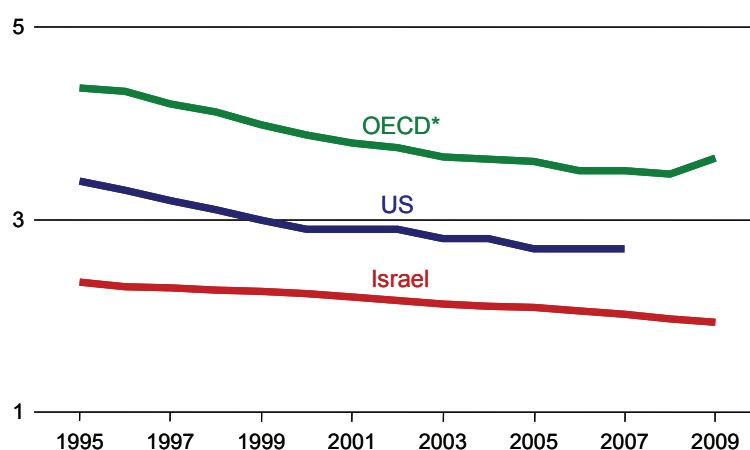
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD Statistics Portal.

The decline in physician-population ratio has emerged concurrently with a decline in nursing and related personnel, and has called attention to the relative shortage of auxiliary health manpower. The impact of such a decline in manpower supply in the population on the availability of services is particularly harsh in so labor-intensive a sector as health care.

Hospital beds. It is difficult to conduct an international comparison of hospital bed-population ratios due to differences in how “hospital bed” is defined. Figure 10 presents data published recently by the OECD on general inpatient beds. The comparison shows that Israel's standardized ratio is lower than that of the developed countries included in the study, as well as the US. This disparity is obscured when one looks at Israel's total inpatient-bed data, which include emergency room, long-term care and psychiatric beds. It should be noted that recently published data strongly confirm the prevalent feeling that Israel is suffering from an overall inpatient bed shortage.

Figure 10
General hospital beds per 1,000 population
1995-2009



* the average of 15 countries: Austria, Belgium, Canada, Denmark, Finland, Germany, Greece, Ireland, Italy, Japan, South Korea, Netherlands, Norway, Spain, and Sweden.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics; OECD Statistics Portal.

As in the discussion of the physician-population ratio, it is important to focus on the hospital-bed situation trends, rather than on numbers that refer to a specific point in time. The overall downward trend in inpatient bed numbers that has emerged over the past two decades, in both the OECD and the US, indicates a lowered hospital bed-population ratio which, in turn, appears to reflect technological developments resulting in fewer hospitalizations overall. Nevertheless, Israel's downward trend has been more precipitous, and has reached a lower point.

To conclude, it is only natural that in a healthcare system featuring national health insurance where the main funding is public – any excess demand will find expression in a demand for privately-funded services. This is due to the difficulty of publicly-funded systems, compared with privately-funded systems, to make the necessary adjustments.

2.C. Exacerbation of Excess Demand by Government Policy

Rather than plan and prepare for what was inevitable (and readily-anticipated), and help the system, particularly its publicly-funded part, to adapt to changing conditions and to “wean” itself from the medical manpower supply levels of the 1990s (which were unprecedented in modern history), successive Israeli governments have worsened the supply situation. They have done this by steadily reducing, since 1998, the State's share in healthcare system funding, to a degree unparalleled among those developed countries that provide their populations with universal health coverage – the OECD countries, excluding the US (Figure 6).

Governmental support for the Israeli healthcare system has declined from 67 percent at the time of the enactment of the National Health Insurance Law (1995) to 60 percent of overall system funding in 2010; the difference has been made up by co-payments and by private insurance premiums, particularly the “supplemental health insurance” currently held by 80 percent of Israeli households. Even worse, this latter form of insurance has been organized to fund healthcare in private facilities. This

is in contrast to other potential options, such as those found in the Hadassah and Shaarei Zedek Medical Centers which, for historical reasons, are able under the *SHARAP* arrangement to receive both public funding and organized private funding (semi-public). That is, the Israeli government, over the past decade and a half, has contributed to increased excess demand for privately-funded medical services in a manner unparalleled by any other country, developed or not.

What are the results of this state of affairs? Due to a lack of publicly accessible information, the anticipated outcomes, theoretically at least, are available in the form of popular anecdotes. In light of the fact that most of Israel's healthcare manpower is employed in publicly-funded clinics and hospitals, the excess demand for privately-funded health services is being met largely by healthcare workers employed in these facilities – some of which are actually government-owned. Medical specialists, even State employed ones, are providing privately-funded services, frequently during their publicly funded work hours. This privately-funded activity is being carried out in private facilities and by “corporations” even on the premises of government hospitals. These specialists care for patients whom in many cases they themselves have referred from publicly-funded facilities to facilities where the services provided are privately-funded. Patients, for their part, are demanding private healthcare, particularly as a means of avoiding the ever-lengthening lines and waiting periods that characterize a public health sector that is shrinking in relative terms. Moreover, but the more the government reduces its healthcare investment relative to rising demand, the more the private system develops its infrastructures and offers patients state-of-the-art services and technologies – ones that, in some cases, are adopted without having been properly assessed beforehand.

As a result, there is a growing burden on those medical personnel who remain employed in the public hospitals – i.e., residents, and specialists in areas less relevant to private medicine. Moreover, the income disparities between physicians working in the private sector and those who remain solely in the public sector are widening. The younger generation of

doctors, those who are bearing most of the burden, are being left far behind. Not only that, but high-income specialists tend to reduce their work hours, thereby exacerbating the situation even farther.

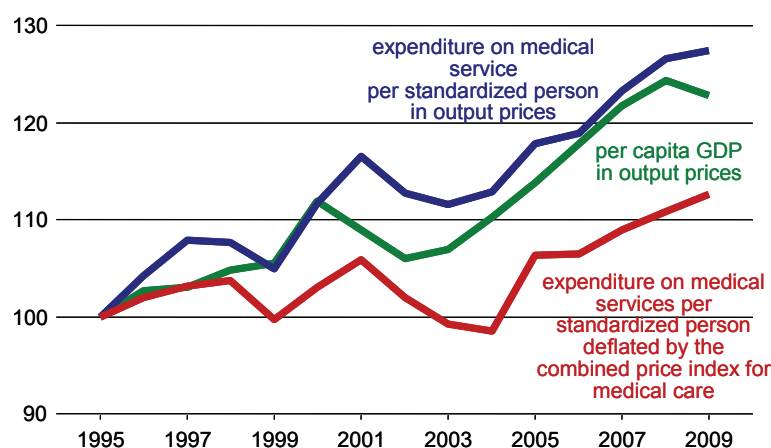
Although the relevant data have not been made public in their entirety, the economic symptoms of these developments are not invisible. They can be seen against the background of a stable national expenditure on healthcare, on the order of eight percent of the GDP over the last decade. Essentially, the fact that Israel has maintained a steady level of expenditure as a position of its product despite growing excess demand, means that Israelis are increasing spending for services, on average, at a level comparable to rises in their income. This is despite the fact that their demand for healthcare is increasing at a rate that exceeds their income growth. The Ministry of Finance views this stability as an “achievement,” despite the fact that it is not consistent with the basic economic laws relating to excess demand just described.

That is, the economic and social costs of the present situation are being ignored by the Ministry of Finance. Firstly, Israel has experienced price rises or relative inflation in the area of healthcare. During the period 1995-2009 the price index for private healthcare rose by 90 percent, while the consumer price index rose by 64 percent. The medical inputs price index, which reflects costs in the public health system, rose by 79 percent (Figure 8) (Chernichovsky, Gamzu, Navon, 2010). The widening gap between the private-healthcare price index and the public healthcare (inputs) price index points to, among other things, a growing disparity between wages in the public sector and those in the private sector, as well as the pressure exerted by income from private funding on public-sector wages.

The relative rise in healthcare prices, particularly in the private sector, reflects the higher degree to which specialists receiving “double pay” from both private and public sources are compensated – in a context of duplicate infrastructures, uncontrolled adoption of technologies, and exposure of Israelis to basic market exclusion – to the potential exploitation by service providers of those seeking medical care.

In light of Israel's stable national medical expenditure as a percentage of GDP, the relative rise in the price of medical services means that, although the average healthcare expenditure per capita is rising at a rate consistent with overall rising income levels, nevertheless, in product terms, Israelis are actually receiving, on average, a smaller and smaller amount of healthcare in proportion to their incomes. Additionally, when adjustments for changing demographics and needs are made, the consumption-standardized per capita expenditure has actually risen by just 13 percent (Figure 11).

Figure 11
Expenditure on medical services per standardized person*
 1995-2009, base year 1995=100



* adjusted for standardized person in Israeli risk adjustment (capitation) terms through 2010.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

The decline in growth of real health services compared with income is, first and foremost, a true reflection of the relative decline in health manpower supply relative to increasing demand, which translates into a rise in prices. Worse, not only has efficiency been compromised – in terms of relative inflation – but the decline has been, in a number of respects, unevenly distributed, in the following ways:

- Through a transfer of income from the general public to the medical establishment, particularly in the private sector.
- Through a relative decline in the supply of services in the public sector compared with the private sector.
- Through a decline in real hourly wages in the public sector relative to the private sector.
- Through an increase in the burden of healthcare expenditure as a percentage of disposable income borne by the lower income quintiles as compared with the upper quintiles – resulting in a more regressive healthcare system. Healthcare expenditure contributes to growing inequity in the consumption of non-medical treatments, products and services.
- Through compromised efficiency of healthcare. Evidence is growing that low-income Israelis, most of them aged 65 and over – a significant proportion of whom suffer from chronic ailments – are foregoing needed services, including prescribed medications, due to an inability to pay for them (Gross, Brammli-Greenberg and Weisberg, 2009). Hence, there is a growing inequality in the consumption of medical products and services.
- Through a widening of disparities between central Israel and its periphery. Low-income areas such as the Negev and the Galilee are at a particular disadvantage: in addition to an infrastructure shortage that is worsening in the face of growing needs, specialists are unwilling to work in those areas which are less profitable than Tel-Aviv and central Israel (Section 4 addresses this issue in depth). A change in the Israeli allocation formula that went into effect last January was

intended to narrow the gaps – and to distribute the burden more evenly – between the center and the periphery (Chernichovsky, 2011).

2.D. *Conclusion*

Israel's healthcare system needs more than wage adjustments and additional job posts in its public sector. It is faced with the task of maintaining the current health personnel-to-population ratio (one comparable to that of the more developed OECD countries), while adapting healthcare practices to a changing technological environment, which in some instances results in manpower downsizing. The system also needs to create conditions in which the public sector will be able to cope with changes in healthcare supply and demand and, in particular, to address local needs and public aspirations. In order for these things to occur, a systemwide reform must be carried out by the end of the decade, based on the following principles:

- A budgetary framework should be established for the reform, featuring two main criteria:
 - The national healthcare expenditure as a percentage of GDP should rise to nine to ten percent by 2020;
 - The government's share in funding the system should be restored to the 1995 level and comparable to that of the OECD-22 countries – i.e., to 70 percent of total system funding. A major portion of this share can be obtained by turning supplemental insurance into mandatory insurance, or, even better, by making it part of the progressive Health Tax, with the state paying for those “eligible.”
- Physician supply should be improved. The following potential means of achieving this should be considered:
 - Shortening the period of medical training and residency, while maintaining current quality levels;
 - Limiting or canceling training programs for foreign students and residents, in order to maximize the number of places available for

training Israeli students and residents. The loss of the funding received through the training of foreign students will be offset by eliminating the need to establish new Israeli medical schools, in addition to the one just opened in the Galilee;

- Israelis studying abroad should be given incentives to complete their studies in Israel;
 - Ways of ensuring needs-based residency allocation should be considered;
 - Physician responsibilities should be delegated, where possible, to paramedical staff;
 - Developing telemedicine programs and technologies, as well as other manpower-economizing medical technologies.
- Competitiveness and freedom of choice within the public health system should be enhanced by:
 - Instituting, as universal rights, physician choice in hospital settings and the right to obtain a second opinion – rights exercised *de facto* when patients choose specialist physicians in the community;
 - Employing full-time specialists (“full-timers”) to work solely in publicly-funded institutions, with a commitment not to engage in private practice;
 - Hiring physicians on a personal-contract basis that reflects demand for their specialties around the country. That is, hospital administrators should have more freedom in managing the public funds entrusted to them, and should be able to offer, based on the budgets available to them, salaries commensurate with local needs, with the labor supply, and with the prevailing technological environment. Such a situation would, moreover, enable administrators to manage their staff more efficiently (Spotlights B and C expand on this issue);
 - Improving the wage and work conditions of specialists and other medical staff, while making a renewed investment in healthcare infrastructures that have been neglected.

- In addition, a number of public committees have recommended that the State cease to provide the following health services:
 - Government-owned hospitals, which account for 40 percent of all general hospital beds, and health-fund-owned hospitals, should be transformed into competitive corporations, operating on a not-for-profit or independent-trust basis and subject to public reporting requirements. Alternatively, a hospitalization authority may be created to operate these institutions;
 - Other services provided by the government, such as mother and child centers and mental health services, should be transferred to the health plans. Various committees appointed by past governments have long recommended instituting reforms within the healthcare system;
 - The State should address these issues in a framework similar to that employed in other areas of the economy. That is, it should reach agreements with workers, particularly State employees, designed to ensure that their conditions will, at the very least, not erode because of the change in this status.

***Spotlight B: Flexibility in Wage-Setting –
Linking Authority and Responsibility****

In Israel the authority to set wage levels lies with the Supervisor of Wage Agreements, while responsibility for the outcomes of the Supervisor's decisions lies with other bodies: government ministries, public corporations, government companies and other state-supported institutions.

Concentrating the authority to engage in collective bargaining on the employer's side in the hands of a single body (the Ministry of Finance, the Supervisor of Wage Agreements) strengthens the trend toward centralization on the part of labor representation as well. The dynamic that this generates often leads to the employment of organizational measures that cause the government to capitulate to irregular labor

demands, which naturally snowball into higher wage hikes than would have been granted had these measures not been resorted to. That is, concentrating authority inevitably leads to the creation of equivalencies and linkages between entities that otherwise have no organizational or sectoral affinity; these equivalencies and linkages make it hard to come up with situation-specific solutions when the need arises.

The degree to which the Supervisor of Wage Agreements is able to address the unique needs of the various existing public bodies within the framework of labor agreement renewal negotiations is limited, particularly due to the fact that the negotiations are usually conducted under heavy pressure and in an atmosphere of constraints that are not necessarily relevant to the special issues in need of resolution. In order to avoid “broader ramifications,” the Supervisor of Wage Agreements is frequently forced to come up with creative solutions to specific situations – solutions that complicate the wage structure and foster distortions that enlarge over time.

One example of this is when constraints are addressed by ignoring the fact that wage increases and other hidden benefits are being provided outside of the regular “paycheck” framework by entities “external” to the organization in which the workers are employed – such as an additional salary payment, made via a separate paycheck, from a “health organization” operated under the auspices of a government hospital. This is a negative phenomenon. Payments of this kind are not under the control of the Supervisor of Wage Agreements, nor are they included in the Supervisor’s comparative analysis of worker wage levels in different types of public organizations.

The foregoing is not meant to constitute a recommendation that wage-setting for state-supported entities should be completely decentralized, but rather to generate new thinking on the topic.

* This spotlight was prepared following a lecture delivered by Dr. Avigdor Kaplan before the members of the Taub Center’s Health Policy Program.

Spotlight C: Physician Salaries and Israeli Standards*

Changes in physician wage levels and in existing standards for healthcare personnel should be based on the following principles:

- **Differential improvement.** Many physicians receive inappropriately low wages and work in unreasonable conditions; they deserve immediate and substantial salary increases and improved conditions. However, many other doctors earn several salaries simultaneously, all paid from public funds, e.g. salaries from the State as hospital physicians and additional salaries from the health funds and/or hospital-affiliated health corporations. These doctors are not eligible for sharp wage hikes, so long as their current labor agreements are in effect.
- **Preference to the periphery.** When wage increases are under consideration, strong preference should be given to doctors in the periphery, and there is justification for setting their wages at levels high enough to attract physicians to hospitals located in the periphery.
- **Preference to specializations.** As with the concept of affirmative action for physicians in the periphery, exceptional wage increases should be given to doctors in certain high-demand specialties, or to physicians working under special conditions.
- **Additional job posts in areas where need exists.** Additional job posts should be created for hospital-based medical personnel, particularly in places where there is a clear shortage, as in the periphery. There is no justification for a blanket policy of job post additions, as such additions in and of themselves cannot solve the physician-shortage crisis: some hospital departments and units have positions available but no doctors interested in filling them.

* This spotlight was prepared following a lecture by Dr. Avigdor Kaplan before the members of the Taub Center's Health Policy Program.

3. *Private Healthcare Expenditure and Its Impact on Income Distribution and Poverty*^{*}

The level and distribution of private expenditure on healthcare in Israel, and the changes that have taken place in them, are obvious manifestations of the structural problems as described, problems stemming from a relative decline in public funding and a concomitant rise in private funding. This section summarizes a number of findings regarding private expenditure, obtained through the *2009 Household Expenditure Survey*, that relate to income distribution and to poverty (for a more in-depth discussion, see Navon and Chernichovsky, 2011).

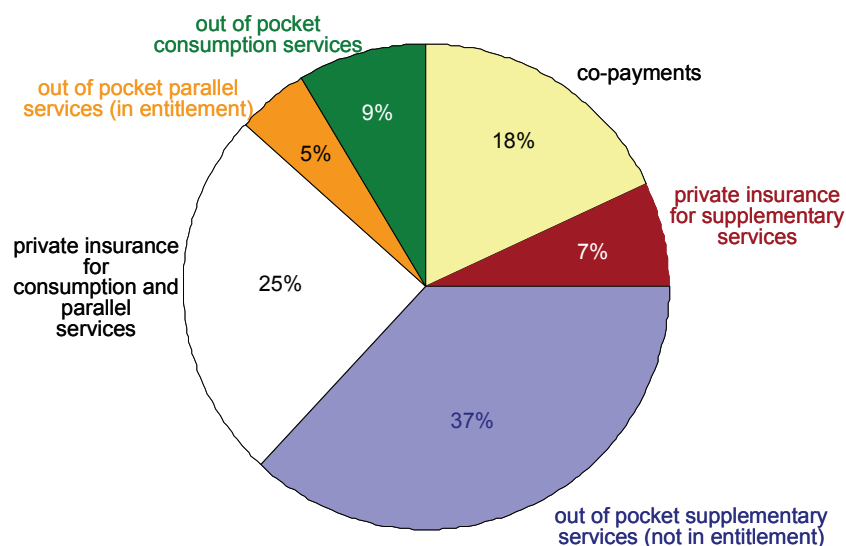
3.A. *Private Healthcare Expenditure*

Israeli households' private expenditure on healthcare accounted for 5.1 percent of household consumption expenditure in 2009, compared with 4.1 percent in 1997. The breakdown of this expenditure across its various items, and by income quintile, is presented in Figure 12 (the complete table is available in Navon and Chernichovsky, 2011). Nearly all Israeli households – 93 percent – report private healthcare expenditure; those reporting such expenditure spend NIS 695 per month.

The main expenditure item in terms of relative size and the number of households that report spending on it is that of **“supplemental” products and services** – either out of pocket or on insurance – not included in the publicly-funded “basket.” This item also includes expenditure on dental services, reported by 26 percent of all households at an average level of NIS 620 per month.

^{*} I wish to thank Dr. Guy Navon, a Policy Fellow at the Taub Center, researcher at the Bank of Israel, and my partner in a study on private healthcare expenditure and its impact on income distribution and poverty (Navon and Chernichovsky, 2011). It should, however, be noted that this section of the present chapter is the sole responsibility of the chapter author.

Figure 12
Distribution of private expenditure for medical services
 2009



Source: Navon (Taub Center and Bank of Israel) and Chernichovsky (Taub Center and Ben-Gurion University), 2011.

Data: Central Bureau of Statistics.

“Supplemental” insurance, defined here as insurance not included in the basket, are paid for by 80 percent of Israeli households, for an average expenditure of NIS 56 per month by those reporting such expenditure.⁴

Co-payments, accounting for 18 percent of private expenditure – another substantial item, both in terms of the percentage of households reporting

⁴ This definition of “insurance” refers solely to insurance for medical products and services that are not included in the basic health basket and that are not defined as “consumption” (Navon and Chernichovsky, 2011).

them (35 percent), and in terms of the average level of expenditure (NIS 289 per month) reported – refer to expenditures for prescription medications.⁵

It is noteworthy that five percent of expenditure is on “parallel” care included in the entitlement.

In general, the three items that excite “public interest” due to their “quasi-tax” character – co-payments, insurance and expenditure on supplemental services – account for 62 percent of private spending and affect between 44 percent and 80 percent of Israeli households.

It is worth noting that these data point to a relatively widespread desire to insure various kinds of surgeries and medical opinions (as well as to the potential feasibility of doing so). These expenditure items are relevant to a very small percentage of the population compared with dental insurance, which is relevant to a quarter of the population and is quite costly.

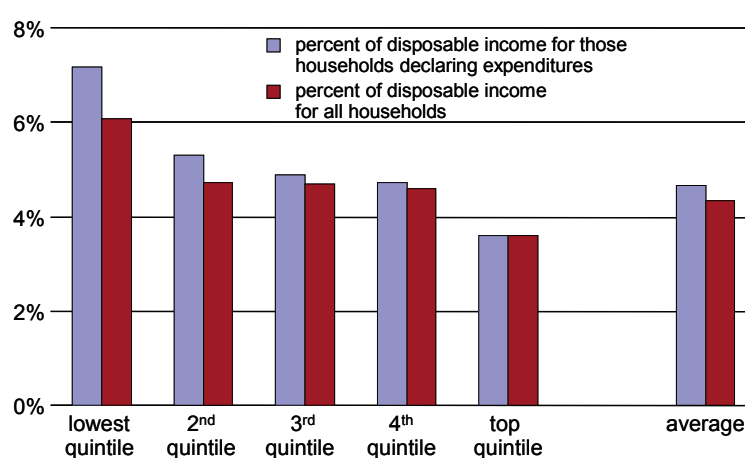
3.B. *Private Expenditure and Equity*

The distribution of private expenditure by expenditure area and by income quintile is presented in greater detail in the complete study (Navon and Chernichovsky, 2011). All items of private healthcare expenditure are income-sensitive: expenditure rises along with income, including expenditure on co-payments, despite their ostensible need-based character. The data on inter-quintile expenditure ratios, as well the mean-adjusted expenditure-difference summaries, indicate exceedingly small disparities between the quintiles with regard to co-payments and supplemental insurance. That is, these latter expenditure areas are need-based to a greater degree than other items, in the sense that poor people and rich people spend similar amounts of money on them.

⁵ Since the period in which the survey on which this discussion is based was conducted, co-payments for the *Tipat Halav* Mother-Infant Care Centers have been eliminated. However, the repeal (itself a significant instance of an absurdity being corrected) affects just one percent of Israeli households.

Hence, private healthcare expenditure is obviously regressive (Figure 13). Poor households spend a higher percentage of their disposable income on healthcare: 7.2 percent for the lowest quintile versus 3.6 percent for the highest quintile.

Figure 13
Percent of medical services expenditure from disposable income and total consumption expenditure
by income quintiles, 2009



Source: Navon (Taub Center and Bank of Israel) and Chernichovsky (Taub Center and Ben-Gurion University), 2011.

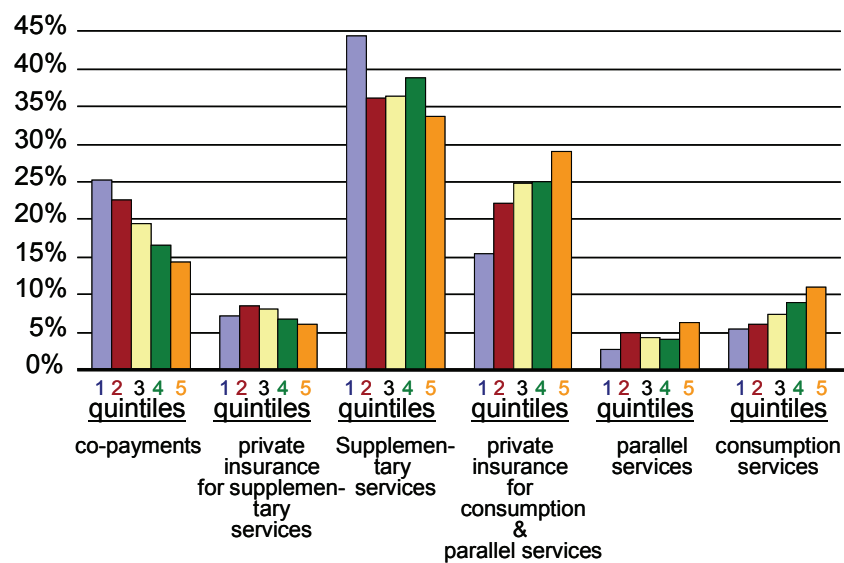
Data: Central Bureau of Statistics.

These households devote larger portions of their total healthcare expenditure on co-payments and on “supplemental” services, including dental care (Figure 14). That is, these latter – and essential – expenditure areas are the ones that contribute most greatly to expenditure regressivity and that account for private healthcare expenditure’s contribution to income distribution.

Figure 14

Distribution of medical services expenditures

out of all medical services expenditures, by income quintiles*, 2009



* the first quintile is the lowest fifth and the fifth quintile is the highest fifth.

Source: Navon (Taub Center and Bank of Israel) and Chernichovsky (Taub Center and Ben-Gurion University), 2011.

Data: Central Bureau of Statistics.

The differences in expenditure figures for the various items, by income quintile, also indicate the existence of disparities in access to healthcare. Differences among quintiles, in favor of higher quintiles, are greatest in the area of private insurance for “supplemental services” – services for which there is no public entitlement – and for services that fall under the category of “parallel” and “consumption.” Thus, in cases where private expenditure – especially on insurance – for services included in the public healthcare basket ensures greater access to these services, the data testify to the role played by insurance in widening disparities in access to services, even those included in the basket, in favor of those with high incomes.

This conclusion is supported by the findings of the Myers-JDC-Brookdale Institute health survey, pointing to a rise in the percentage of those reporting that healthcare payments are highly burdensome – 24 percent in 2009 versus 22 percent in 2007. There has also been a decline in the percentage of those reporting that healthcare expenditure does not burden them at all – 21 percent in 2009 compared with 30 percent in 2007. These findings reveal that a high percentage of those reporting a more burdensome family health expenditure are low-income or chronically ill. A significant increase was also found in the percentage of Arabic-speakers reporting more burdensome family expenditure, 24 percent in 2009 versus 12 percent in 2007. Despite the fact that there was no change between 2007 and 2009 in the percentage of those failing to use services due to their cost, it was found that 14 percent of respondents in 2009 (versus 12 percent in 2007) had foregone medical treatments, medications or both. The survey also revealed that the percentage of those foregoing services is higher in the low-income brackets (22 percent) and among the chronically ill (18 percent). Another finding was that 28 percent of those interviewed reported that they had foregone dental care at least once over the last year, due to its price. The percentage of those reporting that they had foregone dental care is much higher among those with low incomes (38 percent) and young people (30 percent) (Gross, Brammli-Greenberg, Weisberg, 2009).

3.C. *The Impact of Private Healthcare Expenditure on Poverty*

Approximately 3,500 households headed by adults aged 65 and over and/or without wage earners are being driven into poverty due to healthcare expenditures, particularly in the form of co-payments.

Expenditure on parallel services that are included in the public health basket contributes to poverty among families with children and families with two or more wage earners. These findings indicate a certain degree of dissatisfaction with the health system among working couples with children.

3.D. *Conclusion*

Israeli private expenditure on healthcare is regressive – that is, it constitutes a higher percentage of the income of the poor than of the affluent. It also reflects a relative absence of the option of insurance for supplemental products and services, e.g. dental insurance, compared with insurance for products and services included in the national health basket, e.g. surgical procedures, as well as treatments that fall into the category of “consumption.” This situation translates into widening gaps in access to services, even those covered by the health basket.

4. The Meaning of "Periphery" in Israel's Healthcare System: How Has the Modified Health Fund Allocation Formula Affected the Periphery? *

On 13 October 2010, the Knesset's Labor, Welfare and Health Committee approved the National Health Insurance regulations ("Allocation to Health Funds"), according to which the new allocation formula – the capitation formula – compensates these funds not only by member age but also by gender, by distribution of health fund branches, and by the level of service provided in the "periphery" (Israel Knesset, 2010). The regulations went into effect in early 2011.

The Israeli risk adjusted or capitation mechanism – of which the formula is a major component – was intended to promote equal opportunity in healthcare, primarily by ensuring equal access to medical services across a range of health situations. The mechanism thus promotes both equity and efficiency, and is composed of the formula, administrative arrangements, reimbursement for severe illnesses, and a security network. The economic-financial meaning of this lies in the way in which 80 percent of the public resources available in Israel for healthcare – those services provided by the health funds – are distributed.⁶

In the context of our preceding discussion of the healthcare system's structural defects, the modified formula is an important step toward upgrading Israel's capitation mechanism so as to advance the objectives of the National Health Insurance Law, 1994 (hereinafter: "the Law") and its initial objective to improve allocation to the periphery. The adjustment

* I wish to thank Chen Israeli of Ben-Gurion University of the Negev for collecting and analyzing the data used in the complete study of the health fund allocation formula change (Chernichovsky, 2011 – in preparation)

⁶ Discussed at length in Chernichovsky, 2005; 2010a; Shmueli, Chernichovsky and Zmora, 2003.

ensures that age and gender are taken into account when calculating the weighted numbers of insureds belonging to each of the health funds. In addition, a separate weight will also be assigned for residence in local authorities belonging to one of the four lower clusters in the *Peripherality Index of Local Authorities 2004*, and as listed by the Central Bureau of Statistics in 2008 (hereinafter: “resident of the periphery”) (expanded discussion in Chernichovsky, 2011).

The formula adjustment is meant to result in an average six percent addition to the entire periphery health budget. According to a Ministry of Health calculation presented to the Knesset Labor, Welfare and Health Committee, the new formula will bring about the following changes: *Clalit* Health Services will receive an additional NIS 150 million; *Maccabi* Healthcare Services – NIS 15 million; *Leumit* Health fund – NIS 8 million; while *Meuhedet* Health fund will lose NIS 22 million (Ministry of Health, 2010a).

This section of the chapter looks at the ramifications of the adjusted allocation formula against the background of a brief overview and analysis of what is meant by “periphery” in Israel with regard to healthcare.

4.A. *Geographic Periphery and Social Periphery in Israel*

The concept of “periphery” has always existed, everywhere and in the context of every conceivable definition of “space” – geographic, cultural, economic, etc. It usually denotes the marginality of a “lower” class as defined by some specific criterion or in terms of the distribution of a particular relevant variable. Thus, in the context of a specific policy, periphery has to be defined in functional terms relative to the policy’s objectives and the means available for implementing it.

The criteria by which variables are classified – particularly for policy purposes – are generally geographic; that is why this study’s conclusions are presented in terms of Israeli administrative districts. Clearly, the greater the correlation between variables relevant to how periphery is

defined, including the geographic variable, the easier it will be, politically and practically, to implement policy in a suitable manner.

In a context of social services, including medical services, it is conceptually important, when defining “periphery” to distinguish between “need” variables, i.e., potential demand for services, and service-availability variables, i.e., the potential service supply. The policy mechanisms to be employed are dictated by both.

There are three main defining criteria for “periphery” that are relevant to capitation-based allocation in the healthcare system: (A) health status; (B) risk factors related to income level and distribution, education and environment, as well as ethnic characteristics; and (C) the availability and quality of medical services.

In this general context it is important to emphasize several things: firstly, the healthcare system's role is to promote health by means of medical services, not through other health determinants – however important – by which “periphery” may be defined, such as education. Secondly, once economic barriers to service access are removed – as envisioned by the law – service availability is an essential condition for access. Thus, ensuring service availability is a basic mechanism available to the healthcare system for promoting health; which is to say, that if the desire is to remove socio-cultural barriers to service access, ensuring healthcare supply is a prerequisite.

This last point is also related to the issues of social justice and democracy. Even if services are liable to be considered inefficient due to lack of demand on the part of a given population, these services have to be provided equally to all so long as the public financing the services regards them as suitable for universal eligibility. Moreover, in this context affirmative action is necessary not only with regard to service availability, but also with regard to health status and risk factors that dictate access as well.

4.B. *The Geographic-Economic Periphery and Israel's Administrative Districts*

The centrality (“peripherality”) index⁷ employed by the new capitation formula is based on the traditional economic premise that central areas have, if nothing else, economic advantages over the periphery. These advantages increase the more centrally located an area is. The index characterizes and classifies local authorities according to their geographic location in spatial terms, that is, their proximity to the economic activity of central Israel. The index is calculated as a combination of two equally weighted components: the local authority potential accessibility index, which ranks local authorities in terms of their proximity to all other local authorities in Israel relative to their population size; and local authority proximity to the Tel-Aviv District boundary.

Proximity between geographic units is measured in terms of the shortest distance in the road network, taking into account road barriers due to construction or security considerations. The local authorities are divided into ten clusters, Cluster 1 denoting the highest degree of peripherality and Cluster 10 the highest degree of centrality (Central Bureau of Statistics, 2010a).⁸ A summary of the centrality index by district is presented in Figure 15.

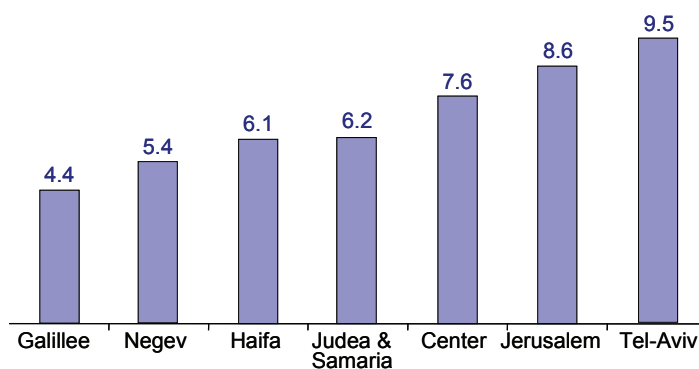
The northern and southern districts have, by definition, a low centrality index, due to the country’s longitudinal geographic structure and the location of Tel-Aviv, Jerusalem and their environs. The northern district is the most peripheral of all, with a ranking of 4.43, followed by

⁷ In contrast to the commonly-used term “peripherality,” we have chosen the term “centrality,” which more faithfully represents the meaning of what is being measured. The term centrality also facilitates interpretation of the interactions between this and other variables.

⁸ See also the summary of a Central Bureau of Statistics’ seminar, *Between Center and Periphery: The Face of Israeli Society*. 5 January 2011: http://www1.cbs.gov.il/reader/kenes/kns_kenes_sug.html?kod_sug=2&number=12 (Hebrew)

the Southern district at 5.37. The Tel-Aviv and Jerusalem districts are the most central (9.45 and 8.56, respectively).

Figure 15
Average periphery index*
 adjusted for population size, 2004



* all numbers are weighted by the size of the population.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

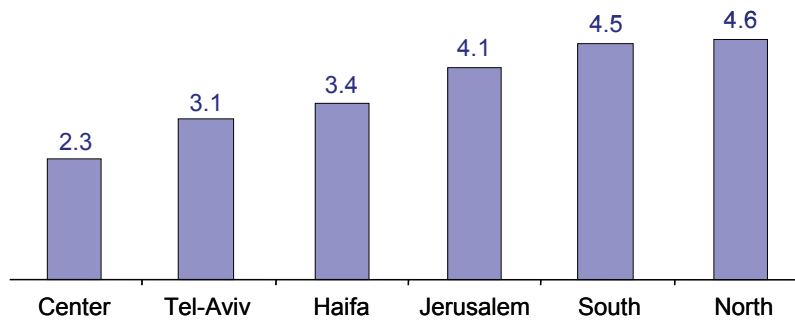
4.C. *Israel's Health Periphery, According to Population Health Indices*

The health periphery is defined in terms of infant mortality and life expectancy (as discussed in Section 1 of this chapter).⁹

- **Infant mortality.** The commonly-used health index, the one for which data are available regarding Israeli localities (based on 110 localities), is presented in Figure 16.

⁹ There are other, less objective variables, such as self-assessment of health. As a rule, the disparities shown here are consistent with what has been reported by the Ministry of Health (2010d).

Figure 16
Infant mortality rate*
2004-2008



* infant mortality up to age 1 per 1,000 live births weighted by population size; in Judea and Samaria there is insufficient data to calculate the rate.

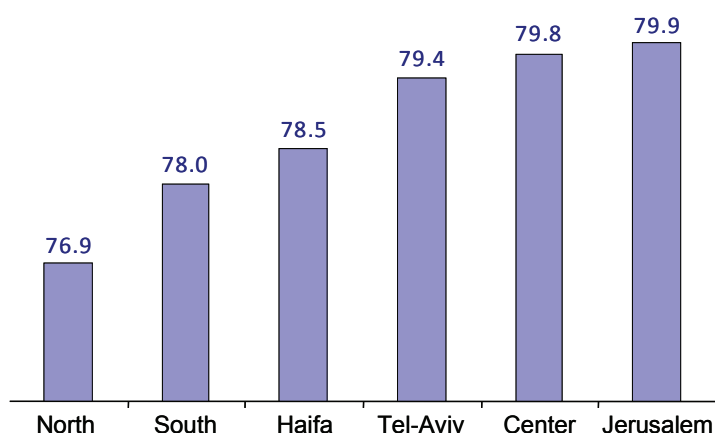
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

The data indicate that infant mortality is higher in northern and southern Israel than in the central and Tel-Aviv districts. The infant mortality rate is especially high in the Northern District (4.6 per 1,000 live births) and the Southern District (4.6 per 1,000 live births). The Jerusalem District also has a relatively high mortality rate (4.1 per 1,000 live births). By contrast, infant mortality is particularly low in the Central District (2.3 per 1,000 live births) and the Tel-Aviv District (3.1 per 1,000 live births). According to Central Bureau of Statistics data summarized by the Ministry of Health (2010d), relative decline in infant mortality was low in the Northern and Southern Districts (Ministry of Health, 2010d).

- **Life expectancy.** The life expectancy reported here (Figure 17) is based on figures for just 29 key localities. The lowest life expectancy in Israel is found in the Northern and Southern Districts (a more detailed distribution for subdistricts and single localities shows even wider gaps (Ministry of Health 2010d, p. 35)).

Figure 17
Life expectancy in years*
average for 2004-2008



* Judea and Samaria do not appear because of a lack of data.

Source: Taub Center for Social Policy Studies in Israel.

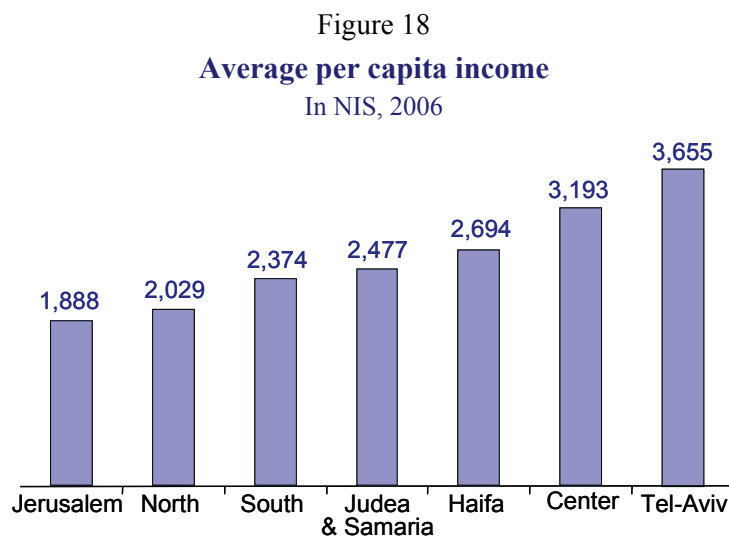
Data: Central Bureau of Statistics.

4.D. *The Periphery as a Function of Socioeconomic Risk Factors*

Low income and socioeconomic status in relative and absolute terms are risk factors (for a more detailed discussion: Horev, 2008). In Israel, as elsewhere, there is a high degree of correlation between socioeconomic status and health status (Ministry of Health, 2010d, p. 36). Accordingly,

three indices are assessed: per capita income, the socioeconomic index, and the Gini coefficient used to measure income distribution:

- **Per capita income** is composed of total locality income based on the total gross wages paid to wage earners over the course of a year; the gross income of self-employed locality residents; the total pensions/benefits paid by the National Insurance Institute; and, income support from the Ministry of Religious Services. The total income was divided by 12 work months and by the number of locality residents (Central Bureau of Statistics, 2009). Per capita income in Israel by district is presented in Figure 18.



Source: Taub Center for Social Policy Studies in Israel.
Data: Central Bureau of Statistics.

The district with the lowest per capita income is the Jerusalem District (NIS 1,888). Figures for the Northern District (NIS 2,029) and the Southern District (NIS 2,374) are also relatively low, particularly compared with the Tel-Aviv District (NIS 3,655) and the Central District (NIS 3,193), where per capita income is the highest.

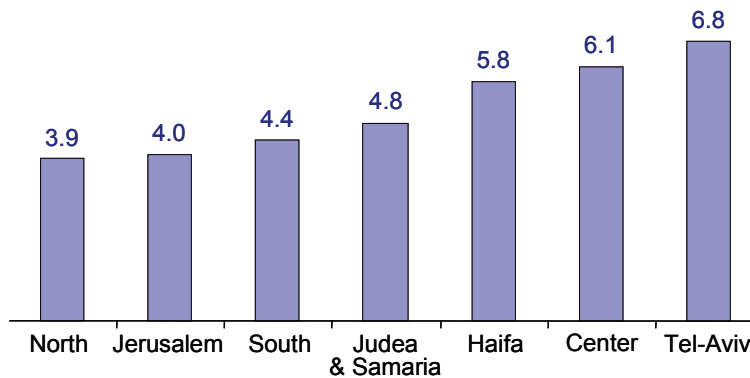
- **The socioeconomic index** is based on the premise that income constitutes a key index but is not the sole means by which a population's socioeconomic level may be assessed. Additional dimensions exist that partly correlate with financial income, e.g. employment, but which are not identical to it. The index is composed of variables that were chosen to reflect most socioeconomic indicators: resident income sources, housing (density, quality and other features), content of homes, mobility level (car ownership), schools and education, employment and unemployment characteristics, socioeconomic problems of various kinds, and demographic characteristics. It is important to note, particularly in the context of this discussion, that the index does not include health or medical variables.

The local authorities were divided into ten clusters, Cluster 1 featuring the lowest socioeconomic level and Cluster 10 the highest (Central Bureau of Statistics, 2010a). The socioeconomic index is presented by district in Figure 19. One can see that the ratings for the Tel-Aviv (6.77) and Central (6.14) districts are significantly higher than for the other districts. In the Northern (3.95), Jerusalem (4.01) and Southern (4.39) districts, the socioeconomic index is relatively low.

- **Income distribution** is based on the concept of socioeconomic periphery.¹⁰ This refers to the fact that there is always a periphery, even in "central" areas – a socioeconomic periphery.

¹⁰ The term was coined by Maccabi Healthcare Services and published in Chernichovsky, 2010a.

Figure 19
Socioeconomic index*
2006



* the index is based on the classification of the Central Bureau of Statistics by 10 clusters, from 1 which is the lowest to 10 which is the highest.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Jerusalem's socioeconomic periphery rating is Israel's highest (0.25) (Chernichovsky, 2011), followed by the northern and southern geographic peripheries. From this point of view, the Tel-Aviv and Central districts enjoy the highest status.

In the context of this discussion of socioeconomic periphery and capitation, it is important to emphasize that, when the status of "two identical poor people" is examined, one from the "periphery" and one from the "center," the status of the latter is higher due to the greater availability of services in the central region. From this perspective alone, the status of a poor person in central Israel is likely to be better than that of a "wealthy" person in the periphery.

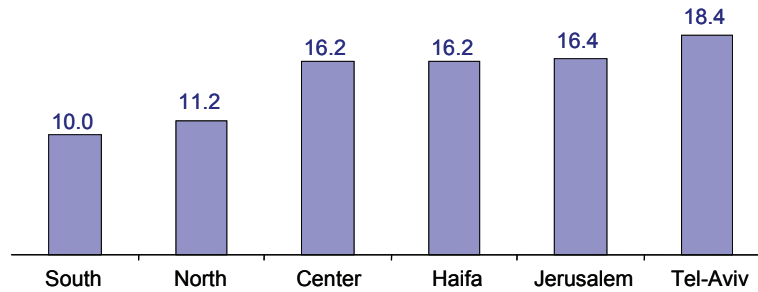
4.E. The Periphery – Healthcare Availability

Healthcare availability in the periphery is defined in terms of the availability of manpower (primarily physicians), general beds in hospitals, and the local population's distance from places of hospitalization, as reflections of both healthcare availability and healthcare quality.

- **Medical manpower.** The distribution of medical manpower by district is presented in Figure 20. The lowest number of healthcare employees per 1,000 standard persons, per the “need” definition implicit in the new capitation formula, are found in the southern (ten per 1,000) and northern (eleven per 1,000) districts. The Tel-Aviv District enjoys the highest percentage of healthcare employees per 1,000 standard persons (18 per 1,000). The Haifa, central and Jerusalem districts also enjoy much higher healthcare employee rates than do the peripheral districts. The personnel shortage is especially pronounced with regard to specialists, as reflected in specialist-population ratios, and in the ratio of specialists to other physicians. These indices point to an exceptionally dire situation in northern and southern Israel, as detailed in Figure 21.

Figure 20

Healthcare professionals
per 1,000 population*, 2006-2008



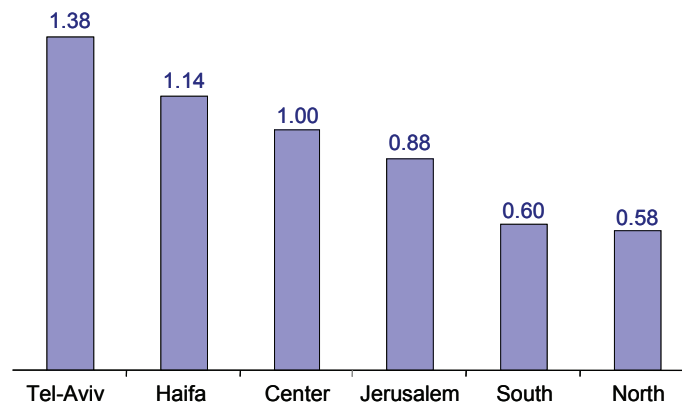
* per standardized person according to the new capitation formula without the adjustment for the periphery.

Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Health.

Figure 21

Ratio of specialists to generalist physicians
2006-2007

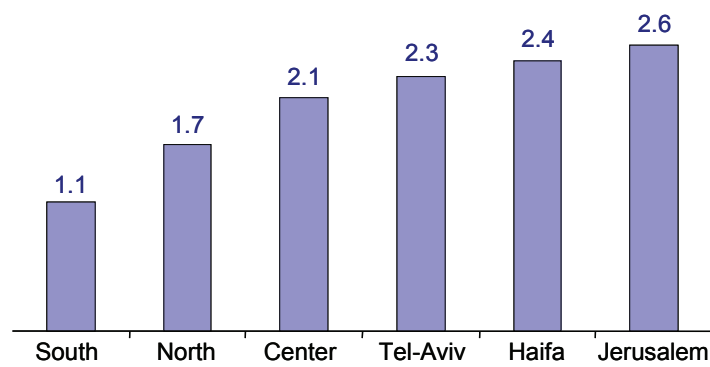


Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Health.

- **General hospital bed-population ratio.** The geographic distribution of general hospital beds in Israel is presented in Figure 22. The Jerusalem, Haifa and Tel-Aviv districts enjoy hospital bed-population ratios that are higher than the national average (2.0). By contrast, the bed-population ratio in the north and the south is lower than that of the other districts, and compared with the national average.

Figure 22
General hospital beds per adjusted 1,000 population
adjusted for population size, 2008

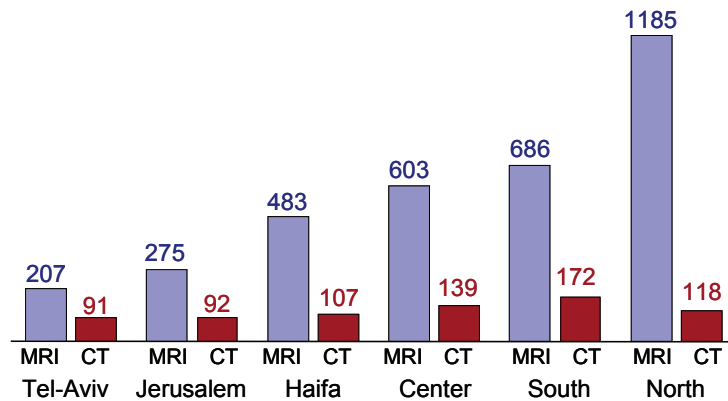


Source: Taub Center for Social Policy Studies in Israel.
Data: Ministry of Health.

- **Availability of sophisticated equipment.** Sophisticated equipment and advanced technologies are represented by MRI and CT machines. Figure 23 presents standardized person to CT/MRI machine ratios, revealing threefold to fivefold disparities in the numbers of MRI machines available in Jerusalem and Tel-Aviv versus the northern and southern districts. The gaps are smaller with regard to CT machines, an area in which the south, however, is particularly disadvantaged. More

than anything else, these disparities point to gaps in the quality of medical care between central Israel and the periphery.

Figure 23
Thousand standardized population per unit of MRI and CT
 2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Doctors for Human Rights; Ministry of Health.

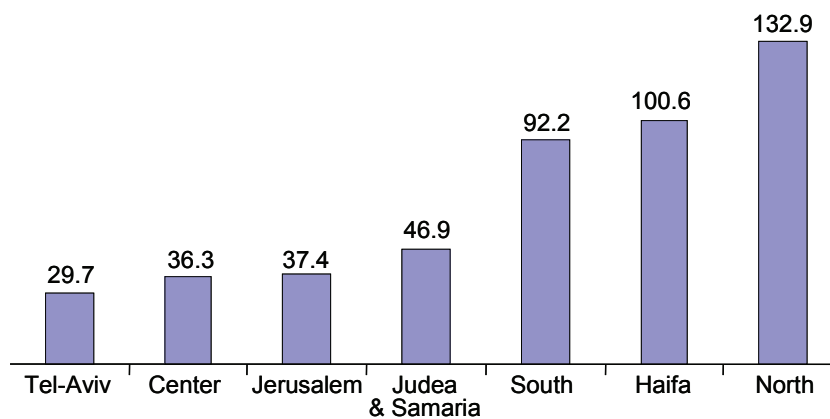
- **Distance from hospitalization.** In order to assess both the availability and quality of medical services, locality distances from general institutions of hospitalization were measured via several parameters: distance in kilometers to the nearest hospital; distance in kilometers to a regional medical center: Rambam Medical Center from Hadera northward; Soroka from Ashkelon southward; and the national medical centers for the other parts of the country. The distance in kilometers that a health fund member would have to travel to each of the national centers – Ichilov, Beilinson, Sheba, and Hadassah – was also examined.

The premise that guided the formulation of these parameters was that in relatively minor instances patients are referred to the nearest hospital.

In more serious instances they will be referred to the regional medical centers serving the north and the south, respectively; while in special cases they will be referred to the national centers. The data presented here refer to distances from the national medical centers, which are positively correlated with the other distance variables (expanded discussion in Chernichovsky, 2011).

Figure 24 presents the average distance of each district from a national medical center. Here as well one finds that the peripheral districts are those most distant from any national center. Residents of the north (132.9 km), south (92.2 km) and Haifa (100.6 km) districts (Haifa District is semi-peripheral) have to travel the longest distances in order to reach a national medical center. This is in contrast to the Tel-Aviv District (29.7 km), whose residents enjoy the shortest distance to a national hospital.

Figure 24
Average distance in kilometers from a national medical center*
2008



* Israel has several national medical centers: Ichilov, Beilinson, Sheba, and Hadassah.

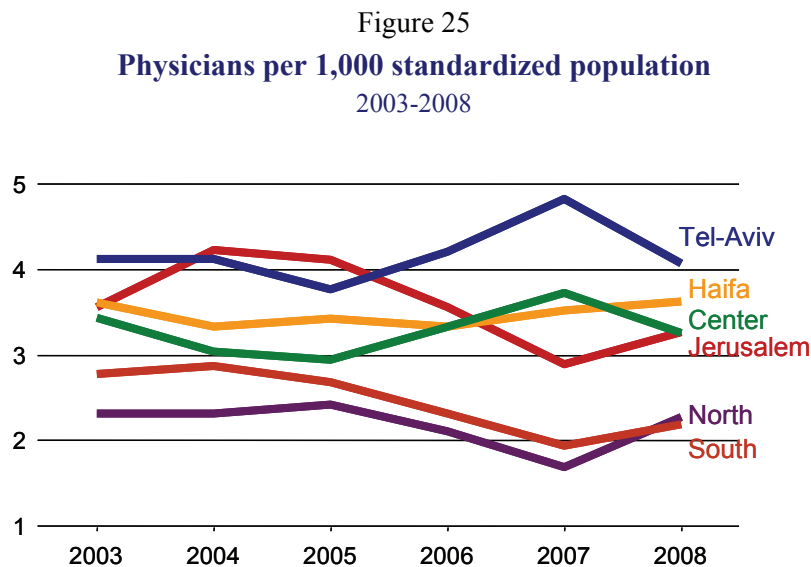
Source: Taub Center for Social Policy Studies in Israel.

Data: Chernichovsky and Engelchin-Nissan, 2008.

4.F. Disparities Widening at an Accelerated Rate

The state of affairs in Israel's northern and southern peripheries is worsening in relative terms. Manpower data (Figure 25) and general hospital bed-population ratio data (Figure 26) indicate a trend toward widening gaps. In the manpower context, it is important to note that manpower data are based on place of residence. That is, it is more likely that physicians living in the south will travel to work in the center than vice versa. With regard to manpower, an area where professional qualifications are key, the picture appears to be even grimmer than that presented in Figures 9 and 10.

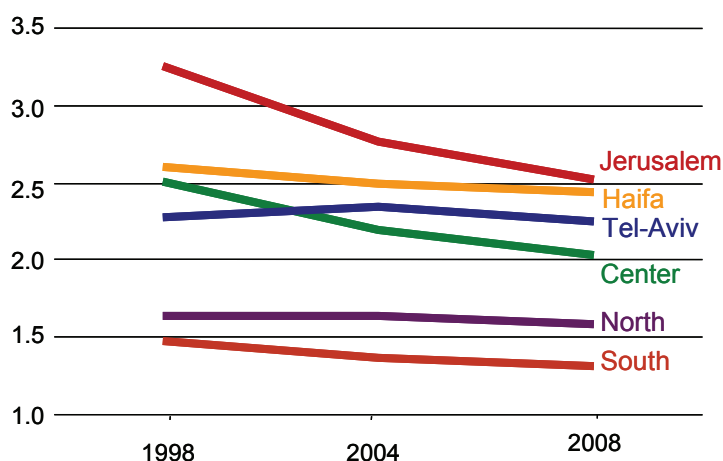
The data presented in this document are just the partial reflection of an overall deterioration in various aspects of healthcare provision (Ministry of Health, 2010).



Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Health.

Figure 26
General beds per 1,000 standardized population
1998-2008



Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Health.

4.G. Improved Regional Allocation

In order to assess the implications of how health resources are allocated to the districts, alternate scenarios for “defining” Jerusalem as a peripheral area, with the north and the south recognized in all scenarios as peripheral were examined. The data are presented in detail in Table 1, which is based on the premise that the Jerusalem District is “peripheral” at a level of 50 percent – enjoying, on the one hand, a high degree of healthcare availability, but characterized by low socioeconomic status that translates into relative social peripherality. Accordingly, the “allocation” scenario, in which Jerusalem is 50 percent peripheral, was adopted.

Table 1. **Distribution of population and risk-adjusted population**
by age, gender, region and periphery (North, South, and in part
Jerusalem*)

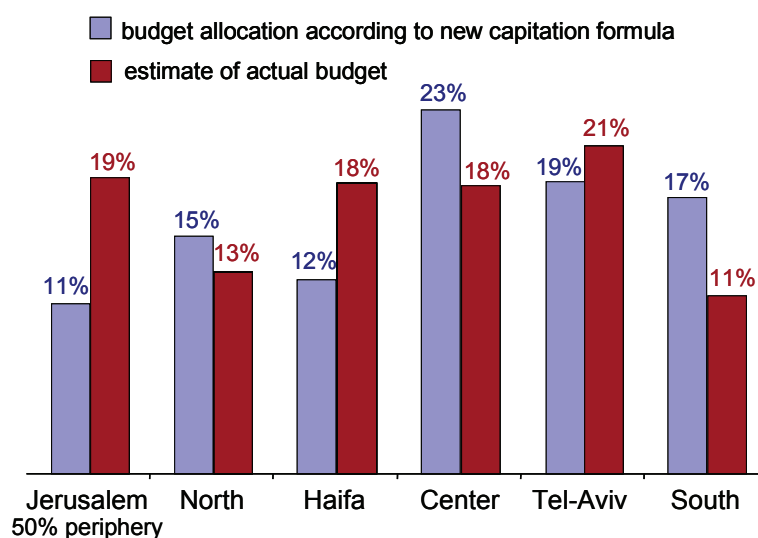
District	Population	Risk-adjusted population
Jerusalem	10.5	10.8
North	15.1	15.1
Haifa	12.3	12.3
Center	23.1	23.0
Tel-Aviv	18.5	18.5
Judea and Samaria	2.8	2.8
South	17.5	17.5
Israel	100.0	100.0

* Jerusalem is calculated as 50 percent periphery, even though it is not included in the measurement of periphery in the new formula. This is due to the low socioeconomic condition of its residents.

The method by which allocation to the country's various districts is arrived at is based on a crude but basic calculation in terms of the actual allocation of manpower (Figure 20) and of general hospital beds (Figure 22) to the different areas. The calculation is based on the current situation in which personnel costs account for 70 percent of total healthcare production, while the remaining 30 percent are capital costs. These ratios were applied to the actual allocation rates for personnel and hospital beds, which represent costs. It should be noted that this constitutes an underestimation for the periphery, which does not adjust for the "quality" of manpower or hospital beds, in terms of specialists and sophisticated equipment which are relatively rare in the north and the south.

Figure 27 presents the actual allocation distribution versus that called for by the new allocation formula (with the Jerusalem District defined as 50 percent periphery), in terms of a total 2010 health fund allocation of NIS 30 billion.

Figure 27
Actual budget versus the new budget allocation*
 1998-2008



* due to the non-inclusion of Judea & Samaria the numbers do not add up to 100.

Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Health.

In light of these data, the Central Bureau of Statistics data on changes in allocation to the health funds in the wake of the new capitation formula, presented in Table 2, indicate that these inter-fund allocation adjustments are minimal despite their differing representations in the periphery, and despite existing disparities between the center and the periphery.

Table 2. **The distribution of the allocation between health funds**
before and after the change in the capitation formula

Health Fund	New allocation from 1.1.2011	Old allocation from 1.12.2010 to 31.12.2010	Addition in percentage points
Total	100.00	100.00	0.000
<i>Clalit</i>	56.69	56.71	-0.018
<i>Leumit</i>	8.56	8.57	-0.014
<i>Maccabi</i>	23.16	23.14	+0.022
<i>Meuhedet</i>	11.59	11.58	+0.010

Source: Bandelak, 2010.

4.H. *Conclusion*

The disparities that this section illuminates between the center and the periphery in terms of health status, risk factors and medical resources, and the discussion of the new capitation formula's impact, lead to the following conclusions:

- The basis on which a figure of six percent compensation on average to the periphery was reached appears to have been arbitrary.
- In light of the disparities between center and periphery according to all relevant indices, the compensation – if, indeed, it even reaches the periphery – is unlikely to be effective.
- The centrality index as a measure of peripherality in a healthcare context is inadequate. The socioeconomic index, or a combined index which also includes distance from place of hospitalization, would be superior from both a conceptual and a practical point of view.
- There is no mechanism to ensure that the resources allocated to the periphery actually get there. In this regard no change has been effected – the periphery did not receive its intended allocation even before the

capitation formula change, and the modified formula itself is not a solution.

- Central Bureau of Statistics data indicating that allocation to the health funds has changed to only an inconsequential degree, leads one to expect that the future holds nothing new – that the health funds have very little, if any, incentive to alter their allocations to the periphery.

In the absence of any geographically based allocation, no mechanism exists to prevent the continual drift of financial resources toward the center, particularly in a healthcare system such as Israel's which is publicly budgeted but whose physicians and equipment are exposed to privately funded demand. This kind of system perpetuates itself. Budgets flow to the places where physicians and equipment already are, while the latter, for their part, are drawn by privately funded demand to central areas, where higher incomes drive such demand, in a vicious cycle – all at the expense of the periphery.

What this means is that, in the current Israeli situation of demand for private services through voluntary insurance characterized by a high degree of income flexibility, there is no alternative to the erection of an impenetrable wall around the allocation intended for the periphery (see also: Ben-Elia, 2006). That is why the State Commission to Investigate the Functioning and Efficiency of the Israeli Healthcare System – the Netanyahu Commission (State of Israel, 1990) which laid the groundwork for the National Health Insurance Law – made the following recommendation: "... to divide Israel into districts and to distribute resources to district authorities based on a district index. Only at the next stage should the health funds, functioning as regional cost centers, receive funding..." (State of Israel, 1990).

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V. PUBLIC OPINION

The 2010 Social Survey

Dalit Nachshon-Sharon and Nachum Blass*

Abstract

The Taub Center's annual social survey offers an indication of multi-year trends in the public's feelings and attitudes on social issues and in relation to social policy. The past year has seen a trend towards an improvement in the "Social Confidence Index," that is tempered by population differences. The survey found that in Israeli society, not surprisingly, the individual's income and educational level impact to varying degrees the differences in feelings with regard to social confidence as well as other societal areas. There are also differences by level of religious observance where the ultra-Orthodox are clearly differentiated from the "secular." Overall public opinion is that social gaps are continuing and even widening, although this feeling does not bring widespread support for policies of affirmative action for weak populations. Within Israeli society, three groups stand out, each distinguished by its value system and its approach to central problems on the social economic agenda – Arab Israelis, the ultra-Orthodox, and the immigrants from the former Soviet Union.

* Dalit Nachshon-Sharon, Researcher, Taub Center.

Nachum Blass, Senior Researcher, Taub Center.

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1. *Introduction and Summary*

The Taub Center's Social Survey gauges the Israeli public's sense of well-being and social confidence, and its attitudes regarding a variety of social issues.¹ The survey presents another dimension of the social situation and completes the other chapters in this Report.

The survey sheds light on Israelis' perception of, and satisfaction with, the way in which social services are being developed – both generally and regarding those services that they themselves receive. It also illuminates the public's assessment of Israel's social situation as a whole, awareness of social disparities, attitudes regarding desirable national priorities for governmental policy, and opinions on existing policy in these areas. This year, as in previous years, the survey covered topics that have recently been on the public agenda. New survey questions relate to policy regarding support for disadvantaged populations, support for families with children via allowances, wage disparities, and issues of equality and access in education and health.

The present survey, like those in the past, included several questions phrased identically to those of previous years in order to obtain an indication of multi-year trends or attitudinal changes on topics covered regularly by the survey. Six questions directly addressing the most fundamental aspects of social confidence constitute the foundation for calculating the Taub Index of Social Confidence. The Index provides a more comprehensive picture of social confidence than can be obtained

¹ The Taub Center's public opinion survey, the Social Survey, has been conducted in a similar manner for over a decade (since 1999). Data collection for processing the survey results was performed by *Smith Consulting – Data for Decision Makers Ltd.* This year's survey was conducted in September on a representative sample of Israel's adult population – Jews and Arabs, aged 18 and over – 1,038 men and women. The sampling error was 3.0 percent.

from responses to individual questions.² The Index is calculated for different population groups, and thereby points to attitudinal differences based on income and educational level, as well as differences between major groups in the Israeli population (see Section 2 for further discussion).

This year's Taub Index for the population as a whole exceeded 65 points, and was the highest score since calculation of the Index began in 2001. The upturn reflected in this year's Index – reversing a three-year downward trend – characterized the entire population, though in differing degrees for different groups.

When one compares the picture painted by the survey with “objective” quantitative information on Israel's socioeconomic situation, one finds that the Israeli public has a strong awareness of the way in which resources are being allocated for social services and their development, as presented throughout the present chapter and as reflected over the years in the Taub Index. However, some of the findings point to the existence of a major discrepancy between what the “experts” think and what the Israeli public believes. This is true, for example, regarding the government's gap-closing efforts, efforts to eliminate inequities in the health sphere, the degree of importance attached to scholastic performance and disparities, and elsewhere.

1.A. The Overall Picture

The overall improved sense of social confidence is shared by all subgroups in the Israeli population (Section 2 discusses this in depth). Although the survey indicates that a large proportion of the population subsists on an income too low for basic necessities, particularly at the low end of the socioeconomic spectrum, even these weaker population

² The Taub Index of Social Confidence was developed at the Taub Center by Joel Blankett for the publication of the 2005 Social Survey, the sixth survey conducted by the Center (Taub Center Report, 2005). Yulia Cogan is responsible for computing the Index based on the survey results.

segments experienced a change for the better relative to previous years also in terms of their expectations for the coming years.

This general upward trend in perceived standard of living was, however, accompanied by major concerns regarding financial security during the post-retirement years: half of the respondents stated that pension arrangements are entirely inadequate or adequate only to a small degree; a similar percentage responded that their own personal pension arrangements are entirely inadequate (30 percent) or adequate to only a small degree (17 percent).

Most Israelis have expressed, as in past years, that social disparities are widening, and that government policies intended to narrow social gaps conflict with policies aimed at encouraging growth. This stance paralleled attitudes on a similar issue that of limiting wage differences. However, perceptions of the severity of existing disparities do not translate into sweeping support for affirmative action: nearly half of the respondents felt that the weaker population segments about which it was asked (Arabs and the ultra-Orthodox) should be given no priority at all.

The Taub Center Social Survey affirms on a yearly basis what might, on the face of it, appear self-evident: that individual income and educational levels may be associated, to one degree or another, with differences in social confidence levels and in attitudes toward various social issues. Over the course of this chapter the major differences rooted in these two factors become apparent. Additionally, the survey findings point clearly to yet another dividing line in Israeli society: response differences were found in accordance with level of religious observance. On the one hand, there are areas in which the ultra-Orthodox and the secular strongly differ; on the other hand, on certain issues the findings point to an observance-based spectrum, rather than to a dichotomy.

1.B. Major Groups in Israeli Society

The survey provides a glimpse of Israeli society as a whole, its values and attitudes towards social issues. Against this general background, three particular groups of Israeli society stand out – populations that are distinct one from the others in terms of their value systems and approach to the major issues on Israel's social economic agenda: Arab Israelis, the ultra-Orthodox, and immigrants from the former Soviet Union (FSU). Although an in-depth study of the attributes of these various groups lies beyond the scope of this chapter, one cannot but be struck by several survey findings that distinguish each of these groups from the others – findings that, at times, contradict what is generally thought about them.

- **The Arab Israeli** population is characterized by its low socioeconomic status. Numerous objective criteria support this characterization, which is also reflected in the responses of Arab Israeli survey participants to questions regarding their standard of living. The proportion of those unable to purchase basic necessities is particularly high in the Arab Israeli sector – nearly half (46 percent), versus one fifth (22 percent) of the Jewish sector. Arab Israeli concerns regarding the possibility of future economic distress are high; however, in contrast to what might be expected, this population is optimistic about the future.

Arab Israelis are less critical of the government regarding the way in which it addresses disparities. Moreover, they display consistently positive attitudes regarding social solidarity and express satisfaction with existing social services. Their support for affirmative action is higher than that of Jews, and encompasses other less affluent groups in Israeli society. For example, they support preferential treatment for the ultra-Orthodox population and strongly advocate limiting wage disparities; they also are relatively strong in their support of increased education budgets for less affluent populations.

Their high degree of satisfaction with health services is particularly striking in light of objective data that point to inequities in health inputs

and expenditures in those parts of the country more densely populated by Arabs, e.g. northern and southern Israel³ (see Epstein, Horev, 2007).

- **Former Soviet Union (FSU) immigrants**, according to the survey, subjectively view their standard of living as inadequate and unsatisfactory (the percentage of those reporting inability to meet basic needs is relatively high); they also express a lack of optimism regarding the near and distant future. Despite their strong fear of falling into economic distress due to unemployment or post-retirement difficulties, they are avid supporters of the “free market.”

FSU immigrants as a group are strongly opposed to affirmative action for both Arabs and the ultra-Orthodox (80 percent and 72 percent, respectively). Regarding wage disparities, a particularly high percentage responded that they should be subject to no limitations at all.

FSU immigrants also differed from the rest of the population with regard to education: most feel that teacher caliber and salaries are the major problems facing the education system, rather than violence. However, they do not, as a group, advocate diverting additional resources in order to raise teacher salaries. Regarding health services, FSU immigrants do not feel that there has been a deterioration, nor do they frequently refrain from seeking necessary medical treatment due to its cost.

- **The ultra-Orthodox.** The ultra-Orthodox are commonly thought to occupy the lower rungs of the socioeconomic ladder, and numerous objective indicators – e.g., household income data and poverty rates – bear this out. However, ultra-Orthodox survey interviewees, in their responses to questions about standard of living, do not portray themselves as less able to meet their basic needs than anyone else, nor do they appear

³ Health services are not organized separately by population sector (Israeli Jews and Arabs), in contrast to education services. Primary medical and preventive services are provided to the population within the locality and residential area frameworks, and the degree of segregation between the sectors at the local level is exceedingly high.

to feel that their situation has deteriorated in recent years. While it is true that the definition of “basic needs” may differ by population group, the survey is meant to reflect subjective perceptions. This sector also displayed a relatively low degree of concern regarding future economic distress, and was the most optimistic of all of the sectors regarding the possibility of improvement.

A particularly high percentage of the ultra-Orthodox, 70 percent, responded that social disparities are widening, and when asked about governmental policy priorities, a relatively high percentage responded that preference should be given to “reducing poverty and narrowing social disparities.” However, their social solidarity relates primarily to their own sector: a significant percentage of the ultra-Orthodox support affirmative action “for themselves,”⁴ but strongly oppose it for Arab Israelis (only the FSU immigrants oppose affirmative action for Arabs in higher percentages). Regarding State support for families with children, the findings for this group were readily anticipated: 95 percent responded that the support should be increased.

As regards the education system, a particularly high percentage (45 percent) of the ultra-Orthodox feel that budgets for disadvantaged populations should be increased; however, the aforementioned findings raise the question of which populations they would regard as “disadvantaged.” On the core curriculum issue, the ultra-Orthodox position is unequivocal: 80 percent feel that the State should not require core secular subjects to be taught; a similar percentage support school admission based on family lifestyle criteria (figures for the other population sectors are much lower). Ultra-Orthodox respondents express a high degree of satisfaction with their health services, despite also displaying a higher-than-average tendency to forgo necessary medical

⁴ As noted earlier, the ultra-Orthodox were defined, for the relevant question, as an “economically weak population.”

treatment because of the expense (21 percent versus 13 percent).⁵ The ultra-Orthodox have notably high rates of support for the provision of dental care to children, an attitude that likely reflects this population's urgent needs in the area of dental health.

Beyond these three distinct groups, the survey findings in certain areas reveal differences dependent on respondent age – a phenomenon noted throughout the survey. However, some of the responses obtained from the survey's young-adult (aged 20-30) respondents – i.e., Israeli society in the not-too-distant future – are worth noting. In their responses, these young adults, show a lack of ideological consistency, even a degree of what might be termed “confusion.” Although they are, as one would expect, optimistic relative to the other age groups, their fear of unemployment is not inconsequential. Young Israelis take particularly extreme stands on affirmative action towards Arabs; with regard to wages, they agree more strongly than do others that “there is no need for wage limitations.” It is worth remembering that this group's responses are likely influenced by its demographic composition (a higher percentage of ultra-Orthodox and Arabs), and by the relative nearness of young (non-ultra-Orthodox) Jews to their period of military service.

The topics addressed by this chapter are presented in the following order: Section 2 presents the findings of the Taub Index of Social Confidence; Section 3 presents findings regarding attitudes toward disparities and toward social solidarity. Sections 4 and 5 are devoted to the two main social service areas, with Section 4 focusing on the education system and Section 5 on health care. Section 6 presents the survey findings on standard of living, employment security, expectations regarding standard of living after retirement, and housing. Section 7 addresses changes in the Israeli public's confidence level regarding violence in society.

⁵ In this chapter, a “significant” difference means that the survey results were found, on statistical examination, to be statistically significant with a 95 percent level of confidence.

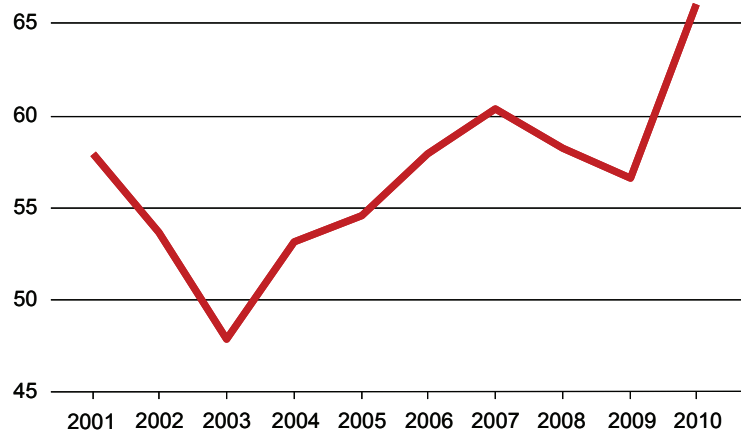
2. The Taub Center Social Confidence Index

The Taub Index provides an aggregate score for a group of survey questions that address fundamental components of social well-being. The answers to these questions provide a basis for comparing population subgroups at a single point in time, and for comparing a given population group against itself over time – with regard to perceptions of change in standard of living, sense of exposure to violence, sense of economic confidence, and fear of unemployment. The Index uses a scale of 0 to 100, with 100 denoting the optimal situation and 0 the worst. The numeric score serves as an indicator of changes in Israeli public opinion, one that is more comprehensive than the responses to individual questions.

The overall Taub Index for 2010 reached an all-time high of 65.6 points, nine points above last year's Index and the highest score obtained in all the years that the Center has been conducting the survey. In its most general sense, the 2010 Taub Index indicates a rise in the Israeli public's social confidence level. The Index's variability reflects, to a great degree, prevailing economic and security situations during different periods – 2003 saw the start of an expansion process that was disrupted to a certain degree in 2008 and 2009 due to the global crisis; 2010 witnessed a return to growth and a sense of having emerged from the crisis.

The Index scores calculated for the various population groups reflect, on the one hand, differing levels of social confidence and, on the other hand, inter-group similarities in response to changes in the economy.

Figure 1
The Taub Index of Social Confidence
2001-2010



Source: Taub Center, Annual Social Survey, various years.

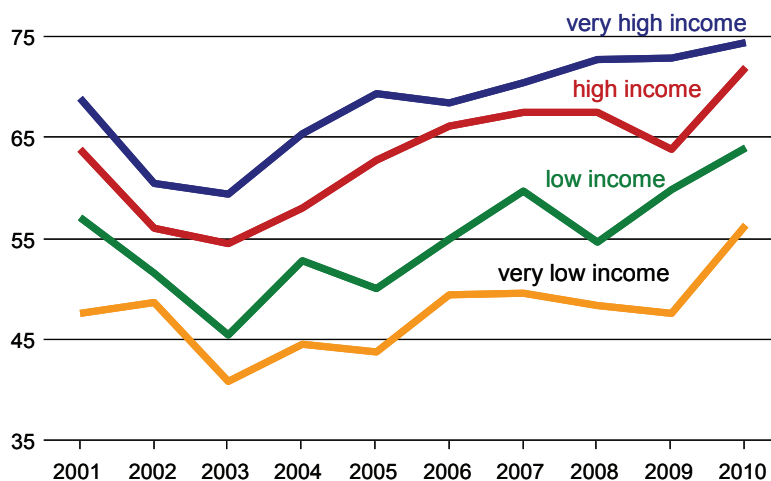
Dividing the population by income level reveals clear inter-group differences as seen in the trend lines of one above the other and point to income-linked disparities between the groups with regard to their sense of well-being (Figure 2). However, it should be noted that the Index trend lines are consistent with this year's rise in the Index for all income groups. Interestingly, the most modest rise was for those with incomes much higher than the average, although their score was still the highest of all groups, reaching an all-time high of 74.4 points, compared with 72.6 points in 2009.

The Index for the group with incomes slightly higher than average, rose this year nearly to the level of those with much-higher-than-average incomes: 72 points versus 61 points last year (a meaningful and significant rise). These findings hint that the "shrinking middle class" phenomenon that has garnered so much media attention may be less

prevalent than previously thought, or that the shrinking process decelerated last year, at least as perceived by the population in question.

At the other end of the spectrum are those with much-lower-than-average incomes, whose Index score rose to 56 points after several years of stability in the low 47 to 49 point range. This year's Index is the highest ever measured for this group; the gap between it and the much-higher-than-average-income group narrowed *vis-à-vis* 2009, from 25 to 18 points. It is interesting to note that this year's Taub Index for this group is higher than the lowest score ever measured for the slightly-above-average-income group (2003) and nearly equal to the lowest score ever measured for those with much-higher-than-average incomes.

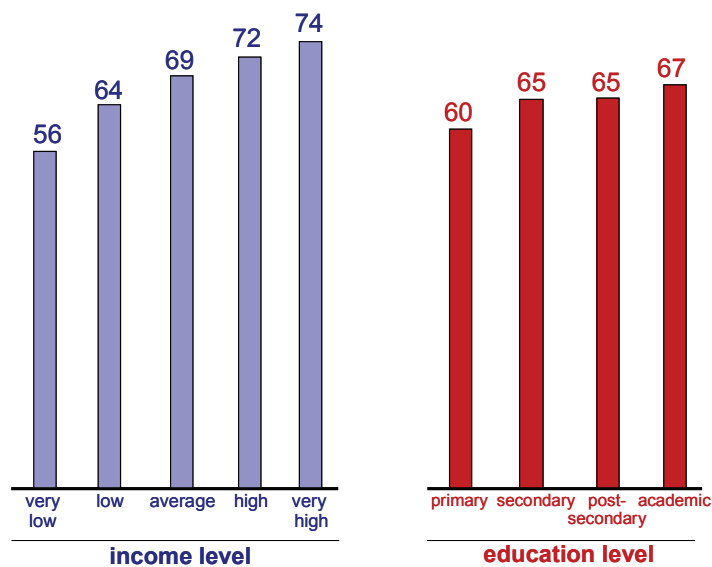
Figure 2
The Taub Index of Social Confidence
 by income level, 2001-2010



Source: Taub Center, Annual Social Survey, various years.

Education level has a less decisive impact on the Index than does income level, and is less strongly linked to social confidence differences (Figure 3). The 2010 Index for those with academic degrees, the highest ever surveyed, is 67 points, versus 60 points for those with the lowest level of education, and close to the overall population average of 65.6.

Figure 3
The Taub Index of Social Confidence
by level of education and income, 2010



Source: Taub Center, Annual Social Survey, various years.

The Taub Index scores for the Arab Israeli, FSU immigrant and ultra-Orthodox populations support and confirm the findings for these groups presented at the beginning of this chapter. The 2010 Index score for the ultra-Orthodox is relatively high, rising this year to 68 points – higher than in earlier years and relative to the mean score. The Index for the

Arab Israeli sector is much lower – 61 points. Although this represents a significant rise over last year, it is nevertheless lower than the overall mean. The FSU immigrant score is also low. Despite the fact that it is higher than last year's score, there is a discrepancy between it and the Index scores for the economically stronger segments of Israeli society (Table 1).

Table 1. **Taub Index, total and selected population groups**
2001-2010

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total	58	54	48	53	55	58	60	58	56	66
Ultra-Orthodox	56	60	50	58	58	57	64	60	59	68
Arabs	51	50	44	46	50	55	55	53	51	61
FSU immigrants	54	47	50	49	48	55	57	51	51	61

Source: Taub Center, Annual Social Survey, various years.

The survey also includes a direct question about socioeconomic confidence: *“In general, how would you rate your and your family’s sense of socioeconomic confidence?”* Responses to this question provide additional support for the Index findings: the percentage of those reporting a high or very high level of confidence came to 48 percent this year, versus 39 percent for the last two years (2008-2009); while those reporting a “not good at all” or “not so good” level of confidence was 14 percent this year, compared with 17 to 19 percent in the previous two years.

Table 2. Responses to the question: *“In general, how would you define your and your family’s sense of socioeconomic confidence?”*
2007-2010 (percent)

	2007	2008	2009	2010
Good or very good	42	39	39	48
Fair	43	42	44	38
Not so good or not good at all	15	19	17	14

Source: Taub Center, Annual Social Survey, various years.

Income level is the dominant influence on the reported ratings; education influences respondents in similar directions, but more weakly. For instance, 87 percent of respondents with a much-higher-than-average-income report a good or very good level of confidence, versus just 24 percent of respondents with incomes much lower than average. For those at the other end of the spectrum, those in the groups reporting a “not-good” level of confidence, the results were also highly differentiated – 34 percent for those with below-average incomes versus just a few percentage points for high-income respondents (the differences were statistically significant).

3. *Policy Regarding Disparities and Social Solidarity*

Every year the survey includes public opinion questions on topics related to welfare policy, government policy and priorities in the social sphere. The responses to these questions, by their very nature, reflect various dimensions of the value systems and ideologies embraced by the survey respondents, as well as the respondents’ assessments of government policy in these areas.

3.A. Widening Social Disparities

The first question in this area was, “*In your opinion, have socioeconomic gaps widened, narrowed or remained the same over the past year?*”⁶

Table 3. “*In your opinion have the socioeconomic gaps widened, narrowed or remained the same over the past year?*”
2000-2010 (percent)

	2000	2001	2002	2003	2008	2009	2010
Widened	61	67	75	82	75	71	63
No change	24	17	8	11	19	21	28
Narrowed	15	16	17	7	6	8	9

Source: Taub Center, Annual Social Survey, various years.

Most Israelis responded that disparities have grown (63 percent). This finding is a constant over the years that the survey has been conducted. This “insight” has become part and parcel of a public “body of knowledge” regarding trends in the development of Israeli society. The Israeli public is aware of existing inequities; most Israelis feel, as indicated in their responses to the following question, that the growing disparities are not being adequately addressed by government policy. It is interesting to note that the percentage of those who felt that disparities were widening was higher in the past – exceeding 80 percent of the entire Israeli public in 2003. However, alongside those who feel that the gaps are widening is a growing percentage of Israelis who believe that the disparities have not changed (28 percent versus 21 percent last year). This change in public perceptions of socioeconomic gaps may reflect the sense

⁶ It should be emphasized that this question was intended to elicit the Israeli public’s overall “sense” of the situation, not its “stand” on the issue. Thus, one should not assume that all respondents who feel that disparities have widened view the phenomenon negatively. Later as well, with regard to the government’s role in widening or narrowing disparities, one should bear in mind that the respondents may view this role as either desirable or undesirable.

of an improved standard of living and rise in optimism as noted previously.

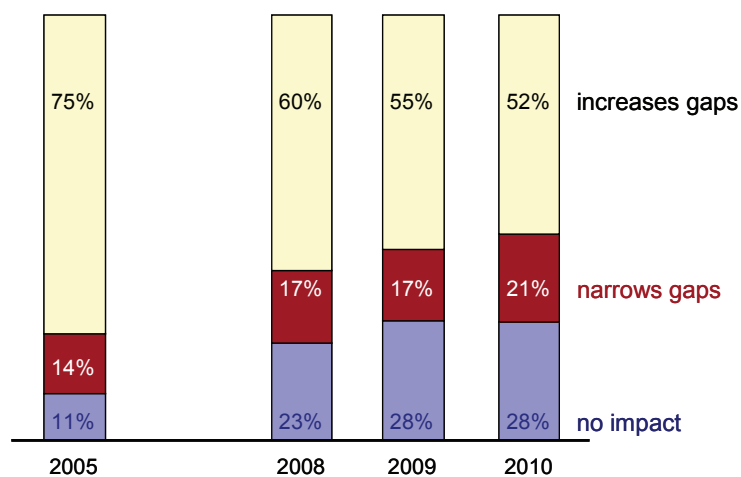
Respondent assessments of the degree to which disparities are widening are differentiated by population group; ratings are influenced by respondent socioeconomic status. Educational level influences responses in rising proportions: a higher percentage of those with academic degrees feel that disparities have widened in recent years, while a concomitantly lower percentage of the academically-educated feel that the gaps have narrowed (this year's percentages are lower than last year's by several points for all educational levels).

The ultra-Orthodox and the secular do not differ in their assessments of the degree to which disparities have widened, but a difference was found between Jews and Arabs (Arab Israelis); a higher percentage of Jews than Arabs feel that the gaps have widened (66 percent versus 46 percent, respectively). The much lower percentage of Arab Israelis who feel that gaps are widening is consistent with the fact that the weaker segments of society are, by and large, more "moderate" in their perception of widening gaps. This finding also corresponds to the various groups' responses to a follow-up question regarding the impact of government policy on disparities.

The survey findings regarding perceived governmental influence on socioeconomic disparities indicate that the Israeli public does not regard governmental policy in this area as effective, although there has been a steady decline over the years in the percentage of Israelis who believe that the government has a hand in widening the gaps (Figure 4). In the latest survey (2010), 52 percent of the public stated that government policy is widening the disparities, versus 55 percent in 2009, 50 percent in 2008 and 75 percent in 2005. On the other hand, this year 21 percent of Israelis felt that government policy does help to narrow disparities – compared with 17 percent in past years. This finding is interesting in light of Central Bureau of Statistics and National Insurance Institute reports to the effect that the gaps are continuing to widen. Are there, in fact, discrepancies in this area between "public opinion," "expert" or

policymaker opinion, and the “reality?” It is interesting to note that other findings of the survey indicate that “public opinion” in the areas of economic and employment security reflect actual changes in the Israeli economy with a high degree of accuracy. By calling attention to the discrepancy between “public opinion” and “expert opinion,” there is no intention to declare one of the parties “right.” This is simply to highlight an interesting phenomenon, one apparently that is not unique to Israel.⁷

Figure 4
Impact of government economic policy on social gaps
 2005-2010



Source: Taub Center, Annual Social Survey, various years.

⁷ Prof. Brian Rowan of the University of Michigan’s School of Education, the principal guest at this year’s Van Leer conference, mentioned the discrepancy between “expert opinion” and “public opinion” in his lecture at the conference (Van Leer Education Conference, November 2010).

Another notable finding in this context is that a significantly higher proportion of the weaker population group believes that the government is helping to narrow disparities – higher than average percentages in this area were found for young adults up to 29 years of age, those with low levels of education (up to 12 years of schooling), the ultra-Orthodox, Arab Israelis, and those with below-average incomes. For example, a fourth of those with low levels of education (up to 12 years of schooling) feel that the government is helping to narrow gaps, versus 16 percent of those with academic degrees; 27 percent of the ultra-Orthodox versus just 13 percent of the secular; 30 percent of Arab Israelis compared with an average of 19 percent of Jews; and 26 percent of those aged 20-29 versus 19 percent of all other adults (aged 30+). Is this more positive, or less critical, attitude toward the government displayed by the “weaker” groups based on their subjective impression or on an overall attitude toward government policy? Does the perspective shown by respondents from the more affluent segments of society offer a different outlook on reality?

3.B. Public Attitudes Toward Wage Disparities

The question of wage disparities in the economy as a whole, and in the public sector, is one that comes up from time to time in the media, in public debate, and in legislative activity. Preoccupation with this issue intensified during the global economic crisis, when numerous economic systems, some of them characterized by substantial wage disparities, collapsed. Internationally, Israel is one of the countries ranked “highest” for wage disparities, particularly compared with the European countries to which Israel is usually compared in terms of its economic performance and the socioeconomic status of its population.

In past years, survey participants were asked what an acceptable level of wage disparity should be in the public sector generally (see Blass and Nachshon-Sharon, 2010). The question posed this year related to the entire economy and focused on the ratio between the maximum and minimum wages paid. It was found that 60 percent of the Israeli public

supports wage restrictions, with 35 percent (of all respondents) stating that the maximum wage should be limited to ten times the minimum, while another 15 percent responded that it should be limited to 50 times the minimum. Another ten percent of the entire respondent group was divided between two options that would limit wages in relation to the lowest salary paid in a given workplace, rather than in relation to the minimum wage mandated for the marketplace as a whole.

On the other hand, 40 percent of Israelis responded that there is no need to limit the maximum wage paid in the economy as a whole, versus just nine percent who said that no restrictions should be placed on wage differences in the public sector. There is no real way of explaining this dramatic change. The question, as noted earlier, was indeed phrased differently, but is the discrepancy between public opinion regarding public-sector wage differences and that regarding wage disparities in the economy as a whole, as large as it appears to be?

Differences between population groups regarding not restricting the maximum wage were quite moderate, with percentages ranging close to the mean (40 percent); however, respondents with much-higher-than-average salaries were noteworthy for choosing this category – 66 percent. Those with much higher than average incomes constitute a relatively small group among the survey participants, in accordance with their representation in the general population; however, this finding was a distinct and statistically significant one.

3.C. Priorities in Government Policy

In the context of the discussion of socioeconomic disparities and wage gaps, and the government's role in narrowing disparities, it is interesting to consider what issues, in the opinion of the Israeli public, should be placed at the top of the government's policy agenda. The recurring question, "*Which of the following areas should be the top priority of the government?*" was included in this year's survey.

Table 4. *“In your opinion, which of the following areas should be the top priority of the government?”*
2006-2010 (percent)

	2006	2007	2009	2010
Reducing poverty and social gaps	41	32	33	36
Defense	34	47	35	36
Economic growth	13	13	16	12
Reducing unemployment	9	5	13	8
Other	3	0	4	8

Source: Taub Center, Annual Social Survey, various years.

The Israeli public considers two main areas as the government priority – responsibility for security and responsibility for defense, as reflected in the option “reducing poverty and social disparities.” This year, 36 percent chose each one of these areas. Another 12 percent accorded priority to “economic growth,” a lower percentage than last year but similar to the figures obtained in 2006-2007. With regard to reducing unemployment, the percentage choosing this option declined this year. This finding may indicate a sense that the threat of unemployment is now lower. What is the meaning of this choice? While the answers to questions about social and economic gaps and about the impact of governmental policy do not necessarily reflect an ideological stance, responses to the present question do indicate that, at least at the declarative level, narrowing gaps is a major issue for a third of the Israeli public, one comparable in importance to that of security.

Breakdowns by population group shows that support for prioritizing “economic growth” increases along with income, from nine to 20 percent, and is also high among those with academic backgrounds. Arabs and Jews were found to differ regarding the level of preference that they assign to “reducing unemployment” (14 percent for Arab Israelis versus six percent for Jews). The difference was found to be statistically

significant, and may be indicative of a “real” difference in the unemployment rates that characterize the two population groups.

Proceeding from this question, which posed a choice between two options, respondents were asked if, in their opinion, policies that strive to narrow gaps contradict those that encourage economic growth.

Table 5. *“There are those who claim that there is a distinct contradiction between a policy that strives to narrow social gaps and one that encourages economic growth”*
2003-2010 (percent)

	2003	2005	2006	2007	2010
There is a contradiction and the priority should be narrowing gaps	34	33	30	27	32
There is a contradiction and the priority should be economic growth	30	26	22	21	25
There is no contradiction between the two policy lines	36	41	49	52	43

Source: Taub Center, Annual Social Survey, various years.

Most Israelis (57 percent) believe that there is a contradiction between these two policy lines. Thirty-two percent (of all respondents) feel that priority should be given to narrowing gaps, while 25 percent would give preference to growth. The proportion who said that there is a conflict and that narrowing gaps should be the priority amounts to about a third of the Israeli public for most of the survey years. Those who responded that there is a conflict and that economic growth should be preferred amount to about a quarter of the Israeli public. To complete the picture, 43 percent of Israelis said this year that there is no contradiction between the two policy lines. This is a significant proportion of the public; at some points over the last few years, the proportion has been even higher.

No major differences were found between different age group, educational level (although the university-educated stand out somewhat for their relatively high percentage responding that no contradiction

exists), religious observance or income level. By contrast, Jews and Arabs were found to differ in their responses to this question. Arab Israelis display a notable preference for economic growth over the narrowing of disparities, a finding consistent with the fact that they rate current gap-narrowing activity and related governmental policy more “positively” than do Jews. The higher Arab Israeli unemployment rate may be an influencing factor here, as economic growth would be seen as a potential solution to this problem.

3.D. *Social Solidarity*

The strength or weakness of Israeli social solidarity may be seen in the responses to a variety of survey questions – those aimed at eliciting respondent expectations of the government in terms of its priorities as well as other questions.

Against this background, the two following survey questions examine public attitudes toward two groups generally regarded as economically weak – Arab Israelis and the ultra-Orthodox. Both questions appeared in similar form in last year’s survey. *“The Arab and ultra-Orthodox populations are on the whole socioeconomically weak. In your opinion should there be a policy of affirmative action for these populations in order to narrow the gaps?”*

A very large proportion of the public, over 40 percent, felt that no affirmative action should be taken on behalf of these two population groups. The overall percentage is slightly higher with regard to Arabs – 47 percent – versus 42 percent for the ultra-Orthodox. However, over 50 percent of Israelis (with regard to both populations) say “yes” to affirmative action under certain circumstances. It is interesting that the percentages favoring unconditional affirmative action are similar for both Arabs and the ultra-Orthodox, amounting to a quarter of the Israeli public. Last year these figures were in the 18-20 percent range.

Table 6. *“The Arab Israeli/ultra-Orthodox populations are socio-economically weak. Do you think it is necessary to have a policy of affirmative action for these populations to reduce the gaps?”* 2009 and 2010 (percent)

	Arab Israelis		Ultra-Orthodox	
	2009	2010	2009	2010
Yes, in all areas of government services and National Insurance allowances	18	26	20	25
Yes, but only in providing government services (education, health, etc.)	10	6	7	4
Yes, but only in the areas of employment and providing jobs	12	9	9	12
Yes, provided that they agree to participate in National Service	18	12	26	17
No, there should not be affirmative action for Arabs/ultra-Orthodox populations	43	47	39	42

Source: Taub Center, Annual Social Survey, various years.

When a distinction was made between Jews and Arabs, it was found that 54 percent of Jews feel that affirmative action should not be implemented for Arabs, compared with 45 percent for ultra-Orthodox Jews. Figures for the secular Jewish population are 44 percent and 56 percent respectively. Thus, secular Jewish opposition to affirmative action on behalf of the ultra-Orthodox is greater than this population's opposition to affirmative action on behalf of Arabs (statistically significant findings). It is worth noting in this context that while just 19 percent of all Jews support affirmative action for Arabs in all service areas (with secular Jews showing the greatest level of support at 25 percent), some 54 percent of Arabs support affirmative action for the ultra-Orthodox in all service areas.

The younger survey participants (ages 18-22) are noteworthy for their opposition to affirmative action on behalf of Arabs – 59 percent. Significantly high figures were also obtained for the broader young-adult

group, those aged 18-29, 52 percent of whom oppose affirmative action for Arabs. Young Israelis oppose affirmative action for Arabs in greater numbers than they do for the ultra-Orthodox – 33 percent. This finding is interesting in comparison with the altogether contrary finding obtained for the “secular” population. This may reflect a rise in the proportion of religious/ultra-Orthodox among the younger population groups.

Immigrants from the former Soviet Union display the strongest opposition toward affirmative action for Arabs – 80 percent of this group responded that it would not support any form of affirmative action. However, the FSU immigrants are also strongly opposed to affirmative action for the ultra-Orthodox, at a relatively high rate of 72 percent. This degree of opposition may reflect a philosophical distaste for affirmative action as such, rather than antagonism toward Arabs or the ultra-Orthodox. The ultra-Orthodox and (Jewish) religiously-observant groups also oppose affirmative action for Arabs (70 percent, versus 44 percent of the secular). These attitudes are not influenced by income or educational level. Arab respondents’ support for affirmative action on behalf of their own population group is, of course, greater.

Respondent willingness to aid the ultra-Orthodox is inversely related to educational level and degree of religious observance. It is interesting that the reverse is true for income level – opposition to affirmative action increases as income rises.

3.E. *Support for Families with Children via Transfer Payments*

Although from time to time the Israeli public expresses opposition to the idea of child allowances, and despite the tendency to blame transfer payments for encouraging people not to go to work, most Israelis (61 percent) feel that the State should increase its level of support for families with children, while another 28 percent feel that the status quo should be maintained. Only a small percentage advocates decreasing or terminating assistance to families with children. The Israeli public does not feel,

though, that support for large families should be increased through larger allowances for children whose place in the family birth order is later.

Support for increasing the payments is higher among young people, women, those with low levels of education (percentages in favor decline as educational level rises), and the ultra-Orthodox. Support rises dramatically as level of religious observance rises. Arabs also advocate child allowances at a much higher rate than do Jews – 81 percent versus 57 percent.

Support for child allowances declines as income levels rise – from 77 percent of those with incomes much lower than average to 68 percent for those with incomes slightly below average, 60 percent for those with average incomes, and 40 percent for those with higher-than-average incomes.

Regarding allowance distribution: a substantial majority of 64 percent feel that allowances of equal value should be given for each child regardless of birth order, while another 21.5 percent feel that a higher allowance should be given to the first child and a lower amount paid for the last child in the family. Support rates for giving preference to the eldest over the “last” child decline as level of religious observance rises.

4. Problems at Education's "Core"

Educational issues constitute a major “cluster” within the Taub Center Social Survey, which includes questions on priorities and government policy in the educational sphere. As in previous years, this year’s survey first sought to determine what the Israeli public views as the main problem affecting the education system. Respondents were then asked what goals they felt should be given highest priority if additional funding would be allocated to the education system. The next topic addressed was that of instituting a core curriculum of basic subjects to be taught in the schools, with particular attention to the manner in which failure to include these subjects in the school curriculum should be dealt with. The

third set of questions dealt with public opinion regarding school admission based on various criteria: prior pupil performance, lifestyle of the pupil's family, and parental payment beyond that authorized by the Ministry of Education (three separate questions).

4.A. The "Main Problem" and Education System Priorities

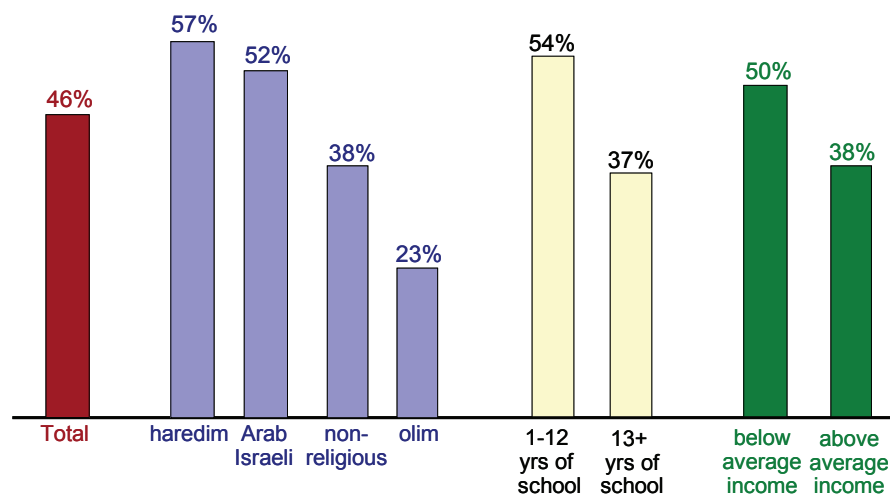
Israelis attach little importance to the issue of "scholastic achievements" (13 percent), while an even lower percentage attach importance to that of "large scholastic disparities" between population groups (five percent) – despite the attention given to these issues by leading figures in the Israeli education system, by academics, politicians, and the media. The public feels, as it did last year, that the main problem facing the education system is that of violence. Nearly half of the survey participants (46 percent) expressed this view. An additional eleven percent responded that the main problem is that of school quality of life. Taken together, these two options show that a majority of nearly 60 percent of Israelis feel that the main problem faced by the education system lies in the area of school climate and educational values, rather than in the area of scholastic achievement or disparities.⁸ The issue of "teacher salaries and quality," (attracting higher caliber teaching staff which is generally thought to be linked to teacher salaries, as well as to the degree of prestige enjoyed by teachers), was ranked by just a quarter of the respondents as the "main problem" facing the Israeli education system (similar to last year's percentage).

These findings are notable against the background of the ongoing debate over pupil achievement measures, both over time and through comparative, international exams.

⁸ School violence and climate is a painful issue, one that generates considerable discussion. Numerous studies have addressed the issue in depth: see Harel-Fish, Koren, Fogel-Greenwald, Ben-David and Naveh (2009); Erhard and Brosh (2008); Benbenishty, Khoury-Kassabri and Astor (2006); and Dan Sharon (2006).

Do the various population groups differ in their choice of the main problem facing the education system? The survey findings offer several interesting answers to this question: “violence” was chosen as the main problem by a higher percentage of those with low educational levels (over 50 percent of respondents with 12 or fewer years of schooling, versus 37 percent of those with academic degrees) and those with below-average incomes (50 percent, versus 38 percent of those with above-average incomes). However, violence was identified as the “main” problem by all of the groups – a finding consistent with those of previous years (Figure 5).

Figure 5
**Rate of those who feel that violence
 is the main problem in the education system**
 2010



Source: Taub Center, Annual Social Survey, various years.

The group that stood out in this regard was that of the FSU immigrants, of whom just a relatively small percentage chose violence as the main problem facing the education system (23 percent versus a mean score of 46 percent). This group differs from the rest of the population in its selection patterns: most of the immigrants responded that the main problem with the education system is low teacher salaries – 39 percent, a significantly higher percentage compared with all of the other groups.

Level of religious observance was a differentiating factor in the choice of a central problem with the education system: “violence” was selected in higher percentages as religious-observance level rose, from 38 percent of the secular to 57 percent of the ultra-Orthodox. The picture is reversed for the second-largest category, “teacher salaries and quality,” which was chosen in smaller numbers as the level of religious observance decreased (from 35 percent of the secular to 17.5 percent of the ultra-Orthodox). The great emphasis placed on violence by the ultra-Orthodox as the most urgent problem facing the education system was discussed in the past (Blass and Nachshon-Sharon, 2010). The finding is noteworthy in light of the relatively low degree to which this group fears violence generally, as the ultra-Orthodox have the lowest degree of exposure to violence within the Israeli population as a whole (see further discussion below). The finding appears to reflect ultra-Orthodox criticism of the Israeli education system, of which they do not consider themselves a part, rather than the actual state of affairs in the ultra-Orthodox schools. On the other hand, it may be that violence within the ultra-Orthodox schools – violence exhibited by pupils, by teachers, or in response to any religiously-unacceptable behavior – though invisible to the public at large, is indeed reflected in the ultra-Orthodox responses to the survey question.

The Arab Israeli survey participants stand out for the emphasis that they place on violence and school quality of life; a slightly smaller than average percentage of them chose scholastic achievement, despite the high degree to which this problem afflicts the sector.⁹

⁹ One of many studies on this topic, that of Kennet-Cohen et al. of the National Institute for Testing and Evaluation, shows the attainment level of Arab pupils

Regarding the issue of raising teacher quality and salaries, the findings show that support for this option rises along with respondent educational and income levels. Arab Israelis also respond as expected for their socioeconomic level (on average) with regard to teacher quality and salaries. That is, the percentage of them who feel that this is the main problem facing the education system is much lower than that of the Jewish respondents. This finding corresponds to another study recently conducted by the Taub Center on the topic of teacher position relative to other salaried workers in terms of the socioeconomic ranking of their home localities. The study also looked at the influence of this position on teachers' social status (Blass and Romanov, 2010).

The following question in the education cluster enables respondents to indicate the goals to which priority should be given in terms of resource allocation, on the assumption that the system is going to be infused with additional resources. On the face of it, this question makes it possible for those who previously chose a particular "main problem" to select the area to which first priority should be given for additional resource allocation. Indeed, a relative high percentage of respondents prioritized resource allocation for the purpose of reducing class size – 42 percent. This choice may be regarded by the Israeli public as a solution to the problem of increasing violence, and also as a potential solution to the "scholastic achievement" problem and as a promoter of scholastic success generally. Consequently, over a quarter of Israelis would choose to allocate greater resources to pupils from the weaker population groups (28 percent), a higher percentage than those who emphasized "strengthening weaker populations" in their responses to the question about the main problem faced by the education system. Here, as well, the option chosen may have been seen as a potential solution to the violence problem that so concerns the public. Another quarter of the respondents chose improving teacher

to be lower than that of Jewish pupils on nearly all of the over fifty tests considered.

work conditions and salaries (23 percent), a distribution very similar to that of last year's survey findings.

Only a very small percentage of respondents would choose to increase budgets for outstanding pupils (four percent). This finding apparently reflects the relatively low degree of importance attached by Israelis to scholastic achievement generally, as indicated by the survey results to the previous question. This finding is certainly surprising, and of interest in light of the considerable public attention garnered by Israeli scores on international exams, as well as principal reports of high parental interest in scholastic achievement, as reflected in the 2006 and 2009 PISA data (OECD, 2007; OECD, 2010).

Choice patterns in the education cluster reveal significant differences by gender: women chose reducing class size in higher percentages than did men – 46 percent versus 38 percent, and they were less supportive than men of increasing teacher salaries – 19 percent of women versus 27 percent of men. On the one hand, this finding is surprising in light of the teaching profession's strong gender identification; however, it may reflect the fact that women's salaries are low overall, and that teacher salaries are thought by women to be relatively high.

FSU immigrants who felt that the main problem facing the education system is that of low teacher salaries (39 percent as noted previously – a high and noteworthy percentage compared with the other groups) did not, in this question, assign priority to the issue of teacher salaries. It is possible that FSU immigrants do not regard teacher quality as a function of salary; the finding may also reflect the respondents' own place on the salary scale (see, in this context, the previous question and the discussion of socioeconomically weak populations' attitudes toward salaries and teacher status, compared with those of stronger populations). As with other groups, the FSU immigrants gave priority to class size reduction (48 percent); a relatively high percentage of them also chose the option of allocating additional resources for outstanding pupils. This finding confirms the feeling that "choosing to reduce class size" is linked with the choice to "improve scholastic achievements" – in accordance with the

fact that FSU immigrants chose, in higher-than-average numbers, to address the problem of low scholastic achievement in the Israeli education system.

The effect of educational level is evident in a tendency to support reducing class size: support rises (significantly) with educational level, from 37 percent for the lower-level groups (up to 12 years of schooling) to 48 percent for those with academic backgrounds. The influence of educational level is also strongly evident in the degree of support for raising teacher salaries – 26 percent of those with an academic degree favored teacher salary increases, versus 19 percent of those with 12 or fewer years of schooling. On the other hand, the percentage of those giving preference to budgets for weak populations declines as educational level rises – from over 30 percent for those with low educational levels to just 20 percent for those with academic degrees. In this context, other “strong” populations, such as the higher-income groups, also display relatively low rates of support for budget increases on behalf of weaker populations – support rates decline as income level rises, from 38 percent of below-average-income respondents to 20 percent of those with incomes higher than average (similar to the figure for those with academic degrees).¹⁰ If these findings truly reflect the outlook of the educated and the affluent, then one would have to be pessimistic about the government’s ability (and perhaps its desire) to adhere to affirmative action policies on behalf of the weaker populations. In this regard, one may find some reassurance in the fact that young people feel, in greater percentages that budgets for weaker populations should be increased (39 percent versus a mean figure of 29 percent). However, this finding may

¹⁰ This finding may also reflect a public “fatigue” with affirmative action policies, particularly in light of numerous publications arguing that the efforts and resources that have been invested in affirmative action have failed to bear fruit, that there is no connection between resource allocation and scholastic achievement, and that the “weaker groups are largely to blame for their situation.”

also reflect the growing proportions of Arab Israelis and ultra-Orthodox within Israel's young adult population.

4.B. The "Core" Curriculum and School Budgeting

The question of a "core" curriculum is a major one on Israel's educational agenda today; it is related to the issue of the State's responsibility toward all of its citizens in the areas of education, equality, labor, and citizenship. The core curriculum issue touches on the broader question of what unites and what divides Israeli society. It exposes the degree to which different segments of the population actually constitute, or may come to constitute, distinct societies in their own right; it also raises the question of to what degree different population groups should be allowed to educate their children exclusively in accordance with their own worldviews. The "core curriculum" refers to the material taught in the schools operated by the State of Israel, which views itself as part of the free, modern, developed world; it has implications for the degree to which the State can ensure the future of its younger generation and that generation's preparedness for life in the modern world.

Last year's survey findings were presented regarding support levels for the institution of a core curriculum (Blass and Nachshon-Sharon, 2010). In general, 41 percent of the survey respondents felt that the State should institute a mandatory curriculum amounting to no less than 75 percent of all instructional hours, while another quarter of the respondents supported a mandatory curriculum for no less than 50 percent of all instructional hours. Less than a quarter of the respondents felt there was no need for the State to institute a core curriculum for basic subjects. This year respondents were asked only about sanctions against schools that fail to teach basic subjects; the question was phrased as it was last year.

Table 7. *“In your opinion, what steps should the government take in the case of schools that do not teach basic subjects, like mathematics and English, as part of their curriculum?”*
2007 and 2010 (percent)

	2007	2010
Revoke their accreditation	22	33
Reduce their government financing	24	24
Stop their government financing	26	24
The government should not insist on the teaching of basic subjects	28	19

Source: Taub Center, Annual Social Survey, various years.

A third of the survey participants responded that schools that fail to teach core subjects should have their accreditation revoked. This was 50 percent higher than last year's percentage. A no less important finding – in light of the ongoing debate – is that another 50 percent of Israelis support imposing financial sanctions on schools that do not implement the core curriculum (complete withholding of budgets, or budget cuts). These findings were complemented by findings in the opposite direction: the percentage of those who felt that “the State should not intervene with regard to basic subjects” declined from 28 percent to 19 percent. Although it is true that two-thirds of the Israeli public would refrain from “closing these schools,” a quarter of Israelis felt this year, as last year, that the schools' budgets should be completely withheld by the State, while another quarter supported cutting State funding for schools that refuse to implement the core curriculum.

Level of religious observance has a strong influence on response patterns with regard to the core curriculum: the percentage of those in favor of “revoking accreditation” declines as religious observance level rises, from 41 percent of the secular to three percent of the ultra-Orthodox. These figures reverse themselves when respondents are asked whether the State “should impose no requirements at all” – 78 percent of

the ultra-Orthodox and just seven percent of the secular gave positive answers to this question. Support for maintaining accreditation but withholding funding for schools that fail to implement the core curriculum also increases as religious observance level declines, from four percent of the ultra-Orthodox to 30 percent of the secular.

4.C. Equal Access to Schools for Israeli Pupils

The equality of access issue touches on the idea of Israel's education system as a public, general, non-selective system. Against this background, and against the background of criticism frequently leveled against the system, this year's survey included several questions aimed at eliciting the level of public support for the institution of admissions criteria to schools in Israel's education system.

Survey participants were asked about pupil "screening" for admission to schools or, as formulated in the survey, making admission "conditional" on several factors: 1) the pupil's prior scholastic achievement; 2) the lifestyle of the pupil's family; and 3) parental willingness to pay more than the amount authorized by the Ministry of Education – this latter step amounting to systematic exclusion of pupils whose parents cannot meet the required funding level.

The responses to the first question are as follows:

Table 8. ***"In your opinion, should a school in Israel be permitted to restrict entrance on the basis of previous grades and if so, at what stage of studies?" 2010 (percent)***

It should not be permitted at any level of education	50
It should be permitted for entrance to post-primary school	22
It should be permitted for entrance to primary school	3
It should be permitted at all levels of education	25

Source: Taub Center, Annual Social Survey, various years.

Half of the Israeli public is completely opposed to the idea of making pupil admission conditional on prior scholastic achievement, at all educational levels. That is, Israelis are not in favor of “maintaining” or “guaranteeing” a particular level of school achievement by rejecting pupils who do not meet a given school’s criteria. In other words, all pupils should be able to find their place in, and have their educational needs met by, all schools. At the other end of the spectrum, however, are the quarter of Israelis who support pupil selection based on scholastic achievement at all grade levels. Should this be considered a large or a small percentage? The answer, of course, is in the eye of the beholder. To complete the picture, it should be noted that 22 percent, or nearly an additional quarter of the respondents, favor allowing schools to screen pupils by scholastic achievement at the post-primary level. The fact that only three percent support making admission conditional only at the primary level indicates overwhelming opposition to the idea of admissions criteria for the lower grades.

Educational level has some degree of impact on the response patterns: although the findings are not fully consistent, the percentage of those who chose the “permit selection at the post-primary level” option rises along with educational level, while the percentage of those favoring “selection at all levels” declines as educational level declines. That is, those with academic backgrounds tend to “permit” selection at the post-primary level, although most of them – 51 percent – still insist that selection at all grade levels should be “strictly forbidden.” In this context, it is interesting to note that the percentage of those who would strictly forbid pupil screening rises as one advances along the ultra-Orthodox-to-secular scale, from 42 percent to 52 percent; however, the no-screening approach is still the dominant one among the ultra-Orthodox.

With regard to Arab Israelis, opposition to selection based on scholastic performance is lower; this group also has the highest level of support for selection at all grade levels – 37 percent. This finding may perhaps be regarded as consistent with a growing trend in the Arab sector – one that was noted in last year’s publication – toward seeking

admission to elitist and selective schools (Blass, 2010). The phenomenon may also testify to a dissolution of solidarity in Arab society, as described by Dr. Khaled Abu-Asba in a discussion held in the framework of the Taub Center's Education Policy Program (on 17 November 2010) – a trend that influences attitudes toward educational issues within the Arab public.

With regard to the second question, that of parental payment as a selection criterion, the responses were much less ambiguous. A large majority of Israelis oppose pupil selection based on parental ability to pay. In this regard the public does not differentiate between primary and post-primary education – a very interesting and important finding. Nevertheless, 16 percent of all Israelis feel that selection based on parental ability to pay should be permitted at all grade levels. Respondent breakdown is as follows:

Table 9. *“In your opinion, should a school in Israel be permitted to restrict entrance on the basis of payment beyond what is allowed by the Ministry of Education and if so, at what stage of studies?” 2010 (percent)*

It should not be permitted at any level of education	78
It should be permitted for entrance to post-primary school	4
It should be permitted for entrance to primary school	2
It should be permitted at all levels of education	16

Source: Taub Center, Annual Social Survey, various years.

Regarding differences between population groups: rates of opposition to selectivity are higher among the middle-aged and the elderly than among the young; they are also higher among the Arab sector than the Jewish sector. Here, as well, this may reflect a waning of social solidarity, as seen previously in the area of Arab education. While the opposition percentages are high and quite similar across all income levels, those with much-higher-than-average incomes exhibit higher rates

of support for selection according to parental ability to pay, at all grade levels. Regarding family lifestyle as a criterion for school admission – the survey results are as follows:

Table 10. *“In your opinion, should a school in Israel be permitted to restrict entrance on the basis of a certain lifestyle in the student’s family and if so, at what stage of studies?”*
2010 (percent)

It should not be permitted at any level of education	69
It should be permitted for entrance to post-primary school	2
It should be permitted for entrance to primary school	2
It should be permitted at all levels of education	26

Source: Taub Center, Annual Social Survey, various years.

The Israeli public overwhelmingly opposes pupil selection based on family lifestyle – 69 percent; however the degree of opposition is lower than that for making school admission conditional on parental ability to pay (beyond the officially-authorized level) – 78 percent, as noted previously. Interestingly, the remainder of the respondents, 26 percent, support this kind of selectivity, with no difference for primary or post-primary schooling.

Do the responses differ by population groups? There are slight age-based differences; support for strictly forbidding this kind of selectivity rises with age, from 54 percent of the very young to 65 percent of those aged 23-29, 72 percent of the middle-aged, and 75 percent of those aged 65+. The figures reverse themselves for the “permit at all grade levels” category. This fact may reflect a rise in the proportion of religious respondents in this age group; however, it might also reflect growing social trends favoring increased diversity in the school system. When the responses are examined by educational level, the most firm opposition to family-lifestyle screening among those with academic backgrounds (74 percent), while a clear response pattern emerges according to level of

religious observance – opposition rates rise as religious observance declines, from 16 percent of the ultra-Orthodox to 80 percent of the secular. One finds, of course, the reverse regarding the option to “permit pupil selection according to family lifestyle at all grade levels.”

5. Health Issues

5.A. Satisfaction with Health Services

Survey respondents’ satisfaction with healthcare services in general, and with the health services available to their families in particular, rose this past year. This year, 41 percent of respondents feel that there has been an improvement in the level of health services provided to the Israeli public, while 84 percent are satisfied, to varying degrees, with the services that they and their families receive. However, 17 percent of all Israelis feel that there has been a general decline in the level of health service provision, while a similar percentage state that they are dissatisfied with the services provided to them and to their families. The continuous rise in public satisfaction with health services contradicts media reports and research findings – including a recent Taub Center study – regarding growing inequality and deteriorating service levels in the Israeli health system. This inconsistency is similar to that noted with regard to the issue of educational priorities.

The health services “basket” to which Israelis are entitled by law has been guaranteed for a decade and a half by the National Health Insurance Law. Residents of Israel are entitled to health fund services, including the right to choose and switch health funds. The overall health status of Israelis is considered high in international comparison. Since the law’s enactment, access to health care has increased and the services available to portions of the population have expanded, particularly those delivered via the health funds to the Arab and ultra-Orthodox sectors. The responses on this issue over the last few years testify to a relatively strong sense of improvement among these two groups.

Since the first Taub Center survey was conducted in 1999, public satisfaction with health services has been measured at both the general and the individual/familial levels; this is an area in which impressions are reinforced through the findings from continuous monitoring of public sentiment. When one looks at the results obtained over the years, one finds that this year's satisfaction levels are at their peak. The percentage of those who feel that health services have "improved significantly or somewhat" has risen from 24 percent in 2004, to 31 percent in 2007, 32 percent in 2009 and 41 percent in the most recent survey (2010). By contrast, figures for the "no change" category have remained virtually the same, in the 40 percent range; consequently, percentages for the "worsened significantly or somewhat" category have declined.

Table 11. Distribution of responses to the question: *"In comparison to the situation a year or two ago, in your opinion has there been a difference in the level of healthcare services in Israel?"* 1999-2010 (percent)

	1999	2000	2004	2009	2010
There has been a considerable or some improvement	36	47	23	32	41
There has been no change	44	41	40	44	42
There has been some or a considerable worsening	20	10	37	24	17

Source: Taub Center, Annual Social Survey, various years.

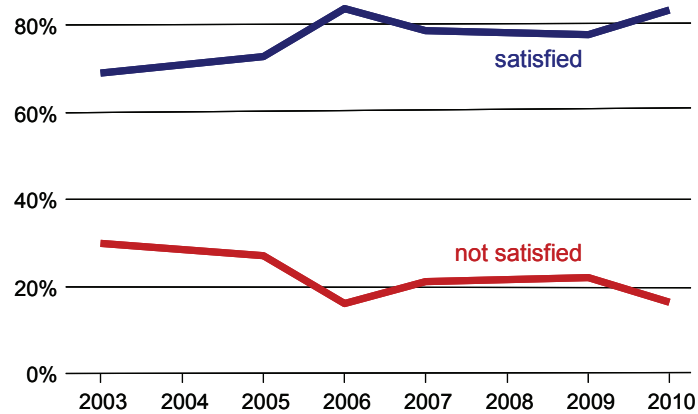
Is this sense of improvement shared by all population sectors? The ultra-Orthodox and Arab Israeli sectors stand out for the high percentages in which they report improvement – 61 percent of the ultra-Orthodox and 59 percent of Arabs (much higher than the mean figure for Jews – 38 percent). This discrepancy relative to the rest of the population was found in previous years as well. No other Israeli population group reports improvement in healthcare in such high numbers. The findings may be

assumed to indicate real improvement in the services currently accessible to the ultra-Orthodox, and on the latter sector's high degree of willingness to utilize the services offered to them by the health funds. This may be seen as proof that policies can indeed lead to real improvement in the status of large populations. In general, this year's survey also points to a correlation between level of religious observance and the sense of improvement or deterioration in existing health services – the percentage of those reporting improvement declines as level of observance drops, from 61 percent among the ultra-Orthodox to just 33 percent of the secular (a very clear and statistically significant difference).

Respondent age, an important trait with regard to health service needs and utilization, influences satisfaction levels and the degree to which services are felt to have improved or worsened. The survey results indicate a significant age-related decline in the percentage of those perceiving an improvement (from 45 percent of the younger respondents to 32 percent of those aged 65+), as well as a corresponding age-related rise in the percentage of those stating that health services have deteriorated (from five percent of young people to 25 percent of those aged 65+).

The second question in this cluster looked at the survey participants' satisfaction with the services that they receive from their health funds. As noted previously, satisfaction is relatively high, and it is also high compared with previous years (Figure 6). The total percentage of those reporting satisfaction rose this year to 84 percent, versus 78-79 percent in 2009 and 2007; those who are satisfied to a high or very high degree rose this year to 51 percent, versus 40 percent last year and much lower figures during the middle and early parts of the last decade. By contrast, at the "dissatisfaction" end of the spectrum, this year's percentage was lower than last year's (a figure that had remained stable over 2007-2009), reaching the lowest level ever obtained during all the years in which the survey was conducted – 16.5 percent.

Figure 6
Satisfaction with the health service
2003-2010



Source: Taub Center, Annual Social Survey, various years.

Regarding differences between population groups, no significant decline was found in satisfaction levels as age level rises, as in the earlier, general question. The percentage of those dissatisfied with their health services among the elderly is actually lower than the mean, indicating that this age group's responses to the previous question do not reflect dissatisfaction with the services that it receives, but rather constitute an overall assessment. This finding has been consistent in the Taub Center surveys over the years.

The ultra-Orthodox, whose rates of satisfaction with health services as a whole are notably high, are also highly satisfied with the services that they and their families receive (56 percent); the percentage of ultra-Orthodox who report dissatisfaction with these services is low. The finding affirms the sense of real improvement noted with regard to the health services being delivered to this population sector. The percentage

of Arab Israelis who expressed a “high degree” of satisfaction was also higher than that of the Jewish population (as a whole), although the Arab sector also has a high percentage of those expressing dissatisfaction. Perhaps this points to the existence of disparities in the health services provided to the Arab population in different parts of the country.

5.B. Failure to Utilize Essential Medical Services Due to the Required Co-payment – Access to Medical Care

Failure to utilize essential medical services due to the required co-payment is a worrisome issue for the Israeli healthcare system, due to its detrimental effect on health status, particularly among populations groups that feel threatened or beset by economic difficulty. Rates of going without essential health services have become a recognized indicator of utilization patterns, especially with regard to the degrees of access and equity available in the Israeli health system. This question has appeared in the Taub Center survey in most years, formulated thus: *“In the past year, have you or any of your family members refrained from seeking a necessary medical service, such as a doctor visit, medication or medical equipment purchase, etc., due to the price you were required to pay for the service?”*

The failure-to-utilize rate for the population as a whole has been quite stable over the years, with 20 percent of Israelis reporting that they had refrained with varying degrees of frequency, from utilizing a medical service during the year prior to the survey, due to the need for co-payment. This year the mean percentage for the population as a whole declined to 13 percent – the lowest figure obtained for all of the survey years (Table 12).

Of the various population sectors, several weaker groups have generally stood out for the high rates at which they have refrained from seeking medical services or purchasing medications: these populations consist primarily of those whose educational level is low, those with very low incomes, Arab Israelis and the ultra-Orthodox. However, this year

the populations in question also showed a decline in their rates of forgoing healthcare, as may be seen in Table 12. The table highlights inter-group rate disparities for forgoing medical services by income, educational level, nationality and level of religious observance.

Table 12. **Forgoing necessary medical services (at least once): selected population groups, 2003-2010 (percent)**

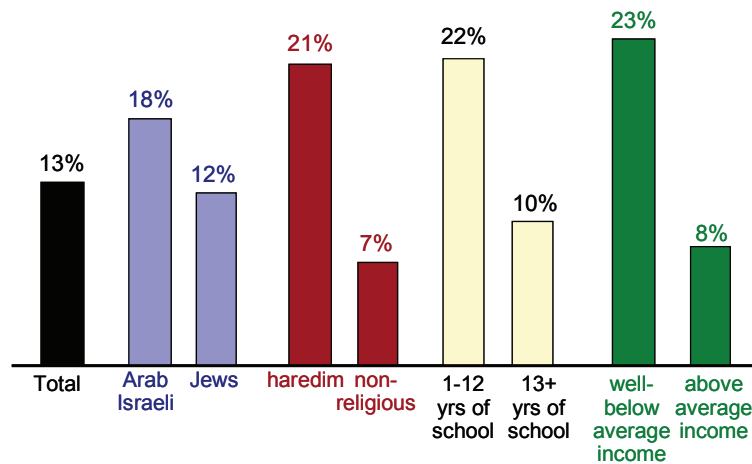
		2003	2006	2009	2010
Total		20	21	19	13
Age	65+	29	24	19	10
Education level	Primary-partial				
	Secondary	37	35	41	22
	Academic	16	17	16	10
Religious observance	Ultra-Orthodox	20	39	24	21
	Secular	18	15	12	7
Sector	Arabs	28	22	32	18
	Jews	19	20	17	12
Income level	Far below average	31	33	30	23
	A little below average	24	24	17	11
	Around the average	18	15	18	11
	A little above the average	10	15	16	8
	Far above average	6	5	8	8

Source: Taub Center, Annual Social Survey, various years.

It is interesting to note that, based on the survey findings, rates of forgoing healthcare have declined drastically for those aged 65+, from 29 percent in 2003 to ten percent this year. Rates of forgoing care for low-income respondents, which had been high throughout the survey years, dropped this year to 22 percent – a figure that, however, is still much higher than the mean. This population may be assumed to include a high

proportion of the very old, and of Arabs. The rate for Arab Israelis declined, but is still significantly higher than that of Jews (Figure 7).

Figure 7
Rate of those who forgo a necessary medical service
 at least once, 2010



Source: Taub Center, Annual Social Survey, various years.

The percentage of ultra-Orthodox who forgo essential medical care is higher than the average, while the rate for those with very low incomes is also relatively high (the ultra-Orthodox likely constitute a significant proportion of this latter group), although the percentages have declined from 30 percent or more to 20 percent. These figures point to the ongoing difficulty experienced by low-income groups in making the co-payments required for various medical services.

It is worth pointing out, with regard to the downward trend in these rates indicated by the Taub Center Social Survey over the years, that the phenomenon came to light in Myers-JDC-Brookdale Institute health service function surveys as early as 2007 (Gross, Brammli-Greenberg, Waitzberg, 2008). The decline was found for forgoing medical care, failure to purchase prescription medications, and both, especially among the elderly. The findings of a more recent survey have yet to be published.

5.C. *Priorities in the Health Sphere*

Survey respondents were asked this year about their priorities for resource allocation in the health sphere. The distribution by response option is as follows:

Table 13. *“If the basket of health services given to the public under the National Health Insurance were to be enlarged, to which area would you give first priority in the allocation of resources?” 2010 (percent)*

Enlarging the basket of medicines and/or new technologies	53
Enlarge hospitals’ abilities for intake of new patients (more hospital beds)	19
Nursing care for the elderly	15
Dental care for children	9
Mental health care	4

Source: Taub Center, Annual Social Survey, various years.

The overwhelming majority of respondents gave preference to expanding the medication basket and to allocating resources for the introduction of new technologies into the health services system. This finding is interesting against the background of several severe shortages known to affect the system, such as the hospital bed shortage that is rediscovered on a yearly basis and never fails to “shock” the system’s

leadership. In the Taub Center survey only 20 percent of the respondents chose this as an area needing to be urgently addressed. Another interesting finding is the low percentage who chose “children’s dental care” – this against the background of the decision taken this year to transfer funds from the medication basket to dentistry, in particular for children’s dental care. The overwhelming preference for the “medication basket” is even more striking in light of the decline that was found in the percentage of those reporting failure to purchase medications due to their cost. The exceptionally low level of priority given to mental health by the Israeli public, despite the current crisis in this area and the lack of a clear decision regarding service arrangements for those in need of mental health care, is also surprising. The findings for this survey question lead one to ask whether the response patterns are driven by awareness of major crises actually affecting the medical sphere, or whether they are biased in favor of certain issues that the media have chosen to emphasize from among the array of current concerns in the healthcare system.

6. Standard of Living and Expectations Regarding Retirement

The Taub Index, whose dramatic rise this year has been noted, aggregates the responses to a set of questions regarding changes in quality of life, basic economic confidence, fear of unemployment, and sense of exposure to violence. This section breaks down these various issues and indicates the areas in which major improvements have occurred, as well as those in which a sense of distress still prevails among the Israeli public.

6.A. Israelis’ Standard of Living

The first question in the “standard of living” cluster looked at survey participants’ ability to meet their basic needs. In contrast to the overall score, the responses to this question do not indicate any real improvement over last year (although a relative improvement over 2003-2005 is

evident). Twenty-eight percent of Israelis (less than a third) remarked that their income enables them to meet their basic needs without difficulty; when taken together with those who feel that they can meet their basic needs “to a reasonable degree,” one reaches a figure of 76 percent of all respondents. However, as the issue at hand here is that of “basic needs,” it is worth calling attention to the 26 percent of Israelis who felt, at the end of 2010, that their income did not enable them, or enabled them only with difficulty, to meet their basic needs.

Table 14. Distribution of responses to the question: *“To what degree does your income allow you and your family to meet your basic needs?”* 2003-2004 (percent)

	2003	2004	2005	2006	2007	2008	2009	2010
Without major difficulty or with no difficulty at all	22	23	23	27	29	30	27	28
Reasonably well	47	43	41	41	47	45	47	48
With difficulty or not at all	31	34	37	32	24	25	27	26

Source: Taub Center, Annual Social Survey, various years.

Specific population groups perceive much greater difficulty in meeting their basic needs: noteworthy in this regard are the Arab Israelis at 46 percent; those with low educational levels (up to 12 years of schooling) at 33 percent; and, FSU immigrants at 33 percent.

Income level is the most obvious explanatory variable for differences in the ability to meet basic needs, as reflected, not surprisingly, in a rising scale; however, educational level also has a clear influence on the responses. Percentages are much higher for those with very low educational levels (primary only), half of whom (49 percent) responded that their income is insufficient to meet basic needs. Nevertheless, 19 percent (nearly a fifth) of those with an academic level education also gave this response. This is a higher percentage than that of the higher-

than-average-income group (ten percent). The difference is not surprising, inasmuch as the academic-educated group includes many professionals, such as teachers and social workers, whose incomes are relatively low, as well as FSU immigrants, who in many cases are not employed in their fields of academic training. Still, one may call attention to a certain upward trend, corresponding to a rise in educational level, in the percentage of those able to meet their basic needs without difficulty.

The responses are also ranked by level of religious observance: 20 percent of the ultra-Orthodox and religious stated that their income enables them to “manage without difficulty,” versus nearly twice the percentage of secular (37 percent). At the other end of the spectrum – inability to meet basic needs: higher percentages were found for the ultra-Orthodox and traditional (28 percent), while the percentage for the secular was relatively low (17 percent).

The second question in the standard of living cluster sought to compare respondents’ current standard of living with their standard of living during the past two to three years. For this question a great change was evident this year, with 28 percent of respondents reporting an improvement over the past two to three years. The percentage is higher than in 2009, and constitutes an upturn relative to 2007 and 2008 as well. Those reporting that their standard of living had worsened also declined in number this year, to 24 percent on average, versus 37 percent last year and about a third of the respondents in 2008. The percentage reporting that their standard of living had worsened over the past year was lower this year than for any other period since the Taub Center began conducting its survey, while the percentage reporting improvement was the highest ever obtained.

Table 15. Distribution of responses to the question: *“If you compare your standard of living and your family’s today against the past two or three years...”* 2003-2010 (percent)

	2003	2004	2005	2006	2007	2008	2009	2010
Improved	8	12	19	21	26	26	19	28
No change	34	38	43	46	49	42	44	48
Worsened	58	50	38	34	25	33	37	24

Source: Taub Center, Annual Social Survey, various years.

Regarding the third question in the standard of living cluster, that dealing with respondent expectations that their economic situation would change in the near future, a stronger sense of well-being and economic confidence was found. The percentage of the population as a whole who anticipate that their situation will improve significantly or somewhat is higher this year than for all previous years – 46 percent of respondents. A similar percent of respondents (47 percent) feel that there will be no change, while only seven percent believe that their situation will worsen somewhat or significantly. This is the lowest percentage obtained in years – dropping for the first time below the ten percent level. Optimism within the Israeli public is thus on the rise; the question is whether everyone shares this feeling.

Table 16. Distribution of responses to the question: *“Do you expect that your situation and that of your family will change in the coming year?”* 2004-2010 (percent)

	2004	2005	2006	2007	2008	2009	2010
It will worsen	13	16	13	14	21	15	7
There will be no change	58	58	47	57	54	56	47
It will improve	29	26	40	29	25	29	46

Source: Taub Center, Annual Social Survey, various years.

Expectations of improvement are much higher among the younger age groups, including the middle-aged, compared with older respondents (the percentage is over 50 percent for those aged 20-49, 38 percent for those aged 50-64, and 24 percent for those aged 65+ – statistically significant differences). Optimism rises in parallel with level of religious observance: the “optimism” rate is 40 percent for the secular (statistically significant differences), 45 percent for the religious/traditional, and 62 percent for the ultra-Orthodox.

The fourth question in the cluster relates to the fear of falling into poverty. The improvement found this year is notably shown in a declining percentage of those who expressed a great deal of fear of falling into poverty (“greatly or very greatly concerned”).

Table 17. *“Are you concerned about the possibility that you or your family will fall into poverty or economic distress?”*
2004-2010 (percent)

	2004	2005	2006	2007	2008	2009	2010
Concerned or very concerned	31	27	18	18	20	18	12
A little concerned or somewhat concerned	43	43	49	24	28	29	34
Not at all concerned	26	30	31	58	52	53	54

Source: Taub Center, Annual Social Survey, various years.

The degree to which respondents fear falling into poverty is closely and positively correlated with educational level; in other words, a higher educational level confers a higher level of economic confidence on those who have reached it. The percentage of those wholly unconcerned about falling into poverty is high among the academically-educated (75 percent), while the percentage of the academically-educated who are greatly concerned is significantly lower (nine percent) than that of all other education level groups.

The clear connection with income level continues to be evident this year, in the form of discrepancies between the individual's degree of "immunity" and his/her level of concern about falling into poverty or distress. The percentage of those who are greatly or very greatly concerned about falling into poverty declines as income level rises, from 29 percent of those with very low incomes to single-digit percentages for those with above-average incomes. The percentage of those somewhat or slightly concerned is also income-linked, as is the percentage of those "not concerned at all," which rises from 35 percent of those with very low incomes to over 65 percent of those with higher-than-average incomes. Here, as well, one finds a certain narrowing of gaps. The gap between Jews and Arabs regarding choice of the "greatly concerned" or "very greatly concerned" options narrowed relative to last year, although levels of concern expressed by Arab Israelis remain higher: 19 percent for Arabs versus ten percent for Jews. Another notable phenomenon is the very high degree of concern among FSU immigrants: a third of those who arrived in Israel from the FSU since 1990 are greatly or very greatly concerned that they will fall into poverty or economic distress.

6.B. Sense of Employment Security

The fear of losing one's job and of being unemployed is relatively low this year, testifying to a certain rise in employment security. This is reflected both in a moderate decline in the percentage of those "greatly" or "very greatly" concerned (to 18 percent this year), and in percentages of those "slightly" or "not at all" concerned – a high of nearly 60 percent. The finding is consistent with, and presumably is a contributing factor to, the overall rise in the Taub Index. The sense of improvement in this area is shared by nearly all population groups, although it should be noted that Arab Israelis continue to express concern in higher numbers than do Jews. Moreover, income level has a significant and continuous influence on response patterns: low-income respondents are greatly or very greatly concerned in higher percentages (27 percent versus nine percent of

higher-income respondents), while the percentage of those concerned slightly or not at all is relatively low – 44 percent versus 75 percent of those with high incomes, and versus the overall figure of 60 percent.

Table 18. **The measure of concern of losing one's job and becoming unemployed**, total and selected population groups*
2006-2010 (percent)

	2006	2007	2008	2009	2010
Greatly or very greatly concerned					
Total	26	18	22	22	18
Sector					
Jews	24	17	20	19	17
Arabs	34	22	28	38	28
Income					
Much lower than average	43	34	33	29	27
Very much lower than average	10	13	11	6	9
Somewhat or not at all concerned					
Total	50	53	54	43	59
Sector					
Jews	51	57	55	45	61
Arabs	49	40	47	29	48
Income					
Very much lower than average	33	37	39	30	44
Somewhat or not at all concerned	69	67	73	82	75

* The category "somewhat concerned" brings the distribution to 100.

Source: Taub Center, Annual Social Survey, various years.

6.C. *Expectations Regarding the Post-Retirement Years*

This year the survey included two questions regarding pension arrangements: the first sought to clarify Israeli public opinion regarding "pension arrangements for the population as a whole," while the second addressed respondent pension arrangements. The overarching goal was to

form an impression of the standard of living that Israelis believe awaits them on their retirement.

The survey findings for this subtopic of economic confidence are worrisome indeed. Half of all respondents felt that current Israeli pension arrangements do not insure an adequate standard of living at retirement age, while another 40 percent stated that an adequate standard of living is insured only “to some degree.” Just ten percent of all respondents concurred, to a high or very high degree, that Israeli pension arrangements are “good.”

Compared with 2003, when an identical question was included in the survey, the percentage of those who feel that pension arrangements are adequate actually declined from 19 percent to ten percent. However, the percentage of those who feel that pension arrangements are inadequate remained more or less stable at around 50 percent of the population.

Table 19. *“To what extent do the government pension arrangements insure a reasonable standard of living for the pension age population?” 2003 and 2010 (percent)*

	2003	2010
Well or very well	19	10
Somewhat	27	40
Only partially or not at all satisfactorily	54	49

Source: Taub Center, Annual Social Survey, various years.

The following question sought to look at the state of the respondents’ “specific pension arrangements,” over and above their general assessment, as explained above. In many areas addressed by the Social Survey, when one looks at respondents’ answers to questions about themselves specifically, one finds a more positive picture than the general one. However, with regard to the pension-arrangement issue this is not the case. The personal predictions regarding standard of living at retirement indicate that arrangements are inadequate for about half of the

population (46 percent). There can be no doubt that, as the proportion of retirees in the population as a whole rises, this issue will receive greater and greater weight. The fact that so high a percentage of the survey participants feel that existing pension arrangements do not insure an adequate standard of living at retirement – even after the changes introduced in recent years to Israeli pension legislation and arrangements – should serve as a warning sign for social policy makers.

Table 20. *“To what extent do your pension arrangements satisfy your pension age needs?”* 2000 and 2010 (percent)

	2000	2010
Well or very well	28	20
Somewhat	28	34
Only partially or not at all satisfactorily	44	46

Source: Taub Center, Annual Social Survey, various years.

6.D. *Housing Crisis*

Housing patterns are one of the most important aspects of well-being and a measure of respondent socioeconomic confidence. Home ownership is the primary housing pattern in Israel, with 70 percent of families residing in privately-owned apartments. This entails tremendous efforts on the part of all those seeking to make homes for themselves. Public debate about the ongoing rise in Israeli apartment prices, and the sense that “the dream is beyond many people’s grasp,” also led the Taub Center to reintroduce the issue in this year’s survey. Although this issue was addressed at the personal level, general attitudes were also sought by phrasing the question in terms of “people in your situation.”

The question was intended to elicit respondents’ opinions regarding the possibility of finding suitable housing. Responses were compared to those on an identical question posed by the survey at the beginning of the decade:

Table 21. *“In general, what do you think are the possibilities for someone in your socioeconomic situation of finding an appropriate housing solution?”* 2000 and 2010 (percent)

	2000	2010
Good or very good possibility	32	28
Reasonable possibility	33	28
Little or no possibility at all	35	44

Source: Taub Center, Annual Social Survey, various years.

Most Israelis (56 percent) responded that the possibility of securing suitable housing is “reasonable to very good,” but this means that 44 percent of respondents feel that finding appropriate housing is “altogether impossible” or highly unlikely. This percentage is higher than that obtained by the survey at the beginning of the decade (35 percent). Pessimism is stronger among the poorer segments of the population; the most striking finding, beyond the high percentage of ultra-Orthodox in the “pessimistic” category, is the ranking by income level. Income level dictates ability and expectations regarding the “securing” of suitable housing: the percentage who chose “altogether impossible” declines from 71 percent among those with very low incomes (much lower than average) to just seven percent of those with much-higher-than-average incomes.

The ultra-Orthodox, again, stand out for having the highest level of pessimism in this sphere – 75 percent of them responded that it is “altogether impossible” to obtain appropriate housing. The percentage is also high among Arab Israelis (56 percent). These findings may be consistent with the general sense of a housing crisis. They may also reflect a specific problem facing these population sectors: the kind of housing that is appropriate for them does not exist in sufficient quantities to meet growing needs.

7. Exposure to Violence and the Sense of Personal Safety

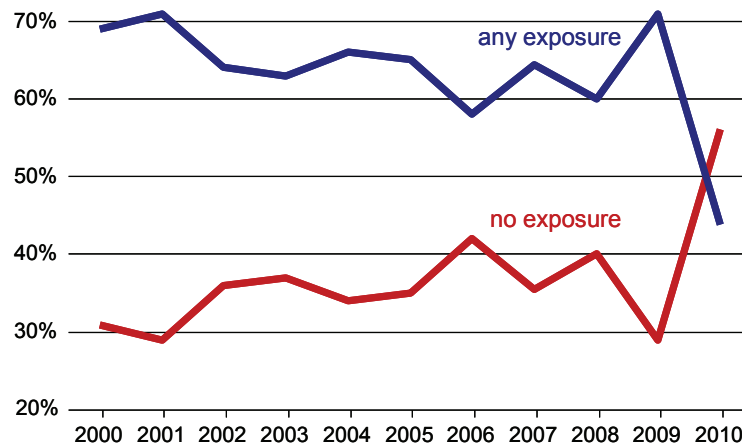
Violence and personal safety issues regularly feature on the Israeli public agenda. This year's Social Survey again included several questions aimed at tapping Israelis' sense of personal safety, and their opinions regarding options for addressing the problem.

7.A. Level of Exposure to Violence

One of the present survey's most surprising findings was that of an improvement in the Israeli public's sense of exposure to violence, despite the considerable ongoing attention paid by the media to incidences of violence in the domestic, educational and public spheres.

Level of exposure to violence and criminal activity has been treated by the Taub Center surveys as an element of individual socioeconomic confidence and as an important component of the Taub Index. Over the last few years, levels of exposure to violence have trended upward, reaching a peak last year when 70 percent of respondents testified to some degree of exposure to violence. This year marked a major turning point: 56 percent of respondents stated that they were "not exposed in any way to violent crime or to criminal acts." The "exposed to some degree" category declined to 44 percent, most of it falling into the "to a small degree" (24 percent of the total) and the "to a moderate degree" categories (13 percent of the total). Interestingly, this year's findings differ from those of all other years in the decade, when rates of exposure to violence (in some degree) ranged from 60 percent to 70 percent.

Figure 8
Feelings of exposure to violence
 2000-2010



Source: Taub Center, Annual Social Survey, various years.

The percentages of those with some degree of exposure to violence are similar for Arabs and Jews, although Arab respondents testified to a high or very high degree of exposure in significantly higher percentages – a finding consistent with last year’s results, although a decline in the level of exposure to violence was registered for both groups. The percentage of Arabs reporting “no exposure at all” or exposure “to a small degree” is also significantly lower than the corresponding figure for Jews (74 percent versus 81 percent of Jews). A negative correlation was also found between reported level of exposure to violence and level of religious observance, with the ultra-Orthodox standing out for their sense of personal safety compared with all of the other population groups; a very high percentage of them report exposure to a small degree or not at all (a

statistically significant difference, with figures of 91 percent for the ultra-Orthodox versus 79 percent for the secular).

7.B. Does the Fear of Violence Affect Behavior?

Survey respondents were asked: “Have you or has anyone in your family changed his/her behavior in order to avoid being exposed to violence?” Of the respondents, 74 percent stated that they had not changed their behavior “at all,” while others chose options reflecting the degree to which they had changed their behavior (ranging from “to a great degree” to “to a small degree”). The question is whether the quarter of the Israeli public, on average, who reported having changed their habits or behavior in order to avoid exposure to violence constitutes a large or a small proportion of the populace as a whole. A comparison with 2005, when an identical question was asked, points to a rise in the percentage of those who “have not changed their behavior at all,” from 65 percent five years ago to 74 percent this year. This response also indicates a change for the better. It is worth considering whether the sense of safety reported this year is related to the great improvement in the Israeli security situation, that is, whether the drastic decline in terrorist attacks has affected Israelis’ sense of personal safety. The change, it should be noted, has not been adequately accounted for and merits follow-up in next year’s survey so that developments in this area can be monitored and the existence of a real trend established.

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