

The Herbert M. Singer
Annual Report Series

STATE OF THE NATION REPORT

Society, Economy and Policy in Israel

2009

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, September 2010

Taub Center for Social Policy Studies in Israel

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

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Addendum

In the period that elapsed between publication of the *Report's* Hebrew version and this English version, the findings reported here have had an unprecedented impact in Israel. The *State of the Nation Report* has generated close to three hundred articles, reports and editorials to date in the printed and electronic media. These include multi-article series in two different newspapers highlighting various aspects of the *Report*. The findings have been brought before the country's leading policy makers in the cabinet, the Knesset and in the civil service. The influence of the findings in shaping the public debate is visible in their prominent position in end-of-year media summaries (for the 2009-2010 Jewish calendar year) culminating in awards and honors from some of Israel's leading media outlets.

STATE OF THE NATION REPORT
Society, Economy and Policy in Israel
2009

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Foreword

The Taub Center's *State of the Nation Report* focuses on the link between society, economy and policy in Israel. All too often, public discourse and policy making are driven by conventional wisdom and gut feelings rather than by facts. This *Report's* goal is to provide an extensive factual, professional and impartial foundation that will serve the public and its leaders in understanding where we were, where we are, where the trends are leading us, their implications, and what kinds of policies can lead to substantive changes – even if our current trajectories may seem etched in stone and inevitable.

The core issues of past Taub Center annual reports continue to be examined here while new points of emphasis have been added to create the *State of the Nation Report – Society, Economy and Policy 2009*, this series' new title. The *Report* presents a comprehensive picture featuring long term historical perspectives and extensive international comparisons. The more benchmarks there are from the past and from other countries, the greater the ability to understand the implications and consequences of the situation in Israel.

The *State of the Nation Report* opens with a macro analysis chapter, painting the “big picture” of the anomaly that is Israel: creativity and innovation pushing the envelope of human knowledge alongside rates of poverty and income inequality that are among the highest in the West; academic excellence alongside a primary and secondary education system with achievements at the bottom of the Western world; unemployment rates similar to the Western average alongside non-employment rates unparalleled in other developed countries. While the industrialized world is steadily aging, Israel's high birth rates give hope for the future – provided its children receive an educational toolbox that will adequately prepare them for the 21st century.

What are Israel's national priorities? The answer lies in its government's budget. The *Report's* budget chapter examines the allocation of public expenditures over time and in comparison with other countries. How is Israel organizing to take advantage of the benefits of free markets and how does it deal with market failures? Education and welfare are two of the primary tools that a modern society has to deal with the failures of a free market. Two of the *Report's* chapters are devoted to education – one focusing on Israel within a global context and the other providing the domestic picture – and two chapters deal with social welfare, one examining the social security system and the other looking at personal social services and their development. Policies in the fields of education and welfare have far-reaching implications on Israel's labor market – examined in a separate chapter – which in turn has a substantial impact on rates of poverty, income inequality and economic growth in the country. The *Report* continues with the healthcare chapter examining Israel's healthcare system's expenditures and outcomes in international and historical perspectives, and concludes with the Center's Annual Social Survey, which describes what Israelis think about the state of the country's society, economy and policies.

The Taub Center prides itself on the professional abilities, the diversity of disciplines and the intellectual heterogeneity of its researchers. A major effort was made to lay a solid and distinctive factual foundation in this *Report*, but there is no intention to present just one interpretation of the facts. In fact, the goal here is quite the opposite. For example, the reader will find more than one perspective in this *Report* on the state of Israel's education system and on the need to change the level of benefits provided by the country. These kinds of debates are among the important cornerstones of the Taub Center's approach.

A comment about the Israeli data that is the basis of much of the *State of the Nation Report*. Datasets in Israel are made available electronically on a transparent and accessible scale that is rare in the Western world. Annual, quarterly and monthly reports of the Central Bureau of Statistics (CBS) are available to all at no cost on the CBS website together with

large amounts of additional data and updates that extend far beyond the CBS's printed publications. The research departments at the Bank of Israel and the National Insurance Institute also make their findings and data available to the general public in Excel files, like the CBS, providing historical data on demand and free of charge to any researcher. A growing openness at the Ministry of Finance enables more comprehensive analyses of the government's budget. For years, earlier versions of this annual *Report* included a chapter analyzing the State budget. This year, as in previous years, an appendix to this chapter contains expenditure data by field. We are pleased to announce that with the publication of this *Report*, the Taub Center has made electronic files containing continuous budget allocation data since the 1980s, and in some cases, since the 1970s, freely available to the public on its website.

This is the first *Report* in which I take an active part as a writer and editor. The Taub Center has undergone an extensive process of renewal since I joined in November 2008. Both senior and junior researchers have joined the Center and we are just beginning to tap into their immense potential. Professor Ayal Kimhi, from the Hebrew University's Faculty of Agriculture, joined as Center's Deputy Director and as Chair of the new Labor Policy Program. Professor Yossi Shavit, from Tel-Aviv University, joined as Chair of the Education Policy Program; and Professor Eran Yashiv, from Tel-Aviv University, joined as Chair of the Economics Policy Program. The four of us joined two veteran Policy Program Chairs – Professor Dov Chernichovsky, from Ben-Gurion University, Chair of the Health Policy Program and Professor Johnny Gal, Chair of the Social Welfare Policy Program (recently replaced by Professor Haya Stier of Tel-Aviv University after his appointment as Dean of the School of Social Work at the Hebrew University of Jerusalem).

The International Advisory Council of the Taub Center also began a process of rejuvenation with the addition of four Nobel Laureates, Professors Gary S. Becker, Aaron Ciechanover, James J. Heckman and Daniel Kahneman, together with Israel's most highly cited academic economist, Professor Elhanan Helpman, from Harvard University, and

Professor Adam Gamoran from the University of Wisconsin, one of the world's leading scholars in the field of education policy.

The Taub Center's Board of Directors welcomed seven new members during the past year: Helen Abeles, Geoff Colvin, Ron Grossman, Dov Lautman, Greg Rosshandler, Michael Steinhardt, and Joyce Zeff. Though the global economy experienced one of its most difficult periods during the past two years, we were fortunate to have benefited from the tremendous support given us by veteran and new Board members, led by Board Chair, Caryn Wolf Wechsler, who has been an invaluable partner. We are greatly indebted to the JDC, and especially to its President, Dr. Irv Smokler and to its CEO, Steve Schwager, who is always there for us. Their support for the Center in general – and to me, personally during my initial period at the Center – was invaluable.

My greatest gratitude and appreciation is to the Taub Center's staff. Three new researchers, Sagit Azary, Haim Bleikh and Kyrill Shraberman joined veteran researcher Yulia Cogan, and they provide us with new and unique capabilities in processing and analyzing large raw datasets. These capabilities are repeatedly reflected in the many new findings that appear in these chapters. Senior researcher Nachum Blass, who wrote one of the education chapters in this *Report*, provides us with background, experience and knowledge that he has accumulated over the years as one of the leading researchers of Israel's education system.

The *State of the Nation Report* could not have been published without the maestro, Dalit Nachshon-Sharon, who edited the chapters and organized the process from its beginnings to the book's publication. The sharp eyes of Ruti Lerner, who assisted Dalit, provided the finishing touches to the editing process and played an instrumental role in the layout of this Report. Yuval Erez is one of the most talented students, as well as one of the outstanding teachers, that I have had the privilege to know. Yuval came to the Center from Tel-Aviv University in early 2009 to take over the Center's administration, providing me with the time to engage in research. Laura Brass manages the Taub Center's external relations and has taught me, as the new head of the Center, about the

history and relationships that have developed over the years. She has also played an important role in the editing of this English translation of the *Report*. Hedva Elmackias joined the Taub Center several months after me, as the Center's secretary. Her professional expertise and dedication have enabled the transition phase that we are still undergoing. The multi-talented Aharon Cohen completes the picture of the Taub Center's internal staff.

This has been an extraordinary year, with many internal changes during a challenging economic period. It is to the credit of the Taub Center staff, researchers, Policy Fellows and supporters that we were able to emerge from this year stronger than ever, with a *State of the Nation Report* that is unique in its perspective of Israel's society, economy and policies.

Hopefully, the findings detailed in these pages will have an impact on public discourse and policy decisions so that these will be made on a more informed and evidence-based foundation.

Prof. Dan Ben-David
Executive Director

Jerusalem, 2010

A Macro Perspective of Israel's Society and Economy

Dan Ben-David*

Abstract

This was not an easy year for the Western countries, including Israel. However, Israel entered the recession in a relatively good economic state and appears to also be coming out of the crisis relatively quickly. Israel is returning to long term paths that have characterized the country for decades, paths that are not sustainable in the long run. Rapid demographic processes are at work within Israel, reflected in a steadily growing part of Israeli society that is not equipped with either the tools or the conditions to cope successfully in a modern economy. This chapter highlights the Israeli anomaly in terms of prospects and risks and proposes a strategic plan for systemic reform that can produce a turnaround.

1. Public Policy and Economic Growth

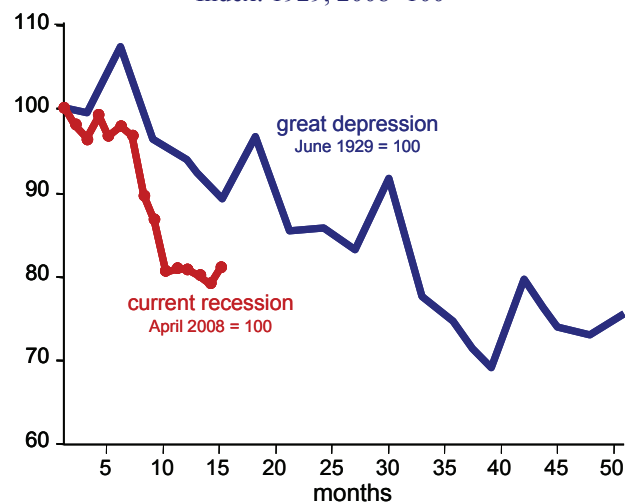
The recent crisis facing the world economy had several similarities to the Great Depression – particularly during its first year. One of the major policy lessons from the Great Depression pertained to international trade. Countries that had suffered substantial and rapid increases in

* I would like to thank Sagit Azary, Haim Bleikh, Yulia Cogan and Kyrill Shraberman for their assistance in compiling and assembling the data. I am also grateful to Nachum Blass, Prof. Ayal Kimhi, Dalit Nachshon-Sharon and Prof. Yossi Shavit for their comments and suggestions.

unemployment adopted a policies of closing borders to imports, seeking to protect their workers – and in so doing, harming employment in other countries. Trade wars ensued, which significantly reduced world trade and further aggravated an already problematic situation. As shown in Figure 1, during the first three years of the Great Depression, world trade declined by about 30 percent.

In the current crisis, Western economies worked together to minimize the damage – including cooperation between governments and consultations between central banks. Nonetheless, the decline in trade during the first year of the recent recession was even sharper than during the Great Depression. During the first year of the Great Depression, world trade declined by less than nine percent (Eichengreen and O’Rourke, 2010), whereas during the first year of the current crisis there was a drop of about 15 percent. During the second half of 2009 and the first quarter of 2010, the decline in world trade was reversed.

Figure 1
Volume of World Trade – Then and Now
Index: 1929, 2008=100

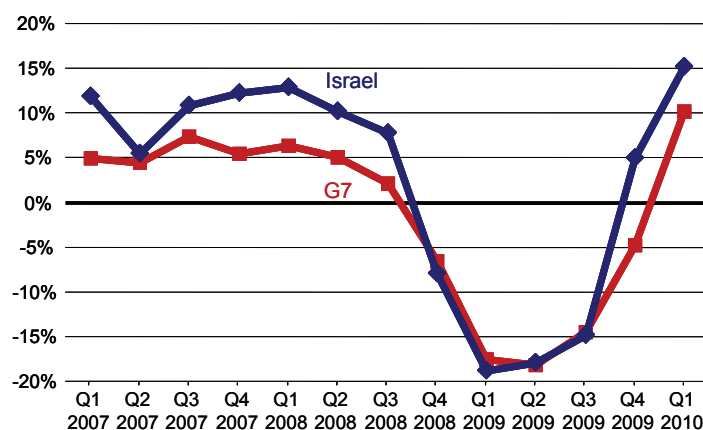


Source: Eichengreen and O’Rourke, 2010.

Direct comparison between Israel and the G7 countries (United States, Canada, Japan, United Kingdom, France, Germany, and Italy) reflects a similar dynamic in exports, with slightly larger improvements in Israeli exports up to the fall of 2008 and almost identical declines of about 30 percent during the first half of 2009 (Figure 2). The implications of a sharp drop in the exports for a small country like Israel can be much more severe than those of a similar decline in the exports of a large country, because small countries are much more dependent on the economies of scale afforded by access to global markets.

In 2007, exports of goods and services were about one-eighth of total United States production, while their share in France and in the United Kingdom was one-quarter of total production. For Israel, however, where the local population is too small for the profitable production of many products, dependence on foreign markets caused exports to reach 43 percent of gross domestic product (GDP) in 2007. Consequently, the

Figure 2
Changes in Exports: G7 and Israel
 exports in each quarter relative to exports in same quarter a year earlier

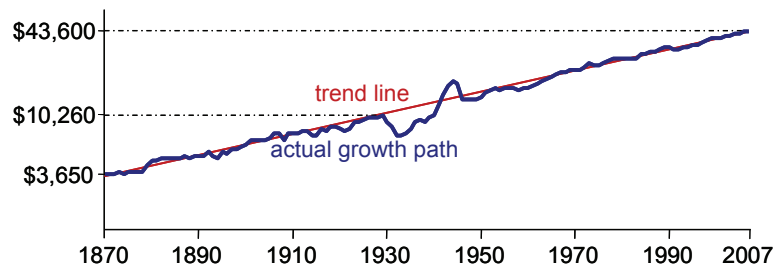


Source: Taub Center for Social Policy Studies in Israel.
Data: OECD, Central Bureau of Statistics (CBS).

large changes in Israel's exports have considerable implications for total production in the economy and for the level of employment in Israel. Towards the end of 2009 and the beginning of 2010, there was a sharp improvement in both Israeli and G7 exports.

The world's leading economies and Israel appear to be coming out of this severe crisis and – if not soon, then eventually – they will return to their long run growth paths. One of the “stylized facts” characterizing steady state growth paths in many countries is the stability of the economic growth process over time. A classic example of this is the American economic growth path over the past 140 years (Figure 3). Despite the Great Depression – which is clearly visible in the figure – and the exceptional upturn that followed, the U.S. economy eventually reverted to its long term path as if the crisis had never happened.

Figure 3
United States' Growth Path
GDP per capita, 1870-2007*



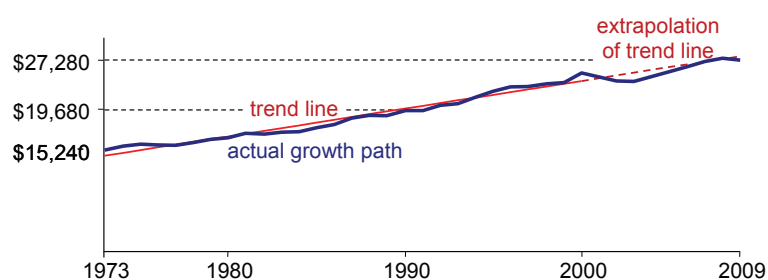
* 2005 prices, logarithmic scale.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: The Maddison, the BEA.

Israel's economic growth trajectory is also characterized by fairly steady growth (Figure 4). Despite wars, three-digit inflation and immigration on the magnitude of one-fifth of the country's population within the span of just a few years – each an extraordinary event that

most countries rarely, if ever, experience – it is clearly visible that these were not the key factors determining Israel's growth path. What does determine steady state growth? Is it good fortune, like the presence of natural resources within the country, or is it policy?

Figure 4
Israel's Growth Path
 GDP per capita, 1973-2009*



* 2005 prices, logarithmic scale.

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

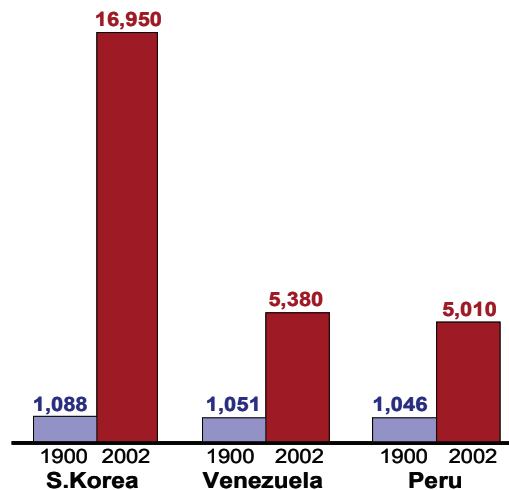
A few examples can illustrate the importance of policy, which reflects national priorities over good fortune and natural resources in determining a country's standard of living and growth rates. Figure 5 shows three countries, which began the 20th century with nearly identical standards of living, a little over \$1,000 per capita (in 2002 U.S. dollars) in each country in 1900. During the subsequent century, the effect of oil on GDP per capita in Venezuela was hardly noticeable, compared to oil-less Peru. Both countries ended up entering the 21st century with very similar standards of living.

By contrast, South Korea – oil-less and with a problematic security situation that consumes a higher portion of its national budget than is common in most other Western countries – reached a standard of living nearly three times that achieved by Peru and Venezuela. (Incidentally, the standard of living in Israel, which had been 422 percent higher than Korea's in 1965, was only 15 percent higher than Korea's in 2004.)

Canada and Argentina are two examples of countries that began the 20th century under fairly similar conditions. With their vast natural expanses and immigrant populations, these were two of the wealthiest countries in the early 20th century (Figure 6). A century later, Canada's standard of living reached a level nearly three times that of Argentina's – and only one of them is considered among the world's wealthiest countries today.

This is not just an issue of differences between countries and cultures. The adoption of policies reflecting important changes in national priorities can allow a country to shift from one long run path to another. An important example is the post-World War II initiative of six countries

Figure 5
Living Standards in 1900 and 2002
output per capita (in 2002 dollars)*



* According to purchasing power parity.

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

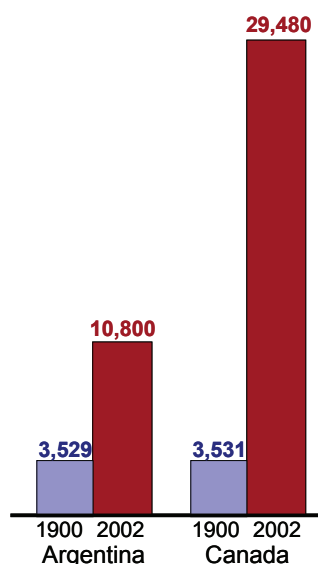
Data: Maddison (1995) and the World Bank.

to create the European Economic Community (EEC) – which in time expanded considerably and became today's European Union.

Figure 7 illustrates the growth in one of those countries, Belgium. (For additional examples, see Ben-David and Loewy, 1998.) Belgium is a relatively small country, with a population that grew from 5 million in 1870 to 7.5 million people on the eve of World War I, to 10.6 million in 2007. The figure begins in 1870 and shows a fairly steady growth path during the decades preceding the outbreak of World War I. A substantial part of Belgium's economy was destroyed during the war, with GDP per capita declining by one-third from 1913 through 1918. Belgium recovered after World War I and, as shown in the figure, reverted back to the same growth path that had it followed between 1870 to 1913 – as if there had never been a war.

After 70 years of steady state growth, including fluctuations around the trend – some sharp, especially during World War I – Belgian per capita GDP sharply fell again in 1940, with the outbreak of World War II. The dotted line in Figure 7 reflects an extrapolation of the 1870-1939 steady state growth path. Had Belgium returned to the growth trajectory

Figure 6
Living Standards in 1900 and 2002
output per capita (in 2002 dollars)*



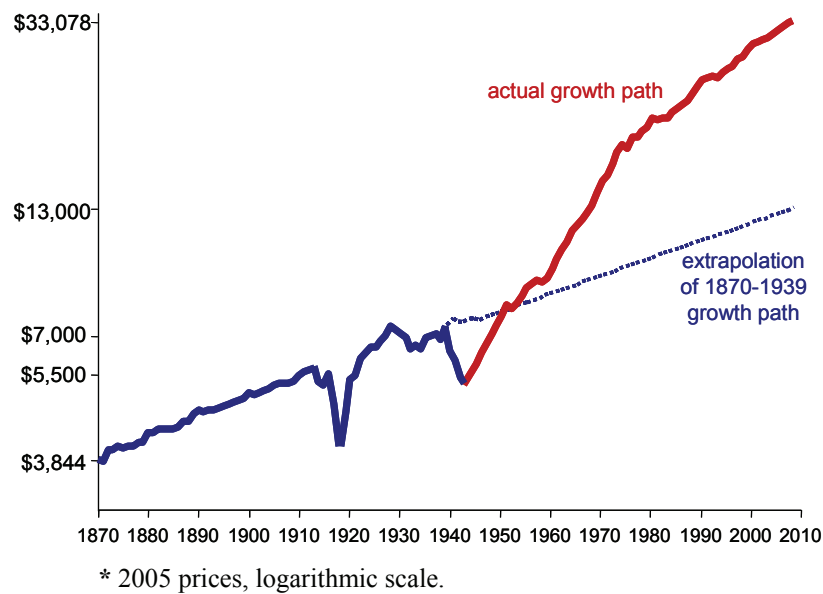
* According to purchasing power parity.

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

Data: Maddison (1995) and the World Bank.

that it had followed during the 70 years preceding World War II, its actual growth would have reflected a return to the dotted line after the war. But that is not what happened in post-war Belgium.

Figure 7
Belgium's Growth Path
 GDP per capita, 1870-2007*



Source: Dan Ben-David and Michael Loewy, 1998 (updated).

One key lesson from the Great Depression was an internalization of the importance of free trade between countries. When the United States offered assistance through the Marshall Plan to European countries after World War II, aid was conditional on substantive changes regarding trade between the recipient countries. The transition of European countries to free trade required the creation of unprecedented physical and human

capital infrastructures. Such infrastructure changes contributed to the significant change in Belgium's postwar growth path.

Belgium shifted to a steeper growth trajectory – reflecting a higher annual economic growth rate – and its standard of living today is much higher than it would have been otherwise. Rather than reaching a GDP per capita of \$13,000 by continuing along its seven decade-long pre-World War II growth path, Belgium reached a GDP per capita of \$33,078 (prices in 2005 U.S. dollars adjusted by purchasing power parity (PPP)).

Belgium's GDP per capita grew at an average annual rate of 0.9 percent between 1870 and 1939. In contrast, the country's growth rate since 1973 (i.e. after the postwar slowdown) has been 2.0 percent per year. Belgium's standard of living is now two and a half times higher than what it would have been without the shift in the trend, and it keeps growing at an annual rate exceeding twice the rate that characterized the country during the seven decades preceding World War II.

Substantive differences in policies may result not only in considerable differences between countries but can also create significant differences in rates of long run economic growth that may otherwise appear constant for decades on end. Given the importance of policy on living standards and growth rates, what does the Israeli growth path – depicted in Figure 4 – look like compared to other countries and from a long term historical perspective?

2. Economic Growth in Israel

Upon its establishment on May 14, 1948, the State of Israel numbered 805,600 citizens. The massive immigration of refugees from the Holocaust and from Arab countries that followed led to some extremely difficult economic times, including the rationing of basic commodities. By the end of 1960, the population reached 2,150,400, including 971,000 immigrants – many destitute – who arrived during the dozen years since Israel's Declaration of Independence. By the end of 1971, another

414,700 immigrants arrived as the country's population crossed the three million mark.

Israel allocated substantial shares of its very limited resources to the creation of physical and human capital infrastructures. The country not only built towns and roads, but also universities. Within two and a half decades of its founding, Israel had seven research universities, which, in some fields, had by then reached the frontiers of human knowledge.

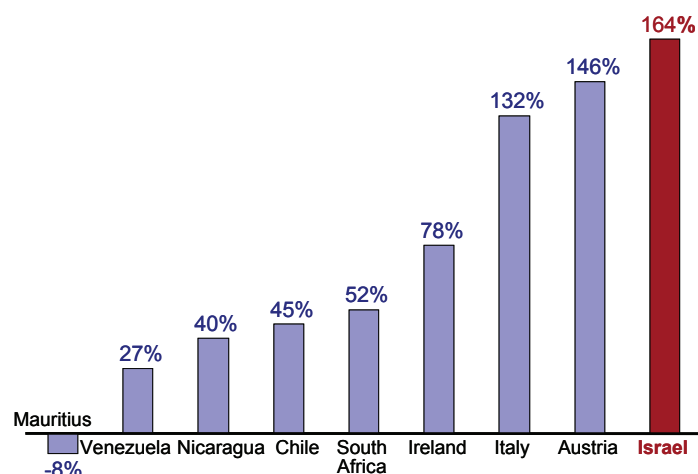
Israel's national priorities over the first 25 years of its existence produced exceptional economic growth. Between 1950 and 1972, the country's GDP per capita grew at a 5.5 percent average annual rate, more than twice the typical growth rate in Western countries during the same period. American living standards in 1950 were 128 percent higher than in Israel. By 1973, the gap between the two countries had fallen to 39 percent.¹

For countries close to the technological frontier, the main route to raising living standards is through innovation. Since it is easier to imitate than to innovate, the growth potential of less technologically advanced countries could be higher than that of cutting edge countries – assuming they possess the institutional and infrastructural foundations allowing their inhabitants to assimilate and implement existing knowledge. But such conditions are not guaranteed. In fact, poor countries do not usually grow faster than rich countries.

Figure 8 illustrates the degree to which Israel's economic growth between 1955 and 1972 was unique. The figure compares Israel to all other countries with similar standards of living in 1955 – that is, the comparison includes all countries with a GDP per capita in the range of 20 percent above or below Israel's in 1955. By 1972, Israel's standard of living had risen by more (164 percent) than in any other country that was similar to it at the beginning of the period.

¹ On the basis of data from Penn World Tables (Heston et al., 2006).

Figure 8
Cumulative Economic Growth in GDP Per Capita, 1955-1972
 comparison of countries with GDP per capita similar to Israel's in 1955*



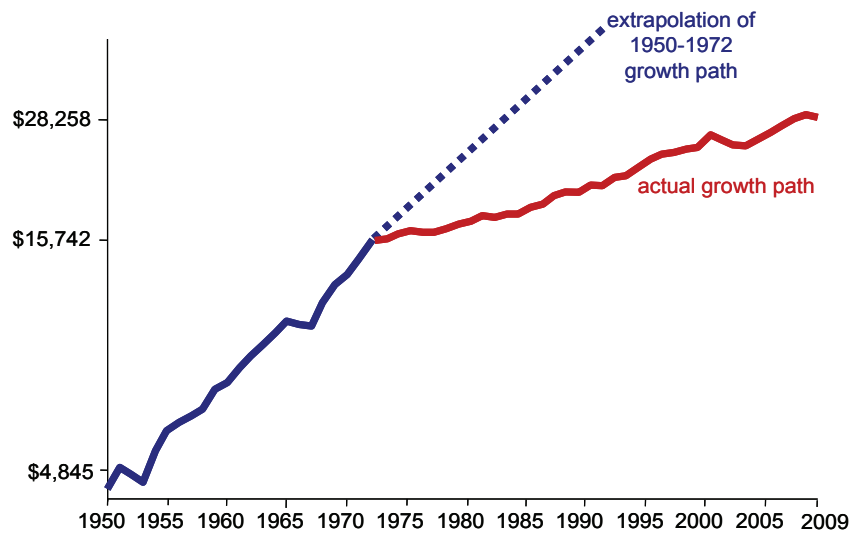
* Real GDP per capita in chained real ppp-adjusted dollars for countries within 20% of Israel's GDP per capita in 1955.

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

The statistically significant turning point in Israel's growth process occurred in 1973 (Figure 9).² Until then, Israel was on its way to rapidly closing the gap between it and the leading Western countries. Since then, the country's growth path has been very different. Israel's growth trajectory since 1973 has been much flatter, reflecting a slower annual growth rate of 1.7 percent in GDP per capita through 2008.

² Ben-David and Papell (1998).

Figure 9
Israel's Long Run Growth Path
 GDP per capita*, 1950-2009



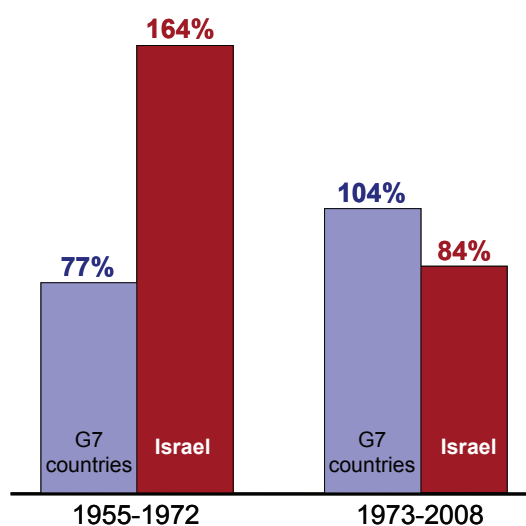
* 2008 prices, logarithmic scale.

Source: Dan Ben-David, *Israel Economic Quarterly*, 2003 (updated).
 Data: CBS.

Although Israel's standard of living has risen in absolute terms since 1973, it has declined in relative terms, compared to that of the leading countries in the world. This phenomenon has increasingly negative consequences, not only on the likelihood that people from those countries would choose to immigrate to Israel, but also on the chances that Israeli citizens in high-demand professions might choose to leave the country. As the gap in earning potential between countries increases, it crosses the stay-leave thresholds of more and more individuals. The issue of the brain drain from Israel, already unparalleled in the West (Ben-David, 2008), will become increasingly difficult to resolve as long as Israel continues to fall farther and farther behind in relative terms.

Figure 10 illustrates the differences in growth rates between Israel and the G7 countries. In the years prior to 1973, Israel had not only grown faster than countries similar to itself, it grew faster than most countries in the world. Compared to the seven leading Western economies, Israel's growth in the years 1955-1972 was more than twice the G7 countries' average growth rate. Since then, the standard of living in those countries more than doubled, while Israel's standard of living rose by only 84 percent.

Figure 10
Economic Growth in Israel and G7 Countries
cumulative growth in GDP per capita*

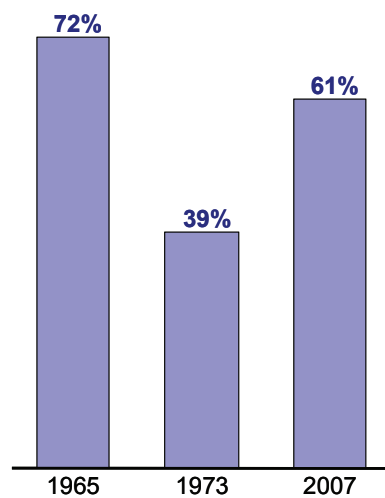


* Real GDP per capita in chained real ppp-adjusted dollars.

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

As shown in Figure 11, the gap in living standards between the United States and Israel, which had contracted considerably by the 1970s, has been growing in the subsequent decades. While U.S. living standards in 1973 were 39 percent higher than Israel's, the gap between the two had increased back to 61 percent by 2007.

Figure 11
**Gap in Living Standards Between
U.S. and Israel***



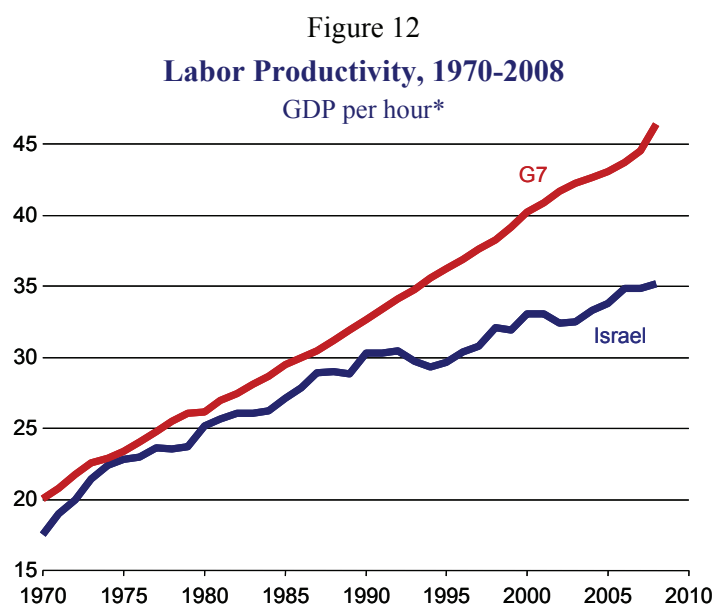
* Percent differences between GDP per capita in U.S. and Israel – real GDP per capita in chained real ppp-adjusted dollars.

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

3. The Irony

A primary factor underlying steady state growth in GDP per capita is productivity. One common measure of productivity is output per hour worked, or “labor productivity.” By 1974, labor productivity in Israel approached that of the G7 countries, where the average worker produced only 2.3 percent more per hour than the Israeli worker. Since then (Figure 12), labor productivity in the G7 steadily outpaced labor productivity in Israel, and by 2008, it was higher by 32 percent. That same year, the American worker produced 49 percent more than the Israeli worker. When each worker – on average – produces more each hour, then it should not come as a surprise that GDP per capita also tends to be higher.

The relatively slower growth in Israeli labor productivity contrasts another reality – Israel’s leadership position in inventions and innovations. Israel invests a good deal in research and development (R&D). Compared



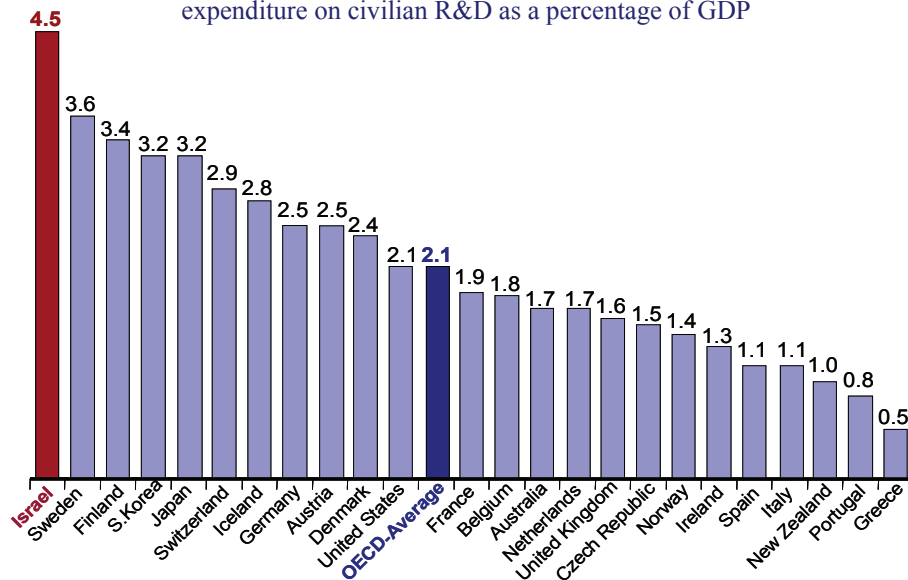
* 2005 prices, according to purchasing power parity.

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

to an average of 2.1 percent of GDP spent by OECD countries on civilian research and development, Israel invests 4.5 percent per year. This rate is higher than that of each of the OECD countries (Figure 13), more than twice the OECD average, and about 25 percent more than in Sweden, the OECD country with the greatest share of research and development investments.

Figure 13

R&D Investment, Israel and OECD, 2006
expenditure on civilian R&D as a percentage of GDP



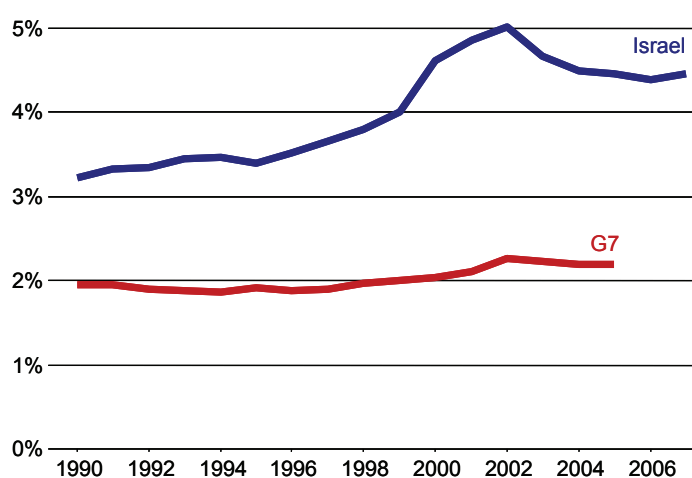
* Average of 30 OECD countries.

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

Data: CBS, the Ministry of Trade and Industry and the Ministry of Finance.

In comparison to the G7 countries, whose standards of living and labor productivity are pulling farther and farther away from the corresponding levels in Israel, the percentage of GDP directed to civilian research and development in the G7 countries has remained relatively constant, around 2 percent since 1990 (Figure 14). This contrasts with Israeli investments as a percentage of GDP that were two-thirds greater than the G7 average in 1990 and more than double the G7 average by 2002.

Figure 14
Civilian R&D as a Percent of GDP, 1990-2007



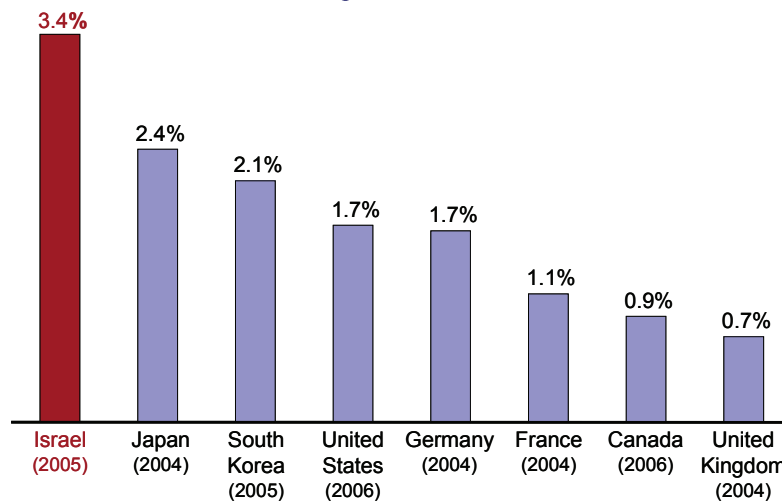
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: National Science Board, OECD.

During this period, most of the funding for civilian research and development in Israel shifted to the business sector. In 1993, according to the country's Central Bureau of Statistics (CBS), 36 percent of Israeli research and development was funded by the business sector. In 1997, the business sector's share rose to 56 percent, and reached 76 percent of the

funding in 2005. These figures are relatively high in comparison with other countries.

As shown in Figure 15, research and development funded by the business sector in the United Kingdom is less than one percent of GDP. In France and Canada it is about one percent, while in Germany and the United States the ratio of business sector R&D to GDP is close to 1.7 percent. In two of the Asian countries with the highest levels of research and development, South Korea and Japan, business sector R&D reached 2.1 and 2.4 percent of GDP, respectively. In contrast, research and development financing by Israel's business sector amounts to 3.4 percent of GDP. This is 42 percent higher than in Japan, which ranks second among the countries investing generously in research and development.

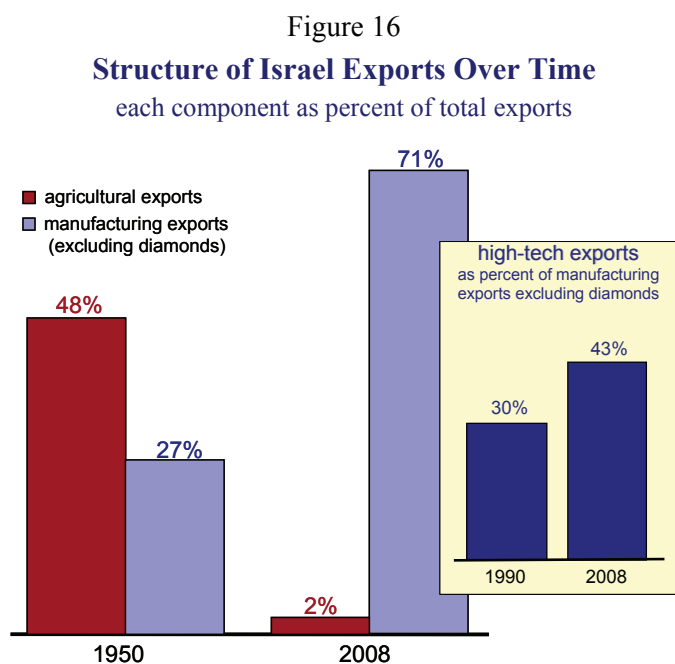
Figure 15
R&D Financed by Business Sector
as a percent of GDP



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

Data: CBS, National Science Board, OECD.

The investments in research and development reflect some of the extensive changes in the structure of Israel's economy since its establishment. In 1950, agricultural exports constituted nearly half of the country's exports (Figure 16). Since then, agricultural exports exhibited a nine-fold increase in real terms, but their share of total Israeli exports fell to just 2 percent. This is the natural evolution, albeit somewhat accelerated, of the modern growth process. Poorer countries focus more on agriculture. As they grow, there is a structural shift to lighter industries – such as textiles – and as countries move up the growth ladder, they move on to heavier industries, services and higher technology production. The inset to Figure 16 gives an indication of the speed with which changes have occurred in the Israeli economy, in its move from agriculture to industry, and the marked change in the mix of industrial exports towards high-tech over the past two decades.



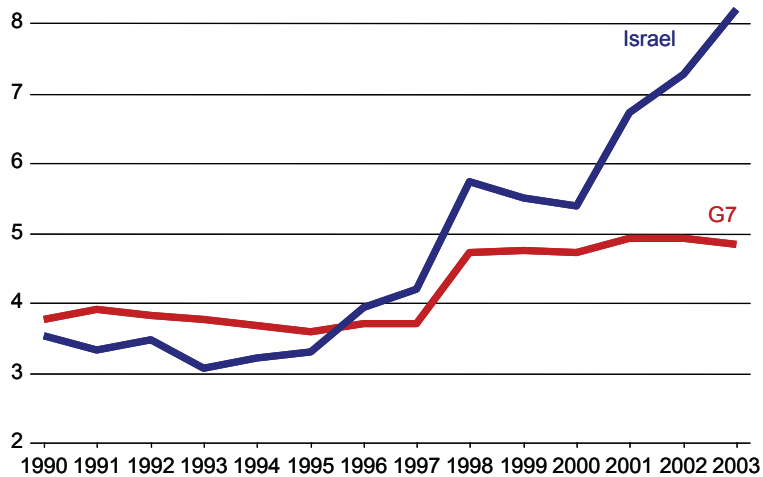
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: CBS, Bank of Israel.

Over the years, the investments in higher education and in research and development began to bear fruit. An important measure of creativity and inventions is the number of patents registered to inventors. The United States National Science Board maintains a record of patents approved in the United States. With GDP reflecting the overall capability of a country, it is interesting to compare the number of patents granted by the United States to inventors from various countries per billion dollars of GDP in the inventors' countries of origin.

Continuing with the focus on the West's seven major economies – the G7 countries – Figure 17 shows that in 1990, the ratio of patents to GDP in Israel was 6 percent lower than the patents-to-GDP ratio in the G7 countries. During the subsequent half decade, no substantial change is

Figure 17

U.S. Patents Granted, 1990-2003
per 1 billion dollars GDP*



* By country of origin of first-named inventor, 2000 prices, according to purchasing power parity.

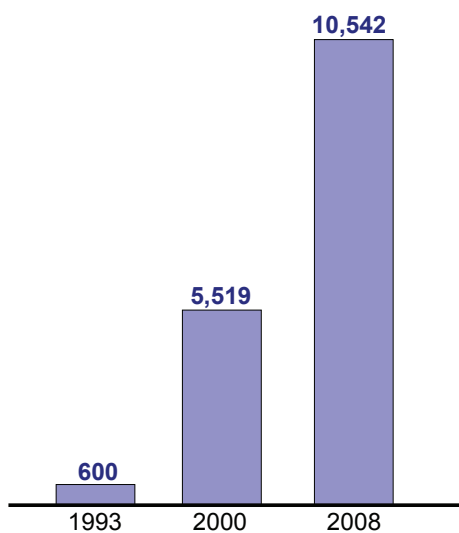
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: National Science Board and World Bank.

discernible in the patents-to-GDP ratio in either Israel or the G7 countries. In the G7 countries, this ratio exhibited a level change during the latter half of the 1990s while in Israel, from the mid-1990s, the patent-to-GDP ratio exhibited a steady increase. In 2003 (the last year for which Israel is mentioned in the American National Science Board data), the country's patent-to-GDP ratio was 69 percent greater than the G7 average.

Innovation and inventions are crucial for growth, and when these exist, the money is generally not far behind. In 1993, foreign direct investment (FDI) in Israel amounted to a total of \$600 million (Figure 18). Seven years later, at the height of the hi-tech bubble, FDI in Israel reached \$5.5 billion. By 2008, \$10.5 billion of foreign direct investment flowed into Israel.

The irony is that on the one hand, Israel invests extensively in research and development and, in certain areas, its creativity and innovation surpass those of the West's leading economies. But on the other hand, though productivity and living standards in Israel have been rising, they have been falling farther and farther behind in relative terms when compared to these same leading Western countries. What is the source of this unusual contradiction?

Figure 18
Foreign Direct Investment in Israel
millions of dollars



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

One major clue lies in the core elements underlying the growth process. For standards of living to rise – that is, for a worker's income to rise – the output that he or she produces must increase as well. This can happen when the physical and human infrastructures enable and facilitate it. Congested roads lead to higher transport costs and consequently lower productivity. Low levels of education and insufficient knowledge reduce the employee's ability to produce much – and incomes tend to reflect this. As an economy grows, the demand for skilled, educated workers and for improved physical infrastructure grows accordingly.

Hence, the question is what kind of labor supply does Israel's society generate to deal with these changing demands of the country's economy? The chapter devoted to the labor market later in this report tackles this issue at length. Inequality and poverty data indicate that Israeli society has not been very successful in meeting the modern economy's demand for a skilled and educated labor force. While demand for skilled and educated workers keeps growing, the demand for unskilled and uneducated workers is falling, in relative terms. But in Israel, the unskilled and uneducated population is very large – and growing faster than other segments of the population. As if this were not enough, Israel imports hundreds of thousands of additional unskilled workers from abroad, thus accelerating the increase in the supply of unskilled labor instead of decreasing it.

As a result, even when there are some areas in which the Israeli economy can successfully compete on a global scale, the heavy weight of the unskilled population enters the calculations of the national average. It turns out that the more advanced sectors of Israel's economy are unable, on their own, to raise the country's average standard of living to the highest Western levels. On the contrary. The large unskilled population pulls the national growth path downwards, and it is no coincidence that the previous figures indicate a lower and flatter Israeli growth path than those of the advanced Western economies.

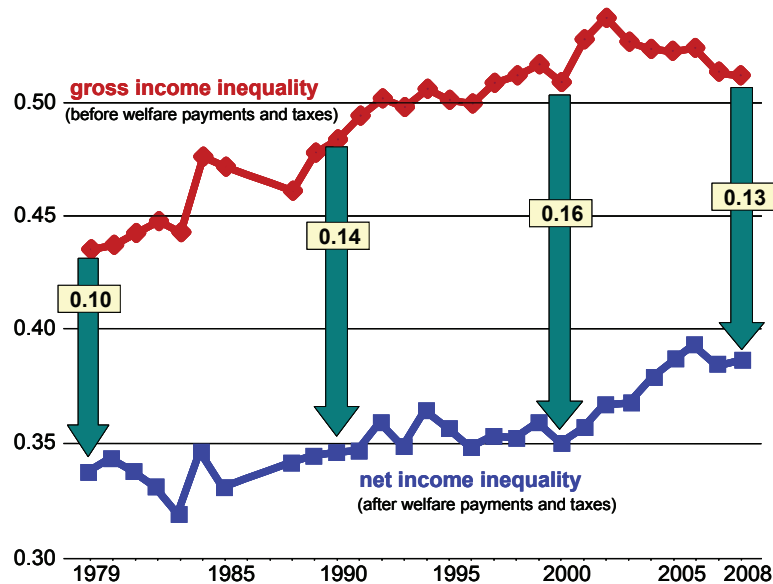
4. Inequality and Poverty

Economic growth is not the only casualty of the inability of a large and growing segment of Israel's society to cope in an open and competitive economy. Human and physical infrastructures that would have better enabled the assimilation and utilization of knowledge would have been helpful not only in improving the economy's ability to develop, evolve and grow – they would have also been useful at the individual level. The inadequate state of vital infrastructures has played an important role in increasing income inequality and poverty in Israeli society.

Public discourse on inequality and poverty usually focuses on net incomes – that is, after taking into account transfer payments and taxes. The debate tends to revolve around the desired size and composition of the national social safety net. Such a debate is important, and though a substantial part of this report focuses on the safety net, it is important to understand that this debate on dealing with the symptoms misses the heart of the problem – the true inequality and poverty picture emanating from the actual capabilities of the Israeli society, in terms of gross incomes, before deployment of the transfer payments and taxes safety net.

Figure 19 shows the steady increase in gross income inequality in Israel since the late 1970s. While there has been a slight decline in recent years, it is still too early to tell whether this decline is an indication that the multi-decade rise in income inequality has come to a halt – possibly even reversing its trend – or merely represents another fluctuation around a rising multi-decade trend.

Figure 19
Inequality in Israel, 1979-2008*
 Gini Coefficient

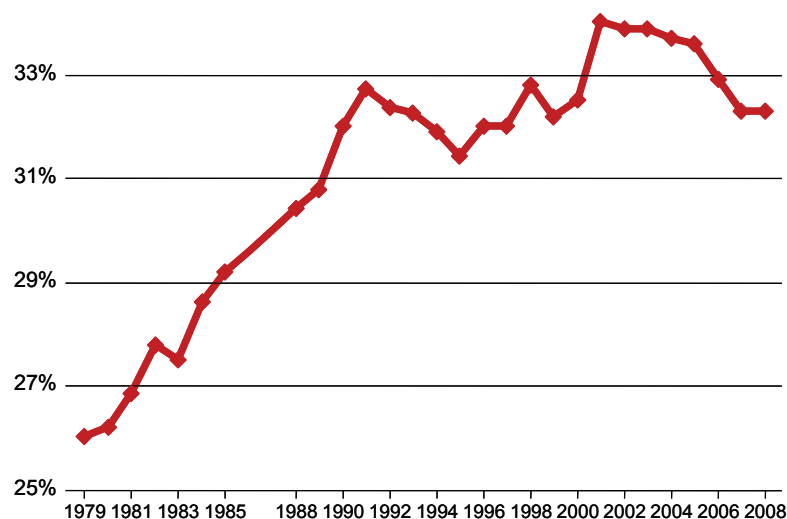


* Old series until 1997 adjusted to new series that includes non-salary workers (including East Jerusalem).

Source: Dan Ben-David, 2003 (updated).
Data: National Insurance Institute.

The poverty picture is similar (Figure 20). In the late 1970s, the percentage of families who would have lived below the poverty line, were it not for the welfare and tax systems, was a little more than a quarter. In recent years, this number has increased to around one-third of Israel's families. As in the case of income inequality, the poverty picture has also shown some improvement in recent years, though here too, this could indicate a change in trend, but it may also be a simple correction, to be followed by a return to the earlier increasing trend.

Figure 20
Percent of Families Living under Poverty Line, 1979-2008*
 according to gross incomes (before welfare transfers and direct taxes)



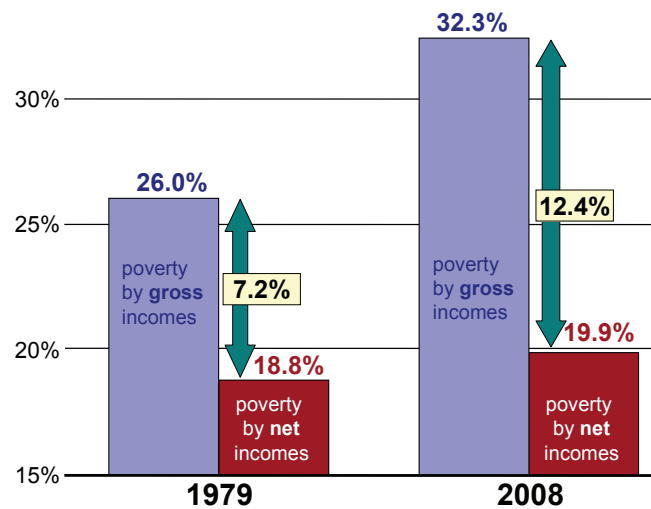
* Old series until 1997 adjusted to new series that includes non-salary workers (including East Jerusalem).

Source: Dan Ben-David, 2003 (updated).
Data: National Insurance Institute.

When rates of gross income inequality and poverty increase, it becomes necessary to transfer increasing amounts to poor families – not to reduce net income inequality and poverty, but to prevent the existing rise (in gross income inequality and poverty) from being reflected in a concurrent increase in net income inequality and poverty. Figure 21 shows poverty rates in gross and net incomes in 1979 and in 2008. While rates of poverty in gross incomes rose from 26 percent in 1979 to 32 percent in 2008, the tax and transfer payments systems were successful in substantially reducing the extent of poverty in net incomes. Not only were poverty rates in net incomes lower – though they are still among the

highest in the Western world – their rate of increase was much lower than the increase in poverty in gross incomes.

Figure 21
Percent of Families Living under Poverty Line*



* Old series until 1997 adjusted to new series that includes non-salary workers (including East Jerusalem).

Source: Dan Ben-David, 2003 (updated).
Data: National Insurance Institute.

This phenomenon of rising poverty in gross incomes combined with much smaller poverty increases in net income (similar to the illustration in Figure 20 on changes in gross income inequality versus net income inequality) reflects two types of burden that have been rising steadily since the 1970s. One is a very heavy social burden. While only seven percent of Israeli families were dependant on government assistance to remain above the poverty line in 1979, 12 percent required assistance in 2008 to stay above the poverty line. This growing dependence on public

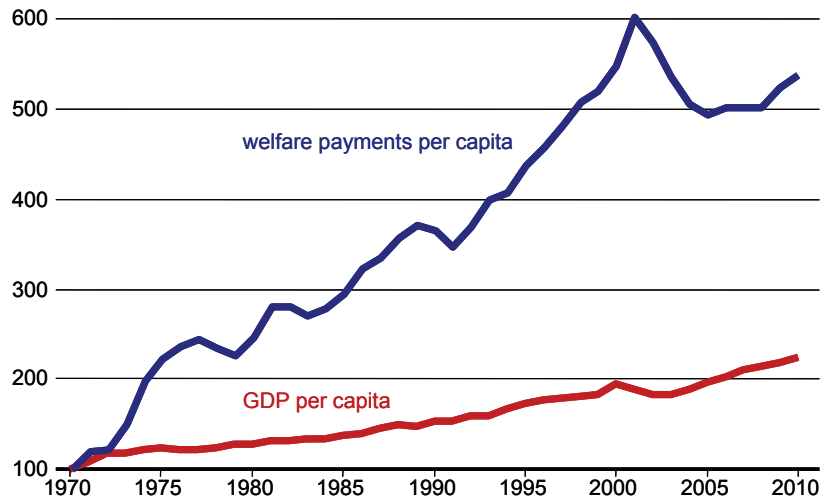
assistance to prevent increases in net income poverty leads to rising frustration and resentment as well.

The other burden is economic. Gradually increasing transfer payments become necessary, not for reducing poverty rates, but for preventing the increase in gross income poverty from translating into net income poverty. In the long run, this situation is unsustainable – and signs of this have become visible in recent years.

Transfer payments have increased steadily over the last four decades (Figure 22). From 1970 to 2001, while Israel's standard of living increased by 89 percent, real per capita transfer payments (i.e., after adjustment for population growth and inflation) rose by 484 percent, or 5.4 times the increase in living standards during the same period. The wave of terrorism and the deep recession at the beginning of this millennium led to substantial cuts in the transfers. While transfer payments are expected to increase somewhat in 2009 and 2010, the large cuts at the beginning of the millennium had a big effect on poverty and inequality in net incomes. As shown in Figure 20, despite a decline in gross income inequality, the reduction in transfer payments during this decade coincided with a large rise in net income inequality. The result has been that the underlying increases in gross income inequality that were hidden for decades by the substantial increases in transfer payments now began to be reflected in increases in net income inequality.

If the upward multi-decade trends in gross income inequality and poverty continue, it will become increasingly difficult to continue to perpetually increase transfer payments and prevent these increases from being reflected in net income inequality and poverty. Strengthening the social safety net, as important as it is, is not a substitute for policies aimed at dealing with the core problems underlying the high levels of gross income inequality and poverty. Such solutions require the creation of adequate human capital and physical infrastructures that would give larger segments of Israeli society the tools and conditions necessary for them to cope in a modern economy.

Figure 22
Welfare Payments and GDP Per Capita, 1970-2010
 base year 1970 = 100 (in constant prices)



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: National Insurance Institute, CBS.

5. Conclusion

Three key variables characterize every society – its overall standard of living, its rates of poverty and the magnitude of its income inequality. When there exists a major problem with any one of the variables, the society is in danger of a potential crisis. When there are concurrent problems in all three variables, and when little is being done to deal with their root causes – or worse, if these problems are allowed to deteriorate for decades on end – then this society is on an unsustainable long run trajectory.

Gaps in living standards between Israel and the developed countries in the West have not declined. In fact, the opposite is true. Despite Israel's hi-tech sector, its medical sector and its institutions of higher education, which are on the cutting edge of human knowledge, the standard of living in Israel has fallen farther and farther behind, in relative terms, the leading Western countries since the 1970s – a phenomenon likely to increase emigration from Israel (Ben-David, 2008, expands on Israel's academic brain drain).

Levels of income inequality and poverty in Israel are among the highest in the West. As long as the government does not adopt a comprehensive and systemic policy to reduce inequality and poverty at their source – that is, in gross incomes – it will have no choice but to keep deploying an increasingly larger social safety net in order to help more and more families avoid falling below the poverty line. This involves ever growing budgets that will become increasingly difficult to finance.

The underlying reason for all three problems is that ever growing segments of Israeli society lack the tools and conditions needed in open, competitive and advanced economies. Furthermore, these segments of the Israeli society are growing faster than the segments of society that must finance the social safety net.

A solution dealing with the core problems should be based on three policy spheres: The first, creating incentives and providing tools; the second, creating a supportive environment; and the third, a multi-year strategic program. These are detailed in the document published by the Taub Center in May 2009 for the newly elected Knesset and Cabinet, entitled: *A Comprehensive Program for Reducing Inequality and Poverty and Increasing Economic Growth in Israel*. Following are the main points of the Program:

First policy sphere: Creating Incentives and Providing Tools

The share of working-age Israelis who are not employed is among the highest in the Western world. One primary reason for this, though not the only reason, has to do with incentives. A substantial part of the prime working age population is able to choose non-work as a way of life. Even if they want to work, many lack the basic tools for coping in a modern, competitive and open economy. It is necessary to upgrade substantially the professional skills and abilities of the working-age population by upgrading their education and vocational training.

The issue of incentives affects not only the supply of workers but also the demand for them. Employers in various fields are able to opt for non-Israeli employees and avoid having to deal with the resident Israeli population, managing to circumvent the need to produce according to the country's comparative advantage. Labor laws favoring the employment of foreign workers, combined with lax law enforcement, create an artificial profitability bubble that further encourages the preference of foreign employees over Israelis.

Low incentives for Israelis to seek employment and for employers to hire Israelis are market failures that the country must deal with so that more Israelis will be employed and so that the productivity of those employed will grow and enable higher wages.

Second policy sphere: Creating a Supportive Environment

Even if incentives are provided to work and to employ, and even when workers are provided with tools that fit the needs of a competitive economy, failures in the surrounding environment still hamper the ability of many to join the workforce. For example, in order to encourage potential workers who are also parents of children to join the workforce – especially if they are low wage earners – a high quality, accessible and affordable daycare support system is necessary.

The State of Israel also needs a transportation infrastructure that would enable workers to reach their workplaces in the larger cities

quickly and at low cost – a system of railways and roads suitable for a first-world country. Such infrastructure must be complemented by a system of services to facilitate employment and the creation and management of businesses.

Third policy sphere: Long Term Strategic Plan

While emphases in the first two spheres are on treatment of the symptoms, the third policy sphere focuses on dealing with the core issues. These include, among others, systemic reforms in education, law enforcement and governance. Substantial failures in all three areas create serious strategic obstacles that weigh heavily on Israel's society and economy. Increasing transparency in all aspects of public expenditure and public activities is an essential complementary step.

It is important to emphasize that moving for decades along stable trajectories that are not sustainable in the long run has existential implications that are not merely theoretical. Many examples in modern history have shown that public policy can build a country – but also harm it. Other countries can go bankrupt as a result of flawed policies and then rise up again economically. In Israel's case, however, the surrounding neighborhood does not provide reassurance that a socioeconomic collapse can be viable from a national security perspective – with all that this implies in terms of the urgent need for a comprehensive national program for changing the country's long run trajectories.

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Public Expenditures

A Look at Israel's National Priorities¹

Dan Ben-David*

Abstract

Even after deducting Israel's very high defense spending from its total public expenditures, the remaining civilian expenditures have been higher than average OECD civilian expenditures between the mid-1980s and the mid-2000s. But the relatively higher civilian expenditures did not prevent rates of poverty and income inequality from rising higher than is common in most Western countries. Where did the money go? In contrast to the common practice, this chapter shows Israel's budgetary allocations by areas of expenditure rather than by government ministries. This makes it possible to see Israel's actual national priorities rather than its declared ones.

¹ Complete tables can be found in the appendix to this chapter.

* This chapter could not have been written without Yulia Cogan. For years, she has been compiling, organizing and preparing the government's budget tables for the Taub Center with dedication and meticulousness. I would like to thank Yulia very much for her considerable assistance and comments. Thanks also to Haim Bleikh, Sagit Azary and Kyrill Shraberman for assembling and updating data and preparation of graphs, and to Nachum Blass, Professor Johnny Gal, Dalit Nachshon-Sharon and Professor Ayal Kimhi for their comments and suggestions.

1. Public Expenditures – Then and Now

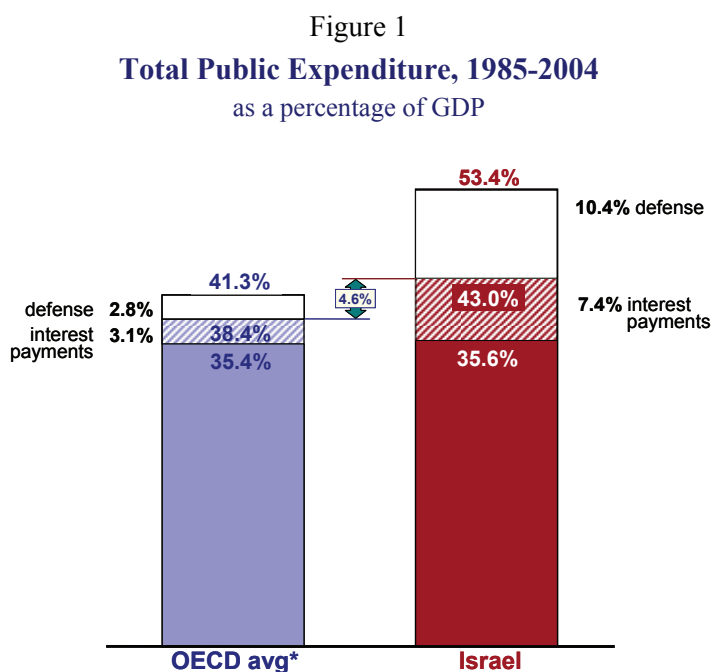
Why are Israel's rates of poverty and disparity so high and what has caused them to rise over the past several decades? How is it that, despite population groups within Israel that innovate at the frontiers of human knowledge, the country's steady state rates of productivity and economic growth consistently lag behind those of the G7 countries that lead the Western world (see opening chapter "A Macro Perspective")? Has Israel's defense budget over the years been so large that the remaining civilian public expenditures were simply insufficient for coping with the country's primary social and economic problems in the realms of education, employment, health and welfare? (See more on these problems in the relevant chapters.)

This chapter focuses on Israel's public expenditures and their allocation. It examines how these expenditures developed over time, their overall levels and composition today and in the past – and how the expenditures and the national priorities underlying these outlays compare with those of other developed countries.

In seven of the eleven years between the 1973 Yom Kippur War and 1984, when the peak inflation rate reached 445 percent, Israel's public expenditure exceeded 70 percent of the country's Gross Domestic Product (GDP). After implementation of the Economic Stabilization Program for dealing with hyperinflation, the country's public expenditure fell to an average of 53.4 percent during the two decades spanning the years 1985-2004, which is still relatively high compared to other Western countries. The conventional wisdom in Israel has been that although total expenditures are higher in Israel, the civilian portion of public expenditures is lower than the Western average because of the much higher defense expenditures in Israel.

Figure 1 compares Israel's public spending to that of the OECD countries. The average Israeli expenditure of 53.4 percent of GDP over the years 1985-2004 was indeed higher than the OECD's 41.3 percent of GDP during that same time period. Also, Israel's average defense

spending, 10.4 percent, was substantially higher than the OECD's 2.8 percent. After subtracting defense spending from overall expenditures in both Israel and the OECD, Israel's civilian expenditure (43.0 percent of GDP) was still 4.6 GDP percentage points higher than the OECD's (38.4 percent of GDP).



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

To illustrate how much Israel's civilian expenditure exceeded the OECD's over these two decades, it is possible to estimate the cumulative value of Israel's surplus civilian expenditure compared to that of the OECD by multiplying Israel's output by the difference between civilian

expenditure in Israel and in the OECD during each of the years. When tallied up, Israel's surplus civilian expenditure relative to the OECD average for the 1985-2004 period equaled NIS 363.9 billion in 2008 prices. This amount is half of Israel's entire 2008 GDP of NIS 725.1 billion. In other words, Israel's long run trends of low growth and high poverty and income inequality relative to the OECD in recent decades did not result from lower civilian expenditures than the OECD, but from different priorities in the utilization of the civilian budgets.

The high level of public expenditures, which were not completely funded by taxes and other revenues, resulted in annual budget deficits. The financing of these deficits meant that Israel had to borrow and subsequently return not only the principal on the loans, but also had to pay the interest on them. Interest payments represent a "fine" of sorts that is placed on Israel's inability or reluctance to live within its means. Debt is justified when the loan is used for building infrastructure that would also benefit the next generation – which makes it reasonable to expect that the next generation should also participate in paying for it.

But when it comes to infrastructure projects over this period, Israel lagged far behind the OECD countries. For instance, in the area of transportation infrastructure, traffic congestion in Israel reached three times the OECD average, even though the country only had half the number of vehicles per capita as the OECD (Ben-David, 2003). The act of borrowing to pay for expenditures that do not pertain to infrastructure investments means rolling over to the next generation bills for expenditures that they will not benefit from.

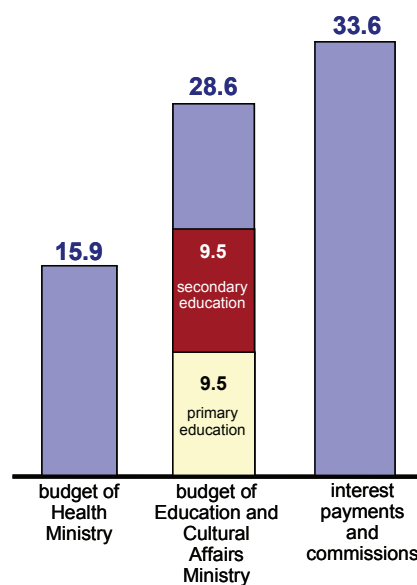
The fact that Israel's annual interest payments as a share of GDP have been more than twice the OECD average is a serious enough problem. When this is combined with the fact that Israel's physical infrastructure has been seriously neglected over these two decades, the problem becomes even more acute. Israel's interest payments reached NIS 33.3 billion in 2008 (Figure 2), more than the Ministry of Education's overall budget that year, which reached NIS 28.6 billion. In fact, interest payments were nearly double the budget of all the primary and secondary

education in Israel and of the Ministry of Health's entire budget. This is one practical implication of rolling the debt over to the next generation.

However, even after subtracting from public expenditure not only the defense spending but also interest payments, Israel's civilian public expenditure over the two decades (35.6 percent of GDP) was almost identical to that of the OECD (35.4 percent of GDP). This relative equality in civilian spending between Israel and the OECD seriously undermines the conventional wisdom that Israel's civilian expenditure was too low to allow a root-cause treatment to alleviate the country's high (in comparison to the OECD) rates of poverty and income inequality and relatively low rates of economic growth.

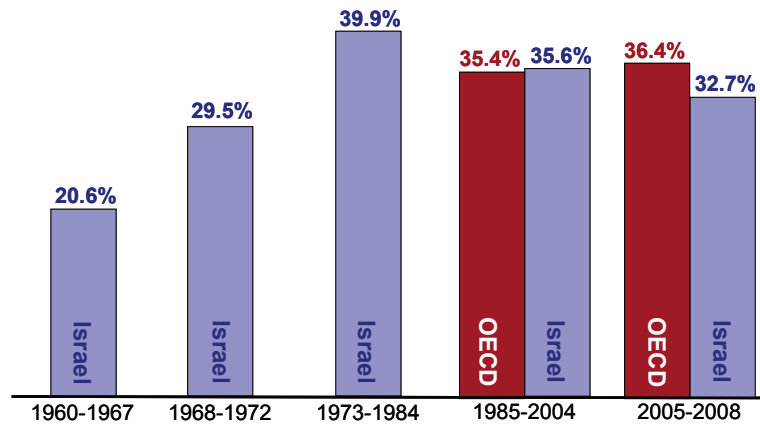
It is interesting to compare Israel's public expenditure not only to other countries but also to other time periods in its own history. Figure 3 presents a comparison of recent years with the past, while continuing to exclude defense spending and interest payments. In the 1960s, during the years preceding the Six Day War and in the shadow of existential national security threats, Israel absorbed massive waves of immigration, built roads, towns, schools and research universities – infrastructure projects that are key for generating economic growth.

Figure 2
Government Budget, 2008
NIS billions



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance.

Figure 3
Total Public Expenditure, 1960-2008
 excluding defense expenditures and interest payments,
 as percent of GDP



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

During this period, Israel was characterized by substantially higher economic growth than all other countries that began the period with similar income levels (see Figure 9, in the chapter “A Macro Perspective”), while income disparities within Israel were very low compared to most Western countries. The infrastructure investments in the 1960s were made when Israel’s civilian expenditures (excluding defense and interest expenses) were 20.6 percent of GDP, slightly more than half the country’s average public expenditures over the years 1985-2004 (also excluding defense and interest expenses).

Israel’s public expenditures, excluding defense spending and interest expenses, grew considerably between the Six Day War and the Yom Kippur War. The ratio of expenditures to GDP rose by almost one half, from 20.6 percent of GDP before the Six Day War to 29.5 percent of GDP in the years 1968-1972. After the Yom Kippur War in 1973 and

until 1984, the record inflation year, and before the Economic Stabilization Program, public expenditures (net of defense and interest payments) rose by an additional 10 percent of GDP, reaching 39.9 percent of GDP.

These high levels of expenditure, together with extraordinary outlays on defense and interest payments, created an enormous debt. In 1984, when average public debt in the OECD was 53 percent of GDP, Israel's debt-GDP ratio reached 248 percent (according to OECD and Bank of Israel data, respectively). As shown later in this chapter, Israel's very high debt required annual interest payments equivalent to the country's combined public expenditure on education, health, welfare and housing.

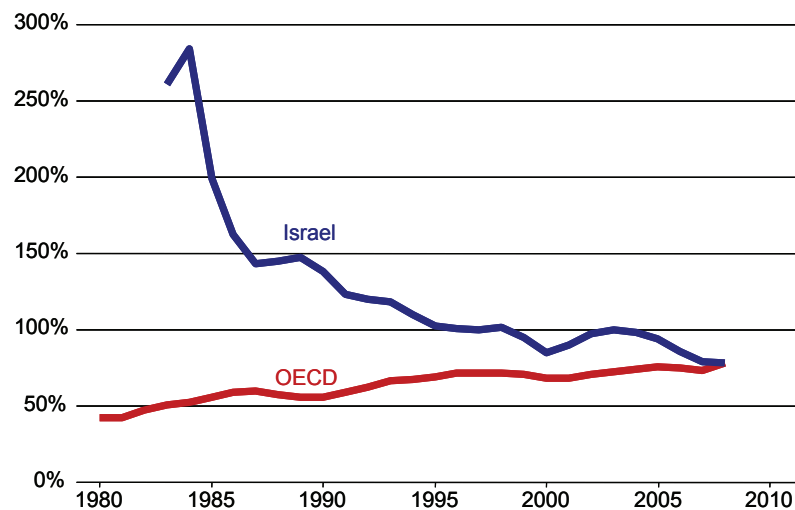
The substantial increase in civilian public expenditures reflected a major change in Israel's national priorities. Although the overall total was higher than it had been in the past, the era of large investments in basic infrastructures for the development of a modern economy came to an end, making way for new priorities that reflected much less of a national perspective and considerably more sectoral, local and/or personal considerations. Consequently, the rate of economic growth declined significantly.

This slowdown was not necessarily unique for Israel. Like many Western countries that entered a period of recession and economic slowdown following the 1973 Yom Kippur War and the subsequent Arab oil embargo, Israel also experienced a steep decline in economic growth (Ben-David and Papell, 1998). But, as shown in Ben-David and Papell, the Israeli growth slowdown was the sharpest and most extensive as the country moved from one of the highest growth rates in the West to one of the lowest. The subsequent slow Israeli growth path has remained remarkably steady since the 1970s (see "A Macro Perspective" chapter). The implication of this has been that instead of continuing to close the income gap between itself and leading Western countries, as had been the case until 1973, Israel's average level of income along the new growth path has since fallen farther and farther behind in relative terms.

The government budget was reduced in the years following the wave of terrorism and deep recession at the turn of this century. In 2005-2008, Israel's public expenditure net of defense and interest payments declined to 32.7 percent of GDP, while the OECD countries slightly raised their expenditures to an average of 36.4 percent of GDP.

Consequently, Israel's debt declined in 2008 to its lowest level in decades: 78 percent of GDP, identical to the OECD ratio that year (Figure 4). The severe global recession that hit many OECD countries in recent years led to increases in debt-to-GDP ratios that are expected to rise and possibly reach 104 percent in 2011. This worldwide recession had a lesser impact on Israel, and the country's debt ratio in the next two years is expected to show only a moderate increase and be lower than the OECD's.

Figure 4
Debt-GDP Ratio, 1980-2008
as percent of GDP

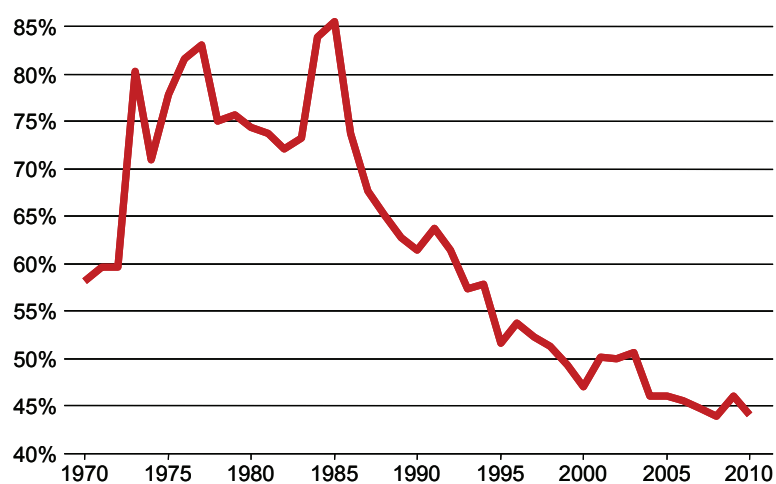


Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Bank of Israel, OECD.

2. The Government Budget

The primary component of Israel's public expenditure is the government budget. The ratio of the government budget to the country's GDP is illustrated in Figure 5.² Following the Yom Kippur War and the subsequent doubling of Israel's defense expenditures between 1972 and 1973, the government budget jumped to 80 percent of GDP. Defense expenditures alone reached 37 percent of GDP.

Figure 5
Government Budget, 1970-2010
as percent of GDP



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

² The analysis in this chapter refers to effective expenditures.

The government budget remained very high over the years. Despite fluctuations in its share of the GDP during the decade following the war, the budget reached 83 percent of GDP in 1977 and 85 percent of GDP in 1985. The picture changed with the implementation of the Economic Stabilization Program, and the government budget's share of GDP dropped to roughly 45 percent by the end of the following two decades.

The allocation of the government budget to its different components reflects the national priorities of the State of Israel. The Taub Center, since its establishment in the early 1980s, has been analyzing the government budget by major areas of expenditure, which do not necessarily overlap the budgets of specific government ministries.³ Thus, for example, education expenditures include not only the Ministry of Education budget, but also expenditures for education by other ministries, such as the Ministry of Industry, Trade and Labor's expenditures for vocational training.

The Taub Center compiles Ministry of Finance's data on actual – i.e. implemented – budget expenditures for the various years (Ministry of Finance, *Report of the Accountant General*) and supplements this with the approved bi-annual budget in its most recent form for the years 2009 and 2010. The different time series presented in this chapter – which start as early as 1970 – show components of the current budget and the development budget in nominal and real prices (i.e., after adjustment for inflation) relative to GDP and to population.

Israel's national priorities from 1970 to 2010 are reflected in Figure 6. Throughout most of the 1970s, after the Yom Kippur War, defense spending was over one-quarter of Israel's entire domestic output. In the early 1980s, defense spending reverted to pre-Yom Kippur War levels of roughly one-fifth of GDP. The share of defense spending out of GDP began to steadily decline after the Economic Stabilization Program was introduced in the mid-1980s, flattening out and stabilizing in the 2000s.

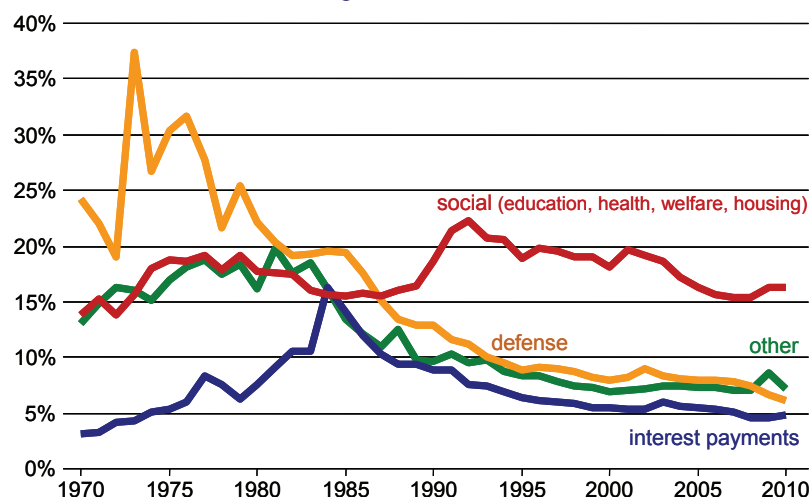
³ The Taub Center structure follows the U.N.'s COFOG (Classification of the Functions of Government).

The budget for the years 2009 and 2010 reflects an additional decline in this ratio.

The government's very high expenditures in the 1970s and 1980s were not financed entirely from government revenues and required extensive borrowing – with interest payments that reflect this. In 1984, for example, interest payments alone reached 16.2 percent of GDP, equaling the government's total expenditure on education, health, welfare and housing. Since the mid-1980s, a sharp decline in defense spending and in other ministries' budgets, excluding education, health, welfare and housing, enabled a reduction in the overall budget and in interest payments. When the big immigration wave from the former Soviet Union reached Israel in the early 1990s, increasing Israel's resident population by almost one-fifth, these budget reductions made it possible to substantially increase the country's social expenditures.

Figure 6

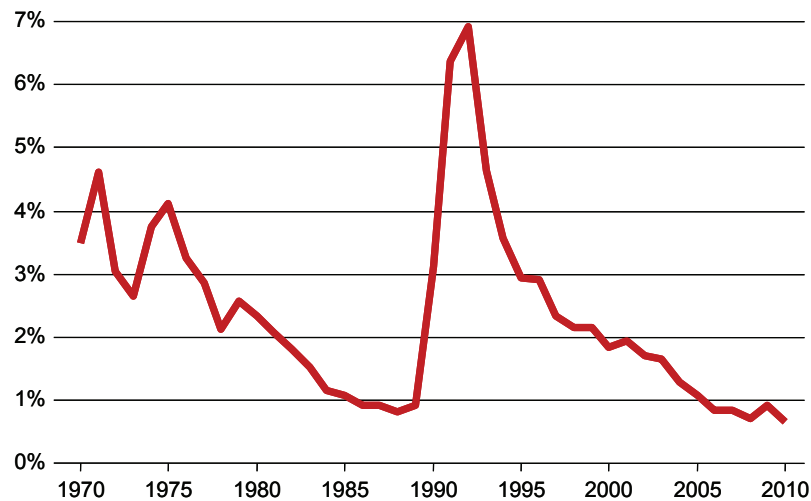
Allocation of Government Budget, 1970-2010
as percent of GDP



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

In the 1970s, the bulk of the growth in social expenditure went to immigrant absorption in the form of direct assistance and as housing subsidies (Figure 7). After nearly two decades of constant decline in these expenditures, from four to one percent of GDP between the early 1970s and the late 1980s, the large immigration of the 1990s pushed expenditures on absorption and housing up to nearly seven percent of GDP by 1992. In the absence of additional immigration at these levels in subsequent years, absorption and housing budgets over the past two years returned to levels from two decades ago.

Figure 7
Housing and Immigrant Absorption Budgets, 1970-2010
as percent of GDP

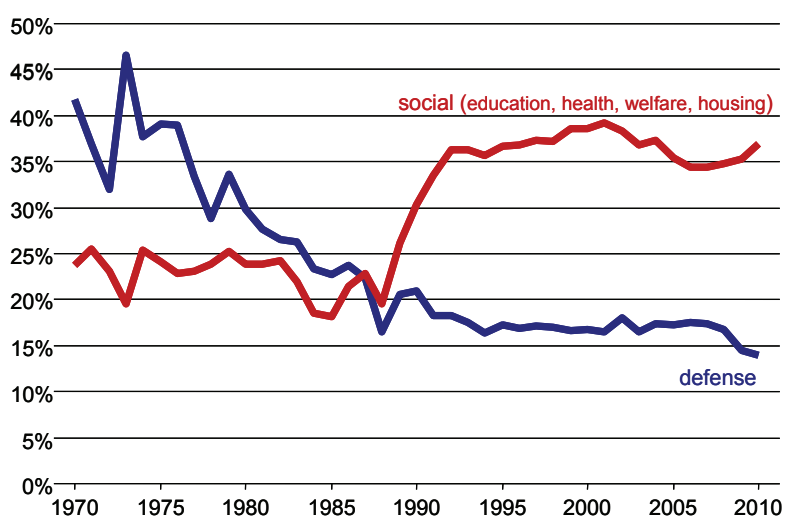


Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

While the government budget's share of GDP declined steadily in recent decades, its internal composition also underwent substantial changes. Defense expenditures (Figure 8), which reached 47 percent of

the budget in 1973, fell to 17 percent of the budget by 1993. They remained relatively stable at this level for one and a half decades, until 2008 (though the budget grew by 43 percent in real terms during this period). For the 2009 and 2010 budget years, defense expenditures are expected to decline to 14 percent of the budget as a result of decreases in defense spending and budget increases.⁴

Figure 8
Defense and Social Budgets, 1970-2010
as percent of total budget



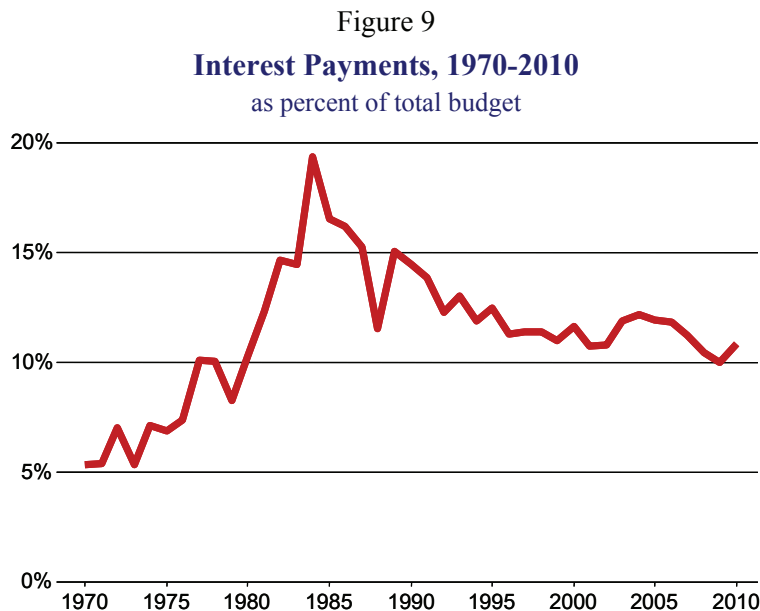
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance.

As noted, the ongoing reduction in the share of defense spending in GDP (Figure 6) allowed not only the reduction of the overall budget, it also enabled an increase in the budget's social component from the mid-

⁴ Since the annual defense budget varies from actual expenses (about 85 percent of the general reserves – roughly NIS 5 billion in 2008 – is earmarked for the country's secret services and permanent transfers), it is possible that the planned reduction of the defense budget will not materialize.

1980s onwards (Figure 8). The social part of the budget fluctuated between 23 and 25 percent of the budget in most years between 1970 and 1982, with a drop to 18 percent of the budget in 1985. Since then, money released from defense cuts facilitated an increase in social spending, raising it to 39 percent of the budget by the years 1999-2001. After the wave of terrorism and deep recession early in the first decade of the 21st century, the social component of the budget declined below 35 percent. A change in trend began with increases in the 2008 budget.

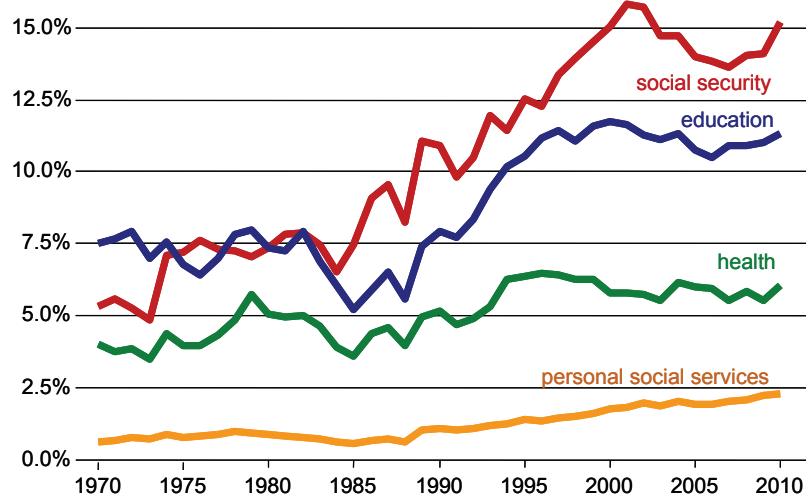
Interest payments represented 5.3 percent of the budget in 1970 (Figure 9). After the Yom Kippur War the interest payment component in the budget rose steadily and in 1984 reached nearly one-fifth (19.4 percent) of the State of Israel's overall budget. Since then, interest payments declined to about one-tenth of the current budget – still more than double the 1970 level.



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance.

The distribution of the social budget to its key components is illustrated in Figure 10. The two largest budget items, social security and education, lead in size in all the years, but have swapped positions.⁵

Figure 10
Social Expenditures, 1970-2010
as percent of total budget



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance.

⁵ Under the heading “social security,” Taub Center includes the National Insurance Institute payments (excluding payments for service in the military reserves and provisions included in other welfare areas) and the Compensation for Victims of Nazi Persecution.

The share of expenditures for education was roughly 7.5 percent of the government budget from 1970 until the early 1980s. Social security expenditures represented slightly more than five percent of the budget in the early 1970s. After the Yom Kippur War and until the early 1980s, a level change in social security expenditures raised their share of the budget to about 7.5 percent, close to education expenditures.

During the peak inflation years leading up to 1985, the share of education dropped to 5.2 percent of the budget. Later, however, the part of the budget channeled to education kept growing and more than doubled, reaching 11.8 percent in 2000. During those years, social security's share of the budget – which was close to that of education for about a decade – did not decline at the same rate as education in the mid-1980s. The social security component in the budget then exceeded education and steadily rose from 6.5 percent of the budget in 1984 to 15.8 percent of the budget in 2001. Following the budget cuts in the early 2000s, the social security component dropped to 13.7 percent of the budget by 2007. Since then, though, it has been steadily rising.

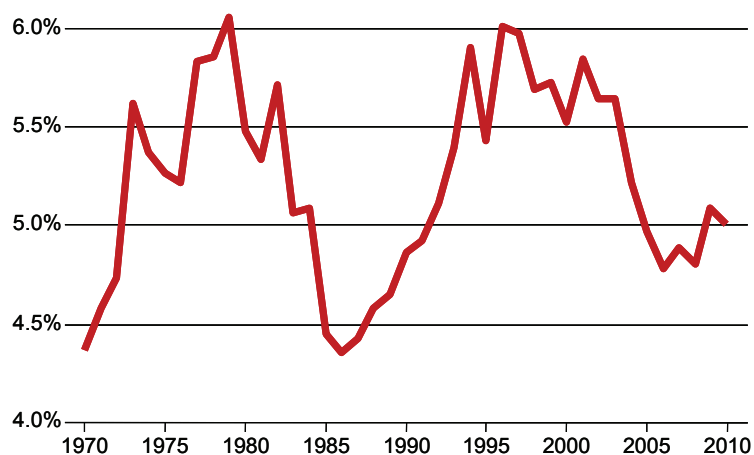
In the years 1970-1990 there were large fluctuations in the healthcare component of the budget, with healthcare in 1970 representing 4.0 percent of the budget. This share declined to 3.5 percent in 1973, rose to 5.7 percent in 1979, dropped again to 3.6 percent during the 1985 inflation crisis, and returned to 5.2 percent in 1990. The introduction of the National Health Insurance Law in the mid-1990s caused a level change, pushing healthcare up to 6.5 percent in 1996. Since then, however, government healthcare expenditures fell slightly, with the share of healthcare in the budget declining to 5.5 in 2003 and 2007.

Among the four main social budget items, personal social services are the smallest expenditure item. They represented 0.6 percent of the budget in 1970 and 1985, followed by a slight increase to 1.0 percent in 1978. In the 25 years since 1985 the share of personal social services in the budget has grown steadily and is expected to reach 2.3 percent in 2010.

3. Education

All the major components of Israel's education budget underwent substantial changes over the past four decades. Education expenditures, representing 4.4 percent of GDP in the early 1970s, reached 6.1 percent of GDP by the end of the decade (1979). This means that within the span of just one decade, the budget share of GDP going to education increased by over one-third (Figure 11). This rise did not continue and in 1986, the share of education expenditures in the budget dropped back to 4.4 percent of GDP. In the following decade, during the second half of the 1980s and the first half of the 1990s, education's share of the budget rose steadily, reaching 6.0 percent in 1996.

Figure 11
Total Education Expenditures by Central Government
as percent of GDP, 1970-2010



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

In fact, the ratio of education expenditure to GDP from 1993 to 2003 fluctuated significantly, followed by a substantial decline in the years 2004-2006. Only in the past few years has this decline come to a halt, with education's share of the 2009-2010 budget designated to rise. Throughout all this time, despite the large changes and fluctuations of past decades, the ratio of public education expenditures to GDP in Israel has been high relative to other countries. One important reason for this is the fact that the Israeli population is relatively young and the percentage of pupils out of the population is higher than in other Western countries. (The chapter "Israel's Education System – An International Perspective" provides an extensive international comparison of Israel's educational system.)

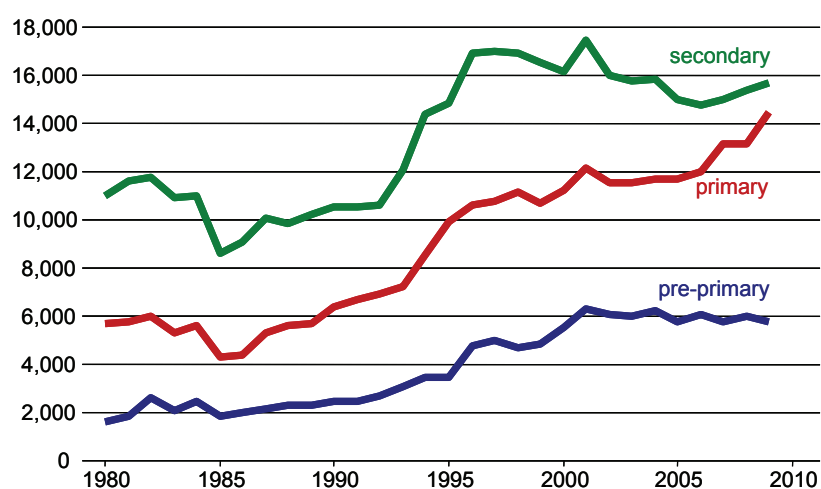
Hence, a more relevant measure for comparing education expenditures over time and between countries must take into account the number of pupils in each country each year. Education expenditures per pupil (i.e., total expenditure divided by the total number of pupils) is such a measure. Figure 12 shows expenditures per pupil from 1980 to 2009, in 2008 prices – i.e., in real terms, after netting out price inflation. The lowest expenditure per pupil is at the pre-primary school level. As the level of education rises, so does spending per pupil: in 1980, expenditures per pupil in pre-primary schools were about NIS 1,600 (in 2008 prices), in primary schools, about NIS 5,700, and in secondary education, expenditures per pupil reached about NIS 11,000.

Pre-primary school expenditures per pupil were stable in the 1980s, rising substantially during the 1990s following the addition of kindergarten in the Compulsory Education Law. This legislative change caused an increase in government expenditure and a decrease in private expenditure. In the 2000s, expenditures per pupil stabilized at around NIS 6,000 – more than three times the 1980 level.

Other than a 25 percent decline in primary school expenditures, to NIS 4,300 (in 2008 prices) in the first half of the 1980s, there has been a steady increase in these expenditures for over two decades. In 2009 the expenditure per primary school pupil reached about NIS 14,500 (in 2008

prices), 3.4 times the 1985 level of spending. The mid-1990s increase in the education budget resulted primarily from a wage agreement signed after a large teachers' strike. Also, there was a substantial escalation in special education expenditures, which were included in the primary education budget.

Figure 12
Education Expenditure Per Pupil, 1980-2009
 NIS, 2008 prices



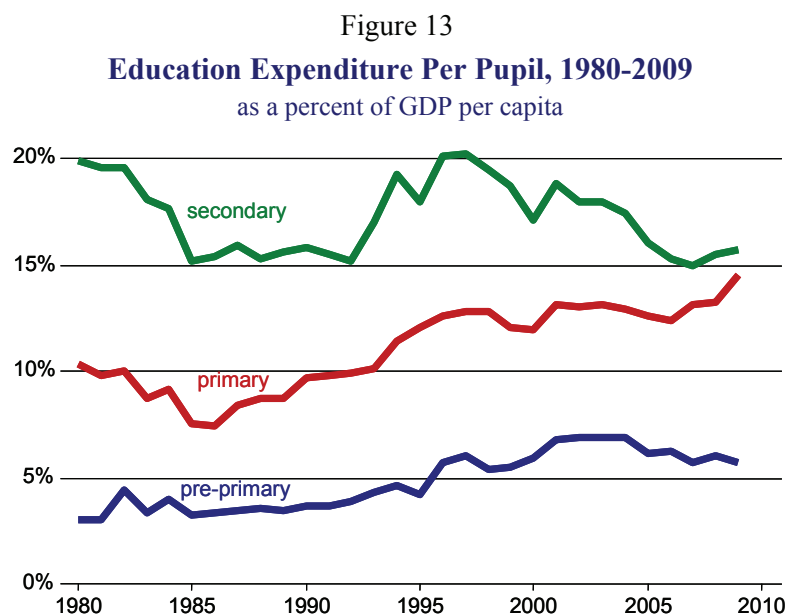
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

The secondary education budget underwent two difficult periods. As in the case of primary education, expenditures per pupil declined by 22 percent from 1980 and 1985. Most of this budget cut was reinstated over the years 1986-1992. Between 1993 and 1996, expenditures per pupil in secondary education rose by 60 percent, reaching NIS 17,000. After a slight decline in 1999-2000, expenditures per pupil in secondary schools jumped to a peak of NIS 17,400 in 2001. Secondary school expenditures decreased sharply, by 15 percent, in 2002-2006, falling to NIS 14,773 per

pupil – still substantially higher than the expenditures per pupil prior to 1993. Over the past three years, secondary school expenditures per pupil rebounded somewhat, rising by 6.3 percent to NIS 15,700 in 2010, which is 82.5 percent higher than the 1985 bottom, but 10 percent less than the 2001 peak.

This is a common way of examining expenditures per pupil, but it has some drawbacks. As Israel's standard of living rises in real terms – i.e., after discounting price inflation – there is a tendency for employee wages to rise as well. Since wages constitute a substantial share of the education budget (89 percent of Israel's education budget in 2007), then when wages rise without a parallel change in expenditures per pupil, the result is a decrease in overall educational inputs that students receive. Furthermore, dividing GDP by population – that is, calculating GDP per capita – reflects the standard of living of the average Israeli citizen. What share of that standard of living was spent for educating an average pupil in 1980, and what share of the current standard of living does the State of Israel spend today educating a pupil?

To address these issues, Figure 13 shows the relationship between expenditures per pupil at different levels of education and GDP per capita. This provides a more accurate reflection of Israel's national priorities in the area of education – and of the changes in these priorities over the past three decades. In early childhood education, the ratio of expenditures per pupil to GDP per capita in 2009 was almost double that of 1980, even though this ratio has dropped 6.6 percent since 2006. In primary schools, the share of GDP per capita directed to education expenditure per student increased by 43.7 percent since 1980. But compared to the trough in expenditures in 1985, the 2009 level reflects an increase of 95.4 percent – including a 19.7 percent rise in 2006-2009 alone.



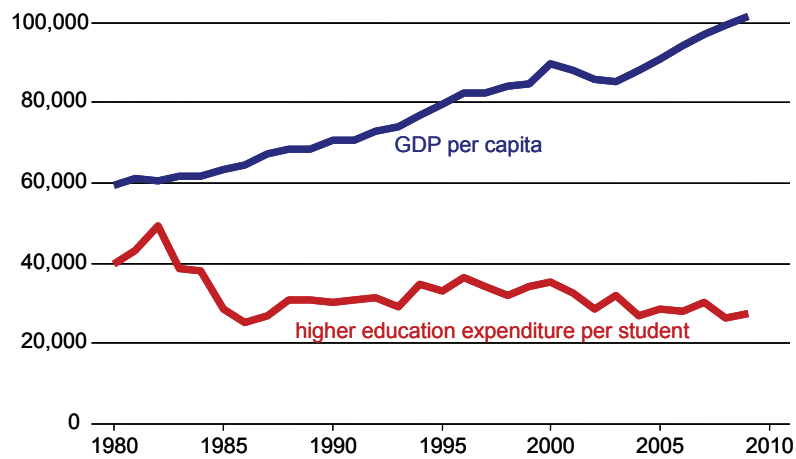
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

The picture in secondary education is completely different. In 1980, expenditure per secondary school pupil reached 20 percent of GDP per capita, but after three decades, it is approximately one-fifth less: 16 percent of GDP per capita in 2009. The additional funding given to secondary education in the early to mid-1990s returned the system to the 1980 expenditure levels. However, the combination of falling real expenditures per pupil and rising standards of living culminated in an erosion in expenditures per pupil relative to Israel's standard of living between 1997 and 2007, taking the secondary education system back to the low expenditure levels of 1985-1992. In the past two years, there was a 7 percent increase in this ratio. The chapter "Israel's Education System – An International Perspective" shows the ratio of spending per secondary school pupil to GDP per capita is currently below the OECD average.

4. Higher Education

While spending per pupil in pre-primary, primary and secondary education is higher today in real terms – albeit, not with regard to secondary education spending relative to GDP per capita – this is not the case in higher education, where expenditure per student in 2009 was 31 percent lower than it was in 1980, and 45 percent lower than at its peak in 1982 (Figure 14).

Figure 14
Higher Education Expenditure Per Student vs. GDP Per Capita
 in 2008 NIS, 1980-2009



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

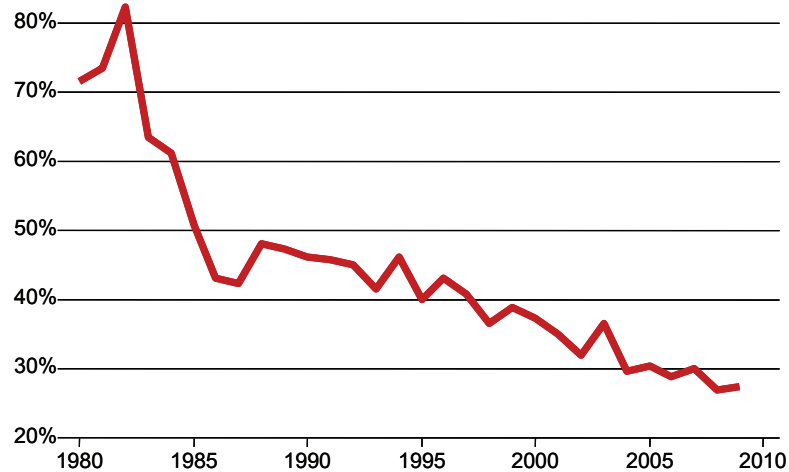
The sharpest decline in higher education expenditures per student took place between 1982 and 1986, when they dropped from NIS 49,357 (2008 prices) to NIS 25,344. Over the subsequent decade, from 1987 to 1996, there was somewhat of a recovery as expenditure per student increased to NIS 36,425 shekels. Since 1996, higher education budget per

student has been trending downwards, with a drop of 25 percent, and is currently 8 percent above the trough in 1986. Part of the explanation for this decline in expenditure per student may be due to the emergence of non-research academic colleges, where spending per student is lower than in universities.

But this is not the entire picture. Figure 14 also depicts the changes in Israel's standard of living, expressed in terms of real GDP per capita. While the costs of higher education services rose substantially in real terms, expenditures per student fell in relative terms. The degree of erosion in budgeting for higher education can be seen in Figure 15. While in 1982 expenditures per student reached 82 percent of GDP per capita, by 2009 they had fallen to only 28 percent of GDP per capita – with all that this entails regarding the universities' ability to function. Public expenditure per higher education student in Israel today, normalized by standard of living, is not only lower compared to the past but is substantially lower relative to OECD countries. (See details in the chapter "Israel's Education System – An International Perspective.")

The decrease in spending per student relative to standards of living coincided with a large reduction in the number of senior faculty positions. As shown in earlier research (Ben-David, 2008), the turnaround took place in the mid-1970s. While Israel's population has doubled since 1973, the number of senior faculty positions at universities grew only 12 percent, and in higher education in general (including colleges) the increase was only 30 percent. The overall result has been a sharp decline in the number of senior faculty per capita in Israel over the past three and a half decades.

Figure 15
Higher Education Expenditure Per Student, 1980-2009
 as percent of GDP per capita



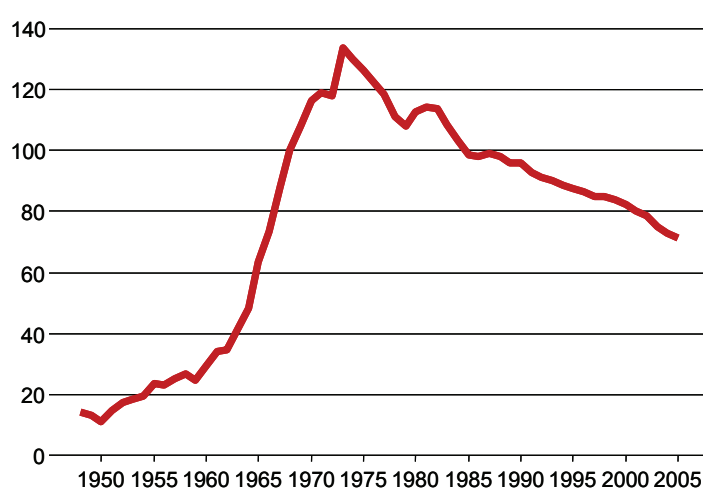
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

Figure 16 shows that the State of Israel increased the number of faculty positions per capita until 1973, despite being a much poorer country than today and with fewer resources at its disposal to allocate – while after 1973, a much wealthier State of Israel changed direction, steadily reducing the number of senior faculty positions per capita over the past several decades. Previous research (Ben-David, 2008) shows that the Technion's (Israel's leading institute of technology) senior faculty grew by just a single position since 1973 while in Israel's two flagship universities, the Hebrew University and Tel-Aviv University, the number of senior positions declined by 14 and 21 percent, respectively.

An entire generation had trouble finding senior research positions in Israel while the senior faculty was aging. According to the Council for

Higher Education, about half of the senior faculty members today are 55 or older. While the relatively small number of faculty positions is not the only reason for the academic brain drain from Israel, it is certainly one of the major causes for an academic emigration that is unparalleled in the Western world (Ben-David, 2008).

Figure 16
Senior Research Faculty in Israel*, 1948-2006
per 100,000 people



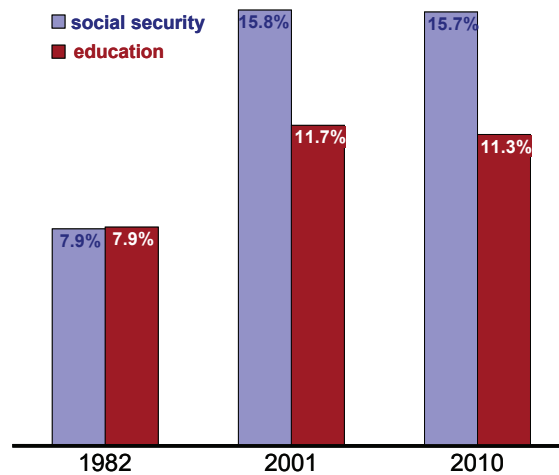
* Senior research faculty includes full professors, associate professors, senior lecturers and lecturers.

Source: Dan Ben-David, "Brain Drained" (2008).
Data: CBS, the Council for Higher Education's Planning and Budgeting Committee.

5. Social Security

From the mid-1970s and for nearly a decade, the State of Israel's education and social security budgets were roughly equivalent (Figure 10). Since then, their respective shares in the overall budget exhibited substantial increases. While in 1982, the education and social security components each accounted for 7.9 percent of the government budget, two decades later, by 2001, education's share of the budget increased by half (to nearly 12 percent) while the social security share of the budget doubled (Figure 17). Since the peaks of the early 2000s, there was a slight decline in the education share (to 11.3 percent of the overall budget) and in the social security share (to 15.7 percent of the overall budget).

Figure 17
Social Security and Education Budgets, 1970-2010
as percent of total budget



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance.

The opening chapter of this book, which provides a macro perspective of Israel's society and economy, shows the expansion of poverty and inequality in terms of gross incomes from 1979 to 2008, but only relatively small changes in poverty and inequality in terms of net incomes (i.e., after transfer payments and taxes). A core treatment of the poverty and inequality problems would have reduced those rates in gross income, and consequently, also in net income. A symptomatic treatment, by definition, is not targeted at reducing gross income poverty and inequality but only at their reduction in net incomes – that is, after they have already been created.

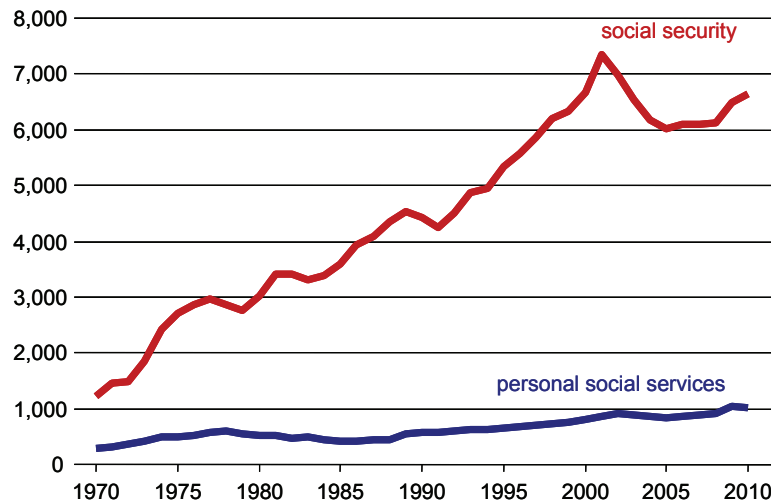
When the core treatment is insufficient and gross income inequality and poverty continue to rise, it becomes necessary to deploy a steadily growing social safety net to prevent the increase in poverty and inequality from being reflected in net incomes. Social security is a major part of the social safety net, designed to reduce net income poverty and inequality – or at least, to prevent them from continuing to grow.

One might speculate that if the State of Israel had made better use of its educational budget during past decades, the picture reflected in Figure 17 would have been different – perhaps with a better balance between education and social security, as was the case in 1982. This is not a trivial issue, considering the social security expenditures that had to be made as a result of the increase in gross income poverty and inequality, expenditures that perhaps could have been smaller had there been adequate treatment of these problems at their core.

Three million people lived in Israel in 1970. By the end of 2009, the country's population had risen by 150 percent, reaching 7.5 million people. Despite the large increase in population, Figure 18 shows that the increase in social security expenditures was much greater. The average social security expenditure per capita – measured in 2008 prices – peaked in 2001 at NIS 7,344, and then fell in subsequent years. That said, the

average expenditure per person is expected to reach NIS 6,652 in 2010, compared to NIS 1,222 in 1970 (in 2008 prices).⁶

Figure 18
Social Security and Personal Welfare Services, 1970-2010
 expenditures per capita in 2008 NIS



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

Personal social services, in-kind services for the weakest and most vulnerable segments in society, are provided to at-risk youth, battered women, families in crisis, individuals with physical and/or mental

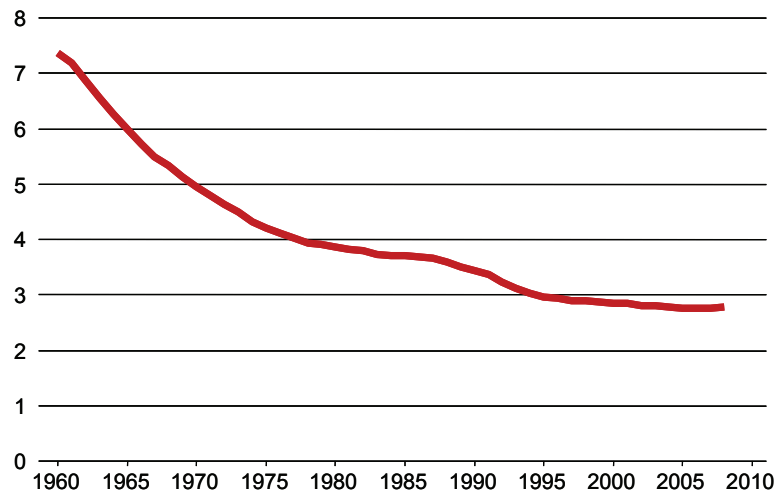
⁶ It is important to note that Israel's social security spending – which is low compared to most OECD countries (OECD, 2009) – is not only directed at dealing with poverty and inequality, but also with other issues and areas. On the other hand, additional funds targeted at reducing net income poverty are disbursed as subsidies and aid to segments of Israeli society via other government budgets and are not included in social security spending.

handicaps, etc. Per capita governmental expenditure on personal social services (in NIS 2008) was NIS 283 in 1970 and is expected to reach NIS 1,016 in 2010 – 3.6 times the 1970 expenditure. From 1970 to 2010, real per capita social security spending grew by a factor of 5.4. By comparison, Israel's standard of living as reflected in GDP per capita grew 2.25 times over these same years.

Independent of the question of whether the 1970 expenditures were high enough or whether they are sufficient or excessive today, it is important to point out that such increases that have occurred over the past four decades will not be possible to replicate over the next four decades. If the causes of poverty and income inequality are not adequately dealt with at their core, then the inability to continue increasing social security expenditure per capita at past rates over the coming decades will invariably result in even higher rates of poverty and income inequality – which are already very high in comparison with other Western countries – with all that this implies for the future of Israeli society.

Table 1 in the chapter “The Social Security System in Israel” shows the major changes that occurred in the allocation of social security spending over the past two decades. These changes reflect a combination of demographic changes in Israeli society and changes in the level of benefits per recipient. Although Israel's birth rates are much higher than is common in OECD countries (Figure 6 in the chapter “Israel's Labor Market”), Israeli society is aging. Figure 19 shows the relationship between the 0-14 age group and the 65+ age group in Israel. In 1960, there were 7.4 times more children aged 0-14 than elderly aged 65 and over in Israel. This ratio declined greatly over the years and in 2008 reached 2.8. This is still a relatively high ratio compared to OECD countries (12 countries already have a ratio below 1, i.e., their 65+ age group is larger than their 0-14 age group), but nevertheless, Israeli society is also undergoing a notable aging process – with distributional implications for the social security expenditure, from old age and survivor benefits through general disability benefits to child benefits.

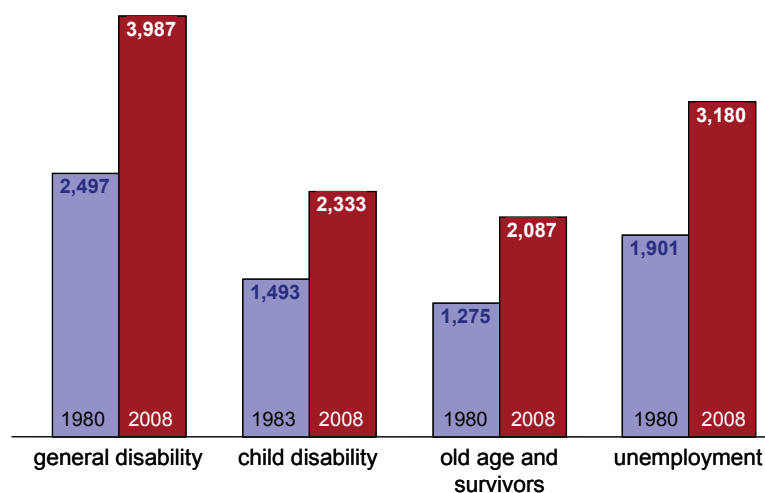
Figure 19
The Aging of Israel's Population, 1960-2008
ratio of 0-14 age group to 65+ age group



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

In addition to the effect of demographic changes on the components of social security expenditure, there were also changes in the average allowance per recipient in various classifications. Some of the changes that occurred over the past three decades appear in Figure 20. In the early 1980s, allowances per recipient differed considerably by social security classification. However, the real increase (i.e., adjusted for inflation) in all four types of allowances was very similar: 60 percent for general disability, 56 percent for children with disabilities, 64 percent for old age and survivors benefits, and 67 percent for unemployment benefits. What were the main causes of changes in the average allowance per recipient?

Figure 20
Average Benefits Per Recipient, 1980-2008
 monthly benefits, NIS, 2008 prices

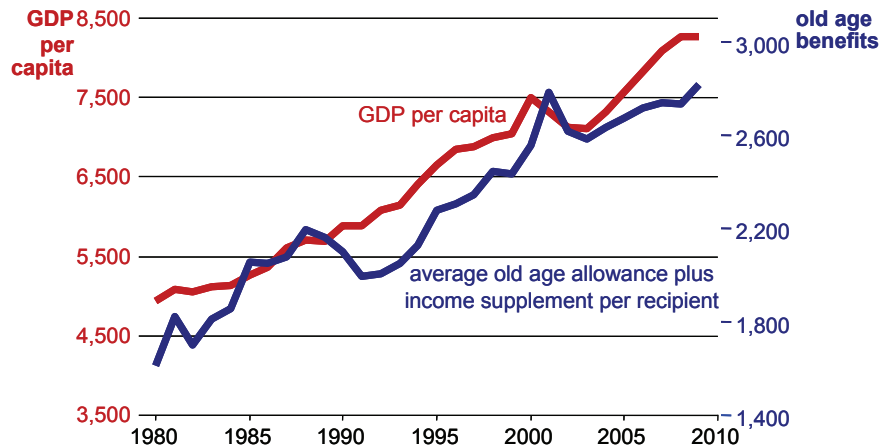


Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: National Insurance Institute.

5.A. *Old Age Benefits*

Over the past three decades, from 1980 to 2009, Israel's standard of living – as reflected in GDP per capita – rose by 67 percent. During the same period, average universal old age allowances per recipient increased 71 percent while the average income supplements paid to poor elderly recipients rose by 81 percent. The average total allowance for elderly people receiving both old age allowances and income supplements rose by 75 percent. However, as shown in Figure 21 (measuring GDP per capita on the left vertical axis and measuring old age benefits on the right vertical axis), the picture is not uniform over the entire period.

Figure 21
Old Age Benefits Per Recipient Relative to GDP Per Capita
 monthly amounts in 2008 NIS, 1980-2009



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
 Data: National Insurance Institute.

From 1980 to 1985, before implementation of the Economic Stabilization Program, the average total allowance for the elderly (old age allowance plus income supplements) increased by 27 percent, compared with an increase of a mere 7 percent in GDP per capita. From the mid-1980s until the end of that decade (1985-1989) the rates of change in the total allowance (5 percent) and in the standard of living (8 percent) were similar. From 1989 to 1991, with the great immigration wave from the former Soviet Union, average total allowance per recipient fell by 8 percent while GDP per capita kept growing (by 3 percent).

From 1991 to 2000, average total allowance per elderly recipient and GDP per capita grew along parallel tracks, increasing by 28 percent and 27 percent, respectively. The sharp increase was followed by a sharp drop in both benefits and GDP with the severe wave of terrorism and the deep recession that followed in the early 2000s. Since then, there has been a substantial erosion in the value of old age allowances, including income

supplements, compared to changes in living standards. From 2004 to 2008, GDP per capita grew by 13 percent while average total allowances for the elderly rose by only 4 percent. In 2009, this erosion was slightly offset by a 3 percent rise in average total allowances and a slight decline in GDP per capita.

The primary reason for the gap between the changes in living standards and changes in old age allowances (including income supplements) is the transition from past indexing of supplements to average monthly wages to their current indexing to the consumer price index (CPI). Indexing of allowances to the average wage had provided compensation to the elderly for increases in the country's standard of living while indexing to the CPI compensates only for cost of living increases.

When benefits are not adjusted to changes in average monthly wages, then those who depend on old age allowances and income supplements for their livelihood are destined, in their final years, to fall farther and farther behind most of Israeli society. This is clearly shown in Figure 21 for the past decade. On the other hand, as society ages (Figure 19), it becomes increasingly difficult to finance old age allowances according to changes in living standards for all relevant ages.

At the heart of this issue is society's need to decide whether to view benefits to the elderly as insurance for old age in the case of insolvency, or as a form of pension for which anyone who made social security payments during their working years should be eligible. Since the first generation to receive social security benefits – in all countries with such a system – received benefits without paying in at a younger age (simply because, by definition, social security did not exist when they were young), then from the outset, social security systems have not operated as pension funds paying back according to cumulative contributions. In the State of Israel, this issue was compounded by the huge influx of immigrants over the years, many of them older immigrants whose working years were spent abroad and who did not make social security payments in Israel as workers – but who became eligible for social

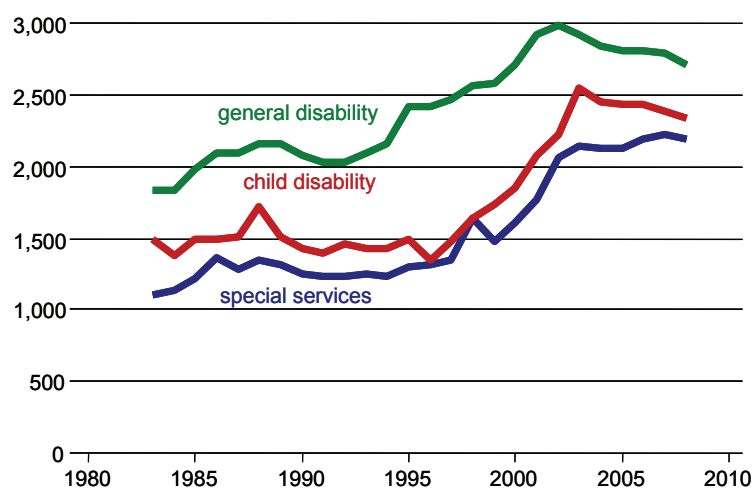
security benefits from Israel nonetheless upon reaching retirement age after arriving in the country.

Beyond universal old age allowances and income supplements paid out to elderly with no income, Israel's social security system has additional layers of assistance for the elderly including occupational pension and savings arrangements for old age. As stated in the chapter "The Social Security System in Israel," while average assistance for the elderly is similar in Israel and the OECD, its overall cost as a percentage of GDP is lower in Israel, which still has a relatively young population, compared to other developed countries. But as a country ages (any country, not only Israel), the burden on working age people increases to enable the system to finance benefits for the elderly – who had made their own social security payments when they were younger to facilitate the financing of benefits for the older generation of their time. Like other Western countries, Israeli society will have to decide at some point whether to (a) increase the burden on the young; (b) reduce the support for the elderly; or (c) begin to regard social security as insurance for times of trouble rather than as a pension that is universally available to all.

5.B. Disability Benefits

Changes in disability benefits since 1983 appear in Figure 22. From 1983 to 1993, there were no great changes in the average disability benefit (a 14 percent increase), in the average child disability benefit (a 4 percent decrease) and in the special services allowance (13 percent increase). The picture changed in the following decade. The average disability benefit increased by 40 percent from 1993 to 2003 while the average child disability benefit rose by 78 percent and the special services allowance rose by 72 percent. Between 2003 and 2009, disability benefits dropped by 7 percent and average child disability benefits dropped by 8 percent. Special services allowances increased during this period by an additional 10 percent.

Figure 22
Disability Benefits Per Recipient, 1983-2008
 monthly benefits in 2008 NIS



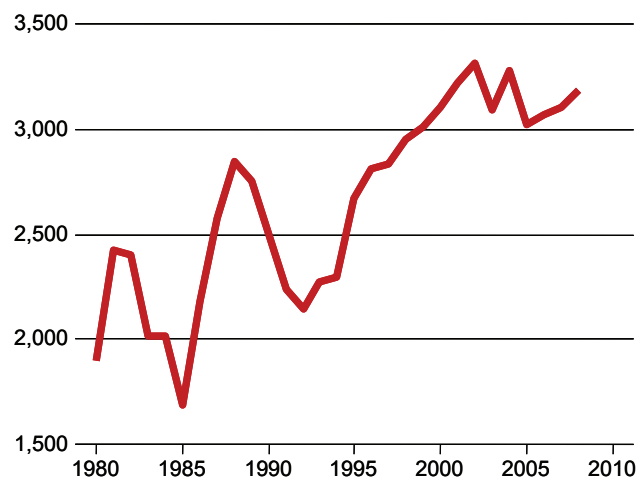
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: National Insurance Institute.

A closer look at the general disability benefit for a person with total disability can illustrate the changes in benefits. From 1983 to 2008, the benefit for such a single person with no children rose by 36 percent, while for the disabled persons with a spouse and one child, the benefit rose 51 percent. Those disabled with a spouse and two or more children had their benefits increase by 64 percent. Additionally, the number of special services allowance recipients – primarily, adults with disabilities – increased substantially. In 1983, 6.6 percent of the disability benefit recipients also received special services allowances. This share has increased by a factor of 2.4, to 15.6 percent in 2008.

5.C. Unemployment Benefits

Between 1980 and 2008, average unemployment benefits per recipient rose 75 percent (Figure 23), compared with a GDP per capita increase of 67 percent. Ostensibly, this would appear to favor the unemployed. But behind this change are two key factors that present a more complex picture.

Figure 23
Unemployment Benefits Per Recipient, 1980-2008
 monthly benefits in 2008 NIS



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: National Insurance Institute.

The first factor concerns the composition of the population receiving unemployment benefits. These recipients can be classified by their income level – as a percentage of average monthly wages per salaried employee – on the eve of their becoming unemployed. In 1991 (these are the earliest published data), 76 percent of unemployment benefit recipients earned up to half of the average monthly wage, nine percent of

unemployment benefit recipients earned between 50 and 75 percent of the average monthly wage, four percent earned between 75 and 100 percent of average monthly wages and 10 percent earned the average monthly wage, or more. In 2009, the group earning up to half of the average monthly wage fell from 76 to 16 percent of all unemployment benefit recipients, while the share of the other groups increased to 34, 20 and 30 percent, respectively – meaning higher benefits for a greater share of the recipients.

The second factor affecting average unemployment benefits pertains to the share of unemployment benefit recipients in the overall number of unemployed (Figure 24). In 1980, 15 percent of the unemployed received unemployment benefits. This share increased gradually, peaking at 51 percent in 1997. Since 1997, restrictions on eligibility steadily increased (for details, see the chapter “The Social Security System in Israel”) and the share of unemployment benefit recipients declined considerably, falling to 21 percent in 2004. Since 2004, this ratio experienced a slight rebound, reaching 27 percent of the unemployed.

One example of restrictions on eligibility for unemployment benefits pertains to soldiers who have completed their compulsory military service. After years of earning considerably less than the minimum wage, a discharged soldier receives a discharge allowance and a lump sum deposit, which represents only partial repayment for loss of potential earnings during military service. The veteran is then obligated to make social security payments from the day after discharge – regardless of employment status – but is not entitled to receive unemployment benefits even though these are explicitly designed to help those in transition between one occupation and another.

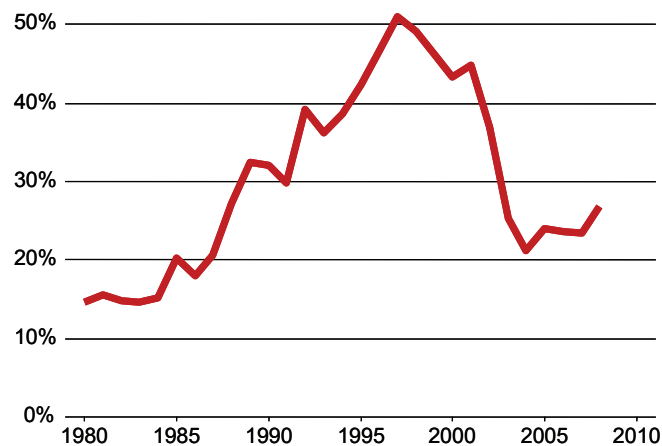
In addition to increasing the eligibility restrictions for unemployment benefits, a ceiling was introduced for the maximum unemployment allowance. Since 1999, the maximum monthly unemployment benefit during the first five months of unemployment may not exceed the average monthly wage and cannot exceed two-thirds of the average monthly wage

from the sixth month onwards. As of 2002, the size of the benefit and its duration were restricted for repeat unemployment applicants.

Since the amount of unemployment benefits depends on income level before becoming unemployed – albeit on a sliding scale – the more a person earns, the higher unemployment benefit he receives. Over the years, harsher restrictions on unemployment benefits eligibility led to a crowding out of those with lower wages who often fail to work for sufficiently continuous periods to qualify for unemployment benefits. Consequently, unemployment benefits per recipient rose, leading to the introduction of the ceiling on maximum unemployment benefits that one can receive.

Figure 24

**Ratio of Recipients of Unemployment Benefits
to the Number of Unemployed People, 1980-2008**



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: National Insurance Institute.

6. *Healthcare*

Healthcare in Israel underwent systemic changes in the aftermath of a comprehensive reform that led to the 1995 implementation of the National Health Insurance Law. While a thorough review of changes in recent years can be found in the chapter “The Healthcare System,” the focus here is on the long run perspective with a look at healthcare expenditures before and after the reform.

The substantial population growth in Israel since 1970 requires an examination of changes in healthcare expenditures relative to changes in the population. Furthermore, Israel's population is aging and healthcare expenditures for the average elderly person tend to be higher than healthcare expenditures for 35-year-olds. Thus, when changes in healthcare expenditures are examined, it is important to take into account not only population growth but also its composition.

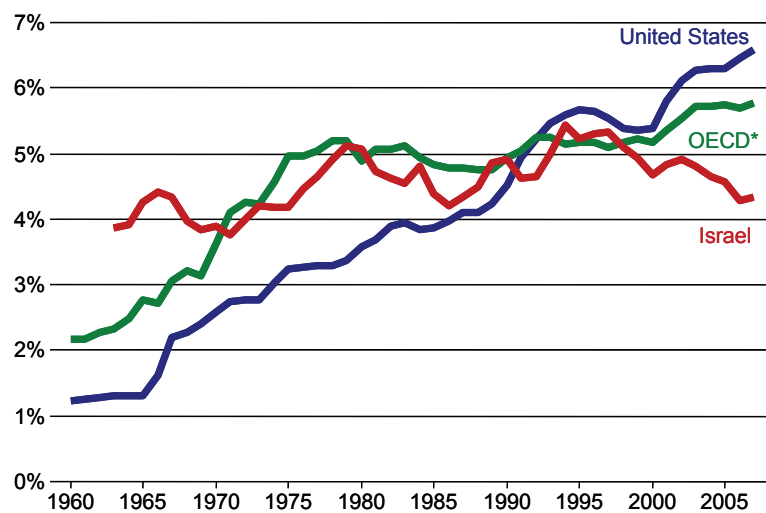
Israel adopted a capitation formula designed to take into account the composition of the population by assigning different weights to different age groups according to their healthcare needs. For example, an 85-year-old is assigned a weight which is 4.06 times the standard person in Israel, whereas a 50-year-old is assigned a weight of 1.07 times, and the weight of a 20-year-old is only 0.40. Similarly, medical expenses for small children, especially infants, are higher. Consequently, the weight assigned to a one-year-old is 0.96 and an infant just a few months old is assigned a weight of 1.55.

The use of these weights makes it possible to standardize the populations of Israel and of other countries over time, and then to calculate the public healthcare expenditure per standardized person in each country each year. How much has public healthcare expenditure per standardized person changed compared with changes in living standards as reflected in GDP per capita? In other words, how has the ratio of public healthcare expenditure to GDP changed, after accounting for

normalization by the ratio of total standardized persons to the total population?⁷

Figure 25 compares the ratio of public expenditure for healthcare to GDP in Israel, in the United States and the OECD average (OECD excluding the U.S.), after correcting for population growth in each country.

Figure 25
Public Expenditure on Health, 1960-2007
Israel, OECD* and USA, as percent of GDP**



* Excluding USA.

** Normalized by ratio of standardized population to total population.

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

Data: Ministry of Finance, CBS, OECD.

⁷ The ratio of public healthcare expenditure (E) to GDP (Y), after normalization by the ratio of standard persons (S) to population (N), equals the ratio between public healthcare expenditures per standardized person (E/S) to GDP per capita (Y/N), i.e. $(E/Y)/(S/N) = (E/S)/(Y/N)$.

In 1963, the ratio of American healthcare expenditure to GDP was 1.3 percent, while in the OECD this ratio reached 2.3 percent. That same year, the ratio of public healthcare expenditure to GDP in Israel was 3.9 percent – higher by two-thirds than the OECD average and three times higher than in the U.S.

From the early 1960s through the mid-1970s, public healthcare expenditures relative to GDP in the OECD and in the U.S. exhibited very large increases, while in Israel they were relatively stable. This development led to a large degree of similarity between the OECD average and Israel during the 1970s, which was more or less maintained until the latter half of the 1990s. Public healthcare expenditures in the United States increased steadily throughout the past half century, since 1960. As a result, the ratio of public healthcare expenditures to GDP in Israel, the U.S. and the OECD in the 1990s was similar. In 1996 this ratio was about 5.6 percent in the U.S., 5.2 percent in the OECD and 5.3 percent in Israel.

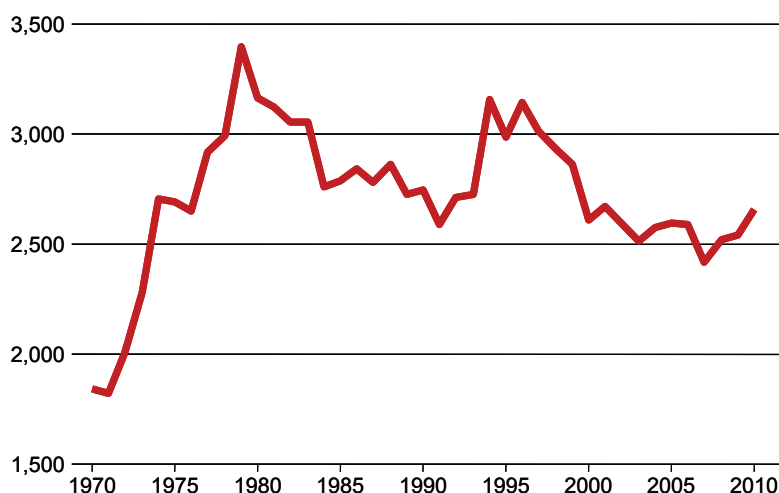
From 1997 to 2007 the three parted ways, with public healthcare expenditures to GDP in the U.S. rising to 6.6 percent in 2007. In the OECD, this ratio rose to 5.8 percent while in Israel, it fell by almost one-fifth – to 4.3 percent.

Focusing on the past half century as a whole, the rising costs of medical care since the 1960s have contributed to substantial increases in the share of GDP directed to healthcare in all Western countries – with a very different picture in Israel. Since 1963, the ratio of public healthcare expenditures to GDP in the United States increased by 405.6 percent. In the OECD, this ratio increased by 148 percent, and in Israel – just 11.5 percent. Changes in Israeli healthcare spending show a rise slightly higher than the rise in living standards, notwithstanding the worldwide hike in treatment, equipment and medication costs.

When the focus moves from total public healthcare expenditure to government healthcare expenditures in Israel, there is evidence of a change in the direction of the trend that took place in the late 1970s. Figure 26 shows the per capita government healthcare expenditure per

standardized person. From 1970 to 1979, real government expenditure for healthcare per standard person increased by 84 percent, from NIS 1,843 to NIS 3,400 per capita in 1979 (both amounts in 2008 prices). From 1979 through the early 1990s, there was a steady decline in real healthcare expenditures. This decline tapered off in the early 1990s and, in 1994, there was even a large increase of 16 percent to a level that was maintained during the early years of the healthcare reform. The year 1998 signaled the beginning of a post-reform erosion in public healthcare expenditures. By the end of the 1990s, government healthcare expenditures per standardized person were lower than they had been at the beginning of that decade. This decline continued until 2007, when healthcare expenditure reached a level 23 percent lower than the record year of 1994.

Figure 26
Health Budget, 1970-2010
 per standard person in 2008 NIS



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Ministry of Finance, CBS.

From the broader, long run perspective, government healthcare expenditures per standardized person declined steadily for three straight decades since 1979 – with the exception of the few years in which the new healthcare system reform was implemented. The fact that Israel's standard of living has been rising during this entire period means that the share of GDP per capita that the government has been allocating to healthcare has been falling even more precipitously during the past 30 years.

Over the past three years, 2008-2010, the healthcare budget per standardized person is expected to grow by 10 percent – to a higher level than in 1970, but it will nonetheless be lower than expenditures in nearly every year since 1979. In light of the upward trend in government expenditures on other social budgets over the past several decades, what has transpired in the governmental healthcare expenditures arena represents a marked departure from the other social expenditures.

7. Conclusion

The State of Israel has known: (1) very heavy defense burdens and high interest payments on its debt; (2) extraordinarily high rates of inflation – in Western terms – resulting from large government expenditures that greatly exceeded tax revenues; and (3) high rates of poverty and income inequality combined with relatively slow steady state rates of economic growth compared to the West. In light of this unique and problematic past and present, it is incumbent upon Israel to be even more vigilant than other countries in following focused and efficient fiscal policies. This does not mean that it is not possible to spend more in one area than another, but it must be understood that increased spending in one area requires either reductions in other areas or an increase in the budget.

If a decision is made to increase the budget, then the need to fund this increase necessitates tax increases, which reduce incentives to work and to invest, with all of the negative implications that this has with regard to

long run economic growth rates, which – in the steady-state – are already lower in Israel than in other Western countries. Alternatively, instead of increasing the current tax burden, it is possible to increase government borrowing and subsequently increase future interest payments that will come at the expense of future defense and social expenditures. In addition, more government borrowing today means that the government must compete with the private sector – by raising the returns on government bonds – thereby limiting the private sector's ability to raise capital and further inhibiting economic growth.

A government planning its long term policy must take into account the long term effects of its decisions. Political stability can enable multi-year planning and the budgeting necessary for more efficient utilization of Israel's limited resources. Though decisions to increase the budget are made on the basis of public, rather than solely economic, considerations, it is important for the public and the policy makers to understand fully the economic and social implications of such a step. To the extent possible, the government budgeting process should begin with a strategic long run determination of national priorities, translation of these priorities into a multi-year path of expenditures while establishing a parallel long run path of tax revenues to fund the expenditures.

A government budget does not have to be balanced each and every year. Quite the contrary, in fact. For instance, tax revenues decline during recessions while expenditures rise due to the need to increase the social safety net for people losing jobs. In such periods, a budget deficit plays a stabilizing role that reduces recessionary pressures. Conversely, tax revenues rise during economic booms while the need for the social security network declines, reducing expenditures in this area. The government budget should show a surplus during boom years – as a counter to inflationary pressures, and to reduce the debt burden in anticipation of future harsher days when the government may be required to increase its expenditures and possibly move into deficit.

Hence, the balancing of the budget should not be an annual target but rather a multi-year goal, for periods that invariably must include years of

recession and expansion. Since both the population and the economy grow over time, government expenditures and revenues will also need to rise, but should do so in a manner in which each balances the other out over the longer term.

While the overall size and trajectories of total expenditures and revenues are important, it is at least as crucial to focus on how the budget is distributed. Loans should be taken out only for projects which will benefit future generations, since they will have to participate in repaying them. Over the two decades since the Economic Stabilization Program of the mid-1980s, the ratio of civilian public expenditures to GDP – i.e., excluding defense spending – was higher than the OECD equivalent. In other words, OECD countries spent less money on the implementation of civilian policies, yet poverty rates, income disparities and economic growth are more problematic in Israel. Even the deduction of Israel's high interest payments did not cause its remaining civilian expenditures to fall below the OECD average.

In recent years, including the 2009 and 2010 budgets, the level of civilian public expenditure in Israel, net of defense spending and interest payments, is lower than the OECD average. These expenditure levels further increase the need for a judicious allocation of the budget, with a revision of how the funding burden is shared that includes a marked improvement in the enforcement of Israel's tax laws.

Israel's exceptionally high rates of non-employment compared to Western countries raise the question of whether so many working-age Israelis really do not work. Is it possible that non-employment rates are in fact much lower than the official statistics indicate because many citizens do not report their full income? Such a scenario has serious negative implications on the size of government tax revenues, and on the extent of government aid to individuals who might be employed but formally appear otherwise and in need of assistance. It is difficult to assess the extent of the impact that tighter enforcement of tax laws might have on public revenues and expenditures, or on the additional degrees of freedom

that the country would have had it invested more on enforcement of its laws.

In a world that is witnessing increased competition between countries, when Israel's rates of poverty and income inequality are high and its long run economic growth path is lower and flatter than those of leading Western countries, national priorities in budget allocation play a major role. The time has come for dealing with the question of whether the government budget should focus primarily on providing core treatment of central social and economic issues from a national perspective – such as building and strengthening human and physical infrastructures – or whether the focus should be on sectoral, local and/or personal interests.

In a country that already has to bear a substantially heavier defense burden than is typical in the West, there is an even greater need for responsibility and caution when deciding how to spend what remains of the budget. Expenditures should be determined on the basis of national interests, with an emphasis on providing the tools and conditions that will enable as many people as possible to cope successfully in a modern economy while stressing a more selective social security network that maximizes the available assistance to those who truly need it.

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Appendix:
Tables, Definitions and Sources

*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 percent of Government expenditures excluding Interest Payments and Debt Repayment		as percent of GDP
	Total		
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	19.8
2000	38.5	55.0	18.1
2001	39.2	56.1	19.6
2002	38.4	54.2	19.2
2003	36.8	54.1	18.6
2004	37.3	52.6	17.2
2005	35.4	51.7	16.3
2006	34.4	50.7	15.7
2007	34.3	50.9	15.4
2008	34.8	51.4	15.3
2009	35.3	51.6	16.3
2010	36.9	54.9	16.3
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	43.3	51.3	16.9
2000	46.0	54.3	16.4
2001	47.5	55.4	17.8
2002	46.4	54.0	17.6
2003	45.5	54.2	17.1
2004	44.9	53.3	16.1
2005	43.9	52.2	15.3
2006	43.4	51.4	14.9
2007	43.7	51.5	14.6
2008	45.1	52.5	14.7
2009	45.9	53.3	15.4
2010	48.4	56.8	15.7

Table 2. Government Expenditures
by main component
in percent

		of which:	Total Excluding Interest and Debt Repayment			
		Interest Payments 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	55.0	24.0	21.0
2001	100.0	30.2	100.0	56.1	23.6	20.3
2002	100.0	29.2	100.0	54.2	25.4	20.4
2003	100.0	32.0	100.0	54.1	24.3	21.6
2004	100.0	29.1	100.0	52.6	24.6	22.8
2005	100.0	31.6	100.0	51.7	25.3	23.0
2006	100.0	32.1	100.0	50.7	25.7	23.6
2007	100.0	32.5	100.0	50.9	25.8	23.3
2008	100.0	32.3	100.0	51.4	24.8	23.8
2009	100.0	31.5	100.0	51.6	21.2	27.2
2010	100.0	32.8	100.0	54.9	20.8	24.3
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	21.1
2000	100.0	15.3	100.0	54.3	26.1	19.6
2001	100.0	14.4	100.0	55.4	25.7	18.8
2002	100.0	14.2	100.0	54.0	27.6	18.3
2003	100.0	16.0	100.0	54.2	26.6	19.2
2004	100.0	15.7	100.0	53.3	26.7	20.0
2005	100.0	15.8	100.0	52.2	27.1	20.7
2006	100.0	15.7	100.0	51.4	27.4	21.2
2007	100.0	15.0	100.0	51.5	27.5	21.1
2008	100.0	14.1	100.0	52.5	26.4	21.1
2009	100.0	13.8	100.0	53.3	23.2	23.5
2010	100.0	14.8	100.0	56.8	22.4	20.8

**Table 3. Social Services Expenditures
by main component**
in millions of shekels, 2008 prices*

1. Total budget (current and development)

	Income		In-kind Services						
	Total	Maintenance	Total	Education	Health	Welfare	Employment	Absorption	Housing
1980	48,489	11,684	36,805	17,431	11,938	2,055	292	328	4,760
1985	48,837	15,238	33,599	16,780	11,634	1,798	281	369	2,737
1989	56,701	20,465	36,236	18,118	12,146	2,505	409	786	2,272
1996	101,765	31,647	70,118	31,392	18,144	3,799	524	2,118	14,141
2000	111,274	41,945	69,329	34,192	16,834	5,077	664	2,350	10,211
2001	119,936	47,288	72,648	35,582	17,626	5,482	693	2,046	11,219
2002	115,969	45,898	70,071	34,301	17,466	5,968	742	1,748	9,846
2003	113,050	43,678	69,372	34,531	17,129	5,855	766	1,429	9,661
2004	107,911	41,977	65,934	32,851	17,827	5,846	832	1,378	7,199
2005	106,759	41,754	65,004	32,666	18,221	5,857	848	1,326	6,087
2006	107,104	43,072	64,033	32,629	18,455	6,009	1,027	1,412	4,500
2007	109,559	43,834	65,726	34,657	17,540	6,443	1,092	1,230	4,763
2008	111,051	44,745	66,307	34,820	18,574	6,730	1,121	1,242	3,820
2009	121,132	48,235	72,897	37,886	19,064	7,699	1,378	1,585	5,284
2010	123,131	50,333	72,798	38,007	20,325	7,685	1,639	1,142	4,000

Average annual percent changes

1980-1985	0.1	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	-4.6
1989-1996	8.7	6.4	9.9	8.2	5.9	6.1	3.6	15.2	29.8
1996-2000	2.3	7.3	-0.3	2.2	-1.9	7.5	6.1	2.6	-7.8
2000-2005	-0.8	-0.1	-1.3	-0.9	1.6	2.9	5.0	-10.8	-9.8
2005-2009	3.2	3.7	2.9	3.8	1.1	7.1	12.9	4.6	-3.5

* 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 3. Social Services Expenditures
(continued)**2. Current budget**

	Income		In-kind Services						
	Total	Maintenance	Total	Education	Health	Welfare	Employment	Absorption	Housing
1980	43,022	11,684	31,337	16,892	11,601	2,021	292	328	203
1985	45,751	15,238	30,513	16,500	11,414	1,772	281	369	177
1989	54,320	20,465	33,855	17,862	11,991	2,483	409	786	323
1996	85,282	31,647	53,635	29,830	17,050	3,748	524	2,118	365
2000	99,371	41,945	57,426	32,780	16,299	5,035	664	2,350	298
2001	107,161	47,288	59,873	34,209	17,166	5,434	693	2,046	324
2002	104,968	45,898	59,070	33,259	17,110	5,923	742	1,748	289
2003	102,448	43,678	58,770	33,620	16,879	5,815	766	1,429	259
2004	100,207	41,977	58,230	32,255	17,644	5,816	832	1,378	305
2005	99,998	41,754	58,243	31,988	18,020	5,838	848	1,326	224
2006	101,933	43,072	58,861	32,023	18,185	5,996	1,027	1,412	219
2007	104,131	43,834	60,297	34,013	17,321	6,434	1,092	1,230	207
2008	106,493	44,745	61,748	34,166	18,310	6,714	1,121	1,242	195
2009	114,122	48,235	65,887	36,439	18,531	7,661	1,378	1,585	293
2010	118,415	50,333	68,082	37,375	20,054	7,673	1,639	1,142	199

Average annual percent changes

1980-1985	1.2	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	6.7	6.4	6.8	7.6	5.2	6.1	3.6	15.2	1.8
1996-2000	3.9	7.3	1.7	2.4	-1.1	7.7	6.1	2.6	-5.0
2000-2005	0.1	-0.1	0.3	-0.5	2.0	3.0	5.0	-10.8	-5.5
2005-2009	3.4	3.7	3.1	3.3	0.7	7.0	12.9	4.6	6.9

Table 4. Social Services Expenditures Per Capita
by main component
in shekels, 2008 prices*

1. Total budget (current and development)

	Total	Income		In-kind Services					
		Maintenance	Total	Education	Health	Welfare	Employment	Absorption	Housing
1980	12,505	3,013	9,491	4,495	3,079	530	75	85	1,228
1985	11,537	3,600	7,937	3,964	2,748	425	66	87	647
1989	12,550	4,529	8,020	4,010	2,688	554	91	174	503
1996	17,900	5,567	12,334	5,522	3,192	668	92	373	2,487
2000	17,693	6,669	11,023	5,437	2,677	807	106	374	1,624
2001	18,626	7,344	11,282	5,526	2,737	851	108	318	1,742
2002	17,651	6,986	10,665	5,221	2,658	908	113	266	1,499
2003	16,899	6,529	10,370	5,162	2,561	875	115	214	1,444
2004	15,848	6,165	9,683	4,825	2,618	859	122	202	1,057
2005	15,405	6,025	9,380	4,714	2,629	845	122	191	878
2006	15,184	6,106	9,078	4,626	2,616	852	146	200	638
2007	15,259	6,105	9,154	4,827	2,443	897	152	171	663
2008	15,194	6,122	9,072	4,764	2,541	921	153	170	523
2009	16,280	6,483	9,797	5,092	2,562	1,035	185	213	710
2010	16,272	6,652	9,621	5,023	2,686	1,016	217	151	529

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	2.1	5.9	0.3	0.3	-0.6	6.9	8.1	18.9	-6.1
1989-1996	5.2	3.0	6.3	4.7	2.5	2.7	0.2	11.5	25.7
1996-2000	-0.3	4.6	-2.8	-0.4	-4.3	4.8	3.4	0.1	-10.1
2000-2005	-2.7	-2.0	-3.2	-2.8	-0.4	0.9	3.0	-12.5	-11.6
2005-2009	1.4	1.8	1.1	1.9	-0.6	5.2	10.9	2.7	-5.2

* Income maintenance expenditures are 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 Per Capita
(continued)**2. Current budget**

	Total	Income	In-kind services						
		Maintenance	Total	Education	Health	Welfare	Employment	Absorption	Housing
1980	11,095	3,013	8,081	4,356	2,992	521	75	85	52
1985	10,808	3,600	7,208	3,898	2,697	419	66	87	42
1989	12,022	4,529	7,493	3,953	2,654	550	91	174	72
1996	15,001	5,567	9,434	5,247	2,999	659	92	373	64
2000	15,800	6,669	9,131	5,212	2,592	801	106	374	47
2001	16,642	7,344	9,298	5,313	2,666	844	108	318	50
2002	15,977	6,986	8,991	5,062	2,604	901	113	266	44
2003	15,314	6,529	8,785	5,026	2,523	869	115	214	39
2004	14,717	6,165	8,552	4,737	2,591	854	122	202	45
2005	14,429	6,025	8,404	4,616	2,600	842	122	191	32
2006	14,451	6,106	8,345	4,540	2,578	850	146	200	31
2007	14,503	6,105	8,398	4,737	2,412	896	152	171	29
2008	14,570	6,122	8,448	4,675	2,505	919	153	170	27
2009	15,338	6,483	8,855	4,897	2,491	1,030	185	213	39
2010	15,649	6,652	8,997	4,939	2,650	1,014	217	151	26

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	1.8	2.6	0.2	11.5	-1.5
1996-2000	1.3	4.6	-0.8	-0.2	-3.6	5.0	3.4	0.1	-7.3
2000-2005	-1.8	-2.0	-1.6	-2.4	0.1	1.0	3.0	-12.5	-7.3
2005-2009	1.5	1.8	1.3	1.5	-1.1	5.1	10.9	2.7	5.0

Table 5. 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	33.3	66.7	30.3	17.5	18.8
2000	100.0	39.1	60.9	30.5	15.1	15.3
2001	100.0	40.4	59.6	29.8	14.8	15.0
2002	100.0	41.0	59.0	29.4	15.0	14.6
2003	100.0	39.9	60.1	30.3	15.0	14.7
2004	100.0	39.5	60.5	30.4	16.5	13.6
2005	100.0	39.6	60.4	30.5	17.0	12.9
2006	100.0	40.3	59.7	30.5	17.2	12.0
2007	100.0	39.8	60.2	31.8	16.1	12.4
2008	100.0	40.3	59.7	31.4	16.7	11.6
2009	100.0	40.0	60.0	31.2	15.7	13.1
2010	100.0	41.2	58.8	30.8	16.5	11.6
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	39.0	61.0	33.9	19.4	7.7
2000	100.0	43.1	56.9	32.5	16.1	8.3
2001	100.0	44.5	55.5	31.7	15.9	7.9
2002	100.0	44.6	55.4	31.2	16.0	8.2
2003	100.0	43.6	56.4	32.3	16.2	7.9
2004	100.0	42.3	57.7	32.0	17.5	8.3
2005	100.0	42.1	57.9	31.8	17.9	8.2
2006	100.0	42.2	57.8	31.4	17.8	8.5
2007	100.0	41.8	58.2	32.8	16.7	8.6
2008	100.0	42.0	58.0	32.1	17.2	8.7
2009	100.0	42.4	57.6	31.9	16.2	9.5
2010	100.0	42.7	57.3	31.4	16.9	9.0

* Primarily personal social services, absorption and housing.

Table 6. Income Maintenance Expenditures
by main component
 in millions of shekels, 2008 prices*

	Total	Old Age and Survivors	Child Allowances	General Disability	Unem- ployment	Income support	Other NII	Nazi Victims
1980	11,685	5,251	3,528	1,284	212	0	1,037	370
1985	15,238	7,024	3,940	1,989	397	508	1,083	296
1989	20,465	8,923	4,715	2,378	1,526	622	1,831	470
1996	31,647	12,557	7,040	3,807	2,197	1,869	3,177	1,000
2000	41,945	15,713	8,090	5,782	3,448	3,350	4,218	1,345
2001	47,288	17,516	8,731	6,801	4,048	4,027	4,707	1,458
2002	45,898	16,848	7,328	7,421	3,853	4,034	4,885	1,528
2003	43,678	16,846	6,595	7,651	2,630	3,512	4,991	1,452
2004	41,977	17,164	5,214	7,731	2,304	3,185	4,992	1,386
2005	41,754	17,452	4,813	8,046	2,139	2,963	5,010	1,332
2006	43,072	18,047	5,228	8,517	2,058	2,758	5,097	1,368
2007	43,834	18,212	5,200	9,168	1,838	2,530	5,401	1,485
2008	44,745	18,425	5,109	9,329	1,840	2,392	5,768	1,880
2009	48,235	19,369	5,414	9,797	3,039	2,495	5,897	2,224
2010	50,333	20,459	5,901	10,135	2,908	2,510	6,214	2,205
Average annual percent changes								
1980-1985	5.5	6.0	2.2	9.1	13.3	..	0.9	-4.4
1985-1989	7.7	6.2	4.6	4.6	40.0	5.2	14.0	12.3
1989-1996	6.4	5.0	5.9	7.0	5.3	17.0	8.2	11.4
1996-2000	7.3	5.8	3.5	11.0	11.9	15.7	7.3	7.7
2000-2005	-0.1	2.1	-9.9	6.8	-9.1	-2.4	3.5	-0.2
2005-2009	3.7	2.6	3.0	5.0	9.2	-4.2	4.2	13.7

* 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	Unemp- loyment	Income support	Other NH	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	39.7	22.2	12.0	6.9	5.9	10.0	3.2
2000	100.0	37.5	19.3	13.8	8.2	8.0	10.1	3.2
2001	100.0	37.0	18.5	14.4	8.6	8.5	10.0	3.1
2002	100.0	36.7	16.0	16.2	8.4	8.8	10.6	3.3
2003	100.0	38.6	15.1	17.5	6.0	8.0	11.4	3.3
2004	100.0	40.9	12.4	18.4	5.5	7.6	11.9	3.3
2005	100.0	41.8	11.5	19.3	5.1	7.1	12.0	3.2
2006	100.0	41.9	12.1	19.8	4.8	6.4	11.8	3.2
2007	100.0	41.5	11.9	20.9	4.2	5.8	12.3	3.4
2008	100.0	41.2	11.4	20.8	4.1	5.3	12.9	4.2
2009	100.0	40.2	11.2	20.3	6.3	5.2	12.2	4.6
2010	100.0	40.6	11.7	20.1	5.8	5.0	12.3	4.4

Table 8. Education Expenditures in Current Budget
by main component
in millions of shekels, 2008 prices*

	Total	General	Pre-schools	Pri- mary	Secun- dary**	Post- Secondary Non Tertiary**	Tertiary	Vocational Training	Yeshivas
1980	16,892	1,764	655	4,805	4,230	773	3,787	582	295
1985	16,500	1,555	782	4,222	4,513	833	3,408	559	629
1989	17,862	1,350	902	4,702	5,246	1,017	3,239	551	855
1996	29,830	2,129	1,655	7,956	8,802	1,782	5,347	858	1,302
2000	32,780	2,307	2,016	8,648	9,483	2,159	5,994	842	1,332
2001	34,209	2,418	2,237	9,325	10,177	2,212	5,613	879	1,349
2002	33,259	2,397	2,270	9,163	9,738	2,189	5,356	908	1,239
2003	33,620	2,176	2,415	9,253	9,698	1,928	6,288	805	1,057
2004	32,255	2,205	2,472	9,258	9,677	1,915	5,365	699	665
2005	31,988	2,287	2,354	9,365	9,182	1,779	5,749	610	663
2006	32,023	2,116	2,473	9,657	8,956	1,880	5,670	544	726
2007	34,013	2,128	2,465	10,768	9,029	1,973	6,148	524	979
2008	34,166	2,019	2,679	11,062	9,363	1,970	5,638	468	967
2009	36,439	2,295	2,626	12,494	9,626	1,804	5,974	615	1,004
2010	37,375	2,404	2,626	12,652	10,274	1,720	6,067	670	961
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	-3.5	3.6	2.7	3.8	5.1	-1.3	-0.3	8.0
1989-1996	7.6	6.7	9.1	7.8	7.7	8.3	7.4	6.5	6.2
1996-2000	2.4	2.0	5.1	2.1	1.9	4.9	2.9	-0.5	0.6
2000-2005	-0.5	-0.2	3.1	1.6	-0.6	-3.8	-0.8	-6.3	-13.0
2005-2009	3.3	0.1	2.8	7.5	1.2	0.4	1.0	0.2	10.9

* Deflated by the Public Civilian Consumption Price Index.

** From this annual report post primary education split to secondary and post-secondary, not tertiary.

Table 9. Health Expenditures out of Current Budget

by main component
in millions of shekels, 2008 prices*

	Gov't financing of health Insurance				Direct Expenditures				
	Total	Parallel Tax	Copayments	Other Transfers	General hospitals	Psychiatric Care	Long Term Care	Public health and other	Other**
1980	11,601	4,716	..	1,867	1,316	911	496	706	1,590
1985	11,414	6,208	201	1,364	538	645	460	569	1,428
1989	11,991	7,695	881	335	162	725	595	499	1,099
1996	17,050	8,709	2,307	1,302	231	1,255	882	782	1,580
2000	16,299	0	10,136	622	191	1,255	1,151	1,223	1,722
2001	17,166	0	10,547	533	536	1,371	1,306	1,112	1,763
2002	17,110	0	10,536	750	291	1,435	1,300	1,064	1,734
2003	16,879	0	10,314	878	182	1,468	1,315	1,064	1,660
2004	17,644	0	10,851	1,006	203	1,463	1,420	1,074	1,627
2005	18,020	0	11,251	877	180	1,613	1,283	1,094	1,722
2006	18,185	0	11,555	707	184	1,522	1,337	1,116	1,764
2007	17,321	0	10,547	647	141	1,581	1,336	1,062	2,007
2008	18,310	0	11,094	838	73	1,604	1,368	1,157	2,175
Average annual percent changes									
1985-1989	1.2	3.5	..	-29.6	-25.9	3.0	6.7	-3.2	-6.3
1989-1996	5.2	4.7	..	21.4	5.2	8.2	5.8	6.6	5.3
1996-2000	-1.1	-3.3	44.8	-16.9	-4.7	0.0	6.9	11.8	2.2
2000-2005	2.0	..	2.1	7.1	-1.2	5.2	2.2	-2.2	0.0
2005-2009	0.7	..	1.6	-3.1	-6.1	-22.6	2.3	1.8	9.4

* Deflated by the Public Civilian Consumption Price Index.

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

**Table 10. Investment Expenditures
as 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	5.5	4.9
2000	3.6	2.8	3.3
2001	3.3	2.2	3.0
2002	2.6	1.8	2.3
2003	2.4	1.3	2.0
2004	1.7	0.9	1.4
2005	2.0	1.0	1.6
2006	1.8	1.4	1.7
2007	1.8	1.2	1.6
2008	1.9	1.4	1.7
2009	3.7	2.7	3.4
2010	1.6	1.3	1.5

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 2008 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.

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); 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 2010 data are budget data updated to the time the report was prepared), and on the Statistical Quarterlies of the National Insurance Institute (the 2009 data are estimates of final expenditure, as prepared by the Research and Planning Division 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 the sources of data:

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.

— *Price Statistics Monthly*, various periods.

Ministry of Finance. *Budget Proposal and Explanatory Notes*, various years.

— The Accountant General. *Financial Statements*, various years.

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

— *Quarterly Statistics*, various periods.

— *Working Budget and Explanatory Notes*, various years.

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

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Israel's Education System

An International Perspective and Recommendations for Reform

Dan Ben-David*

Abstract

This chapter compares Israel's education system over the past decade in relation to OECD countries. The achievement levels of Israel's children are consistently below those of each country in the reference group of 25 OECD countries in nearly all of the years surveyed. Achievement gaps within Israel are wider than in each of the OECD countries in each of the years, while the achievement levels of both the weakest and the strongest pupils are at the bottom – or very close to the bottom – of achievements in the Western world. If, in the past, it was possible to argue that the country's education system was not short of money, budgeting cuts over the past decade have effectively removed this argument. The chapter concludes with highlights of a proposed systemic educational reform.

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1. Quality versus quantity – the relationship between education and the country's economy and society

The underlying reason for the relative decline in Israel's standard of living – compared to leading Western countries – and the country's high rates of poverty and income inequality (major socioeconomic problems described in the chapter "A Macro Perspective of Israel's Society and Economy") is neither destiny nor misfortune. These outcomes are not preordained consequences of war or of immigrant absorption, but direct outcomes of national priorities, policies, implementation, and enforcement.

One of the primary causes – albeit not the only one – of the current socioeconomic situation is Israel's educational system. Numerous studies show the impact that education has on a wide range of phenomena, from incomes and job prospects at the personal level to the rate of economic growth at the national level. Less educated individuals are much more likely to be poor than highly educated ones. Strong correlations have also been found between years of schooling and rates of employment.

Other than the unique exception of the ultra-Orthodox Jews, who adopt the model of life-long learning in subjects that do not generally contribute much toward increasing skills required by modern competitive economies, Israel is similar to other Western countries. That is, the higher a person's level of education, the greater the chances of finding work and increasing income (Figure 16 in the chapter "Israel's Labor Market"). What benefits people at the personal level also contributes at the national level. In the mid-1980s and early 1990s, a series of studies were published examining the impact of policy factors on steady state economic growth – that is, their effect not only on the height but also on the slope of the long run growth path. At the theoretical level, Lucas's (1988) seminal paper demonstrated how individual decisions on the amount of time spent on acquiring education affected not only the level of production, but also its rate of growth.

Studies by Barro (1991), Mankiw, Romer and Weil (1992), and Barro and Lee (1993) were among the earliest empirical corroborations of the link between education and economic growth. More years of schooling per person were found to be related to faster economic growth. Furthermore, greater education among the poor also improves their employment and income opportunities. But what about the third side of the triangle – income disparity? Preliminary findings in Israel by Ayal Kimhi (2009) indicate that more years of schooling in Israel also help to reduce income disparity.

While learning – measured in years of schooling – can have a major effect on economic growth, poverty and income inequality, the impact of education quality appears to be at least as substantial. The measurement of education quality's effect on a country's rate of economic growth began in earnest just over a decade ago. In an economy that is open to the world, not only do firms have to compete with one another, but so do workers. In modern economies, the ability to compete is determined by physical and human resources. Workers change jobs several times during their lifetimes and need a first-rate educational toolbox – one that contains as much knowledge as possible in fundamental areas such as reading, writing, mathematics, science, etc. – in order to cope with transitions between jobs.

It is no coincidence that for many years, Western countries have been conducting comparative examinations of their children's knowledge in the core subjects. Early last decade, a pioneering study (Hanushek and Kimko, 2000) examined the relationship between economic growth and the quality of education in core fields of study. Using a sample of 76 countries between 1960 and 1990, Hanushek and Kimko examined how economic growth was affected by several variables: years of schooling, student/teacher ratios, ratios of education expenditures to GDP, and educational quality, as reflected by students' achievements in international tests in core fields of study. When the achievements variable is not included in the examination, the years of schooling variable provides a statistically significant explanation for economic growth.

However, when all the aforementioned variables are included in the examination, the variable found to have the strongest effect on economic growth is the level of student achievements. The higher the national level of achievements in the core subjects, the higher the country's rate of growth.

Follow-up research by Hanushek and Woessmann (2009) searched for causal relationships, finding that improvements in the quality of education are related to increases in individual earnings and in national economic growth. Findings pertaining to immigrants from the same country who obtained their education in different countries – with different qualities of education – indicate that those who studied in a country with better education (as measured by student achievements) also attained higher earnings. Hanushek and Woessmann also found that increases in educational achievement within countries are related to increases in rates of economic growth.

In light of the accumulating findings concerning the relationship between education quality and socioeconomic outcomes, and in view of the fact that Israel is currently situated on socioeconomic trajectories that are unsustainable in the long run, what future contribution can Israel's society and economy expect from the country's current educational system?

2. Educational Achievements in Core Fields of Study

Comparing the achievements of Israeli pupils in the core fields to the achievements of pupils in other countries is a sobering exercise when one takes into account the socioeconomic ramifications for Israel's future. In the 1960s, when the country's growth rate was among the highest in the world and its level of inequality was among the lowest, the achievements of Israeli pupils in international mathematics tests were the highest in the West (Ben-David, 2003). In retrospect, it turns out that the sample of Israeli children was biased, so the rankings should be treated with a measure of caution. Even in later years, Israel's samples were not

representative of the entire pupil population, with Arab pupils not participating in the international tests until the mid-1990s and the ultra-Orthodox (or, as they are referred to in Israel, *haredi*) pupils still not participating. The difficulty in conducting accurate comparisons of Israel with other countries over the years raises important questions regarding the national mechanisms for measurement and assessment in the area of education.

However, even without accounting for *haredi* pupils, how do the rest of Israel's children compare to other Western countries since the late 1990s? Research conducted by Nachum Blass (2008) shows that no deterioration took place in Israeli achievements over the past decade. This is the good news. The bad news is that while achievements may not be falling, the overall level of Israeli achievements over the past decade has been very low.

One of the problems in comparing Israel's relative achievement level to those of other countries in the various international tests stems from the varying groups of countries participating in each test. Israel's ranking consequently tends to fluctuate, which makes it difficult to estimate the real level of education in Israel. In addition, some countries participating in international tests are developed and some are not, further complicating the comparisons. To minimize some of these issues, the focus in Table 1 is on a fixed group of 25 developed countries on each of the tests administered over the past decade and a comparison of these countries to Israel.

In light of an education system's importance in determining the social and economic future of a country, the cross-country comparisons shown here are quite problematic from the Israeli perspective. The average level of achievement demonstrated by Israeli lower secondary school pupils was below that of each of the 25 OECD countries in all but one of the international tests administered over the last decade. In four out of the five tests, the percent difference between the OECD and Israel was in double digits. Considering the Hanushek and Kimko (2000) and the Hanushek and Woessmann (2009) findings of a significant relationship

Table 1. Average Level of Education in the Western World
 Average achievement levels in 25 OECD countries and in Israel
 over the last decade* (base: Israel = 100)

	TIMSS ¹ 1999	PISA ² 2000/02	TIMSS ¹ 2003	PISA ² 2006	TIMSS ¹ 2007
Israel	100.0	100.0	100.0	100.0	100.0
OECD	113.7	115.8	106.2	113.3	111.7
1 Australia	114.0	120.5	104.9	116.9	108.6
2 Austria		116.8		112.9	
3 Belgium ³	117.0	115.5	107.0	114.8	
4 Canada ⁴	113.9	121.0	108.1	119.0	111.5
5 Czech Rep.	113.4	113.8		112.8	112.0
6 Denmark		113.1		112.7	
7 England ⁵	110.7	120.1	105.9	112.8	113.3
8 Finland	113.0	122.8		124.3	
9 France		115.4		110.8	
10 Germany		110.8		113.5	
11 Hungary	116.1	111.0	108.9	110.7	113.4
12 Iceland		115.0		111.0	
13 Ireland		117.0		114.4	
14 Italy	104.1	107.8	99.1	105.3	104.7
15 Japan	120.9	123.5	114.0	116.3	120.7
16 Korea	121.6	123.1	116.6	121.8	123.5
17 Netherlands			108.9	117.1	
18 New Zealand	107.2	120.8	103.0	117.9	
19 Norway		114.0	97.1	109.5	102.7
20 Portugal		104.9		105.9	
21 Slovak Rep.			104.2	108.4	
22 Spain		110.7		107.1	
23 Sweden	116.2	116.6	104.0	113.4	107.6
24 Switzerland	114.5	115.2		115.4	
25 U.S.A.	108.9	113.4	104.8	108.3	110.4

* Not including ultra-Orthodox Jews in Israel.

¹ National average in math and science exams.

² National average in math, science and reading exams.

³ Flemish Belgium in TIMSS.

⁴ Average of Canadian provinces participating in TIMSS 2003 and 2007.

⁵ U.K. rather than England in PISA.

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

Data: from TIMSS and PISA.

between achievements in these tests and economic growth, Israel's current generation of children – who will be the country's next generation of workers – will be at a major disadvantage when they enter the future global marketplace.

The achievement problem is not only one of levels, as reflected in national averages. The full severity of this problem is evident in the wide achievement gaps within Israel. As education is a major springboard to the job market, a country with such large disparities in educational achievements will find it even more difficult to reduce its already large income gaps.

Blass and Adler (2009) describe a broad policy of affirmative action in Israel, but gaps in educational achievement within Israel remain very high. In core areas of education, the gaps between Israeli pupils are higher than the gaps within each of the OECD countries, in every one of the five tests administered over the past decade (Table 2). In fact, educational gaps within OECD countries are about 20 percent lower on average than those within Israel since 1999.

Eleven out of the 25 OECD countries participated in the most recent TIMSS (Trends in International Mathematics and Science Study) exam in 2007. That year, educational differentials within the United Kingdom were so big that the country ended up above all other OECD participating countries – though still in second place to Israel – on measures of educational disparity. Disparity within the U.K. was 15 percent less than the disparity within Israel. Another country providing a relatively unequal education is the United States. In two of the five tests detailed in Table 2, educational gaps within the U.S. placed it above all of the other countries – except Israel. In 2007, educational gaps within the United States were 20 percent lower than within Israel. The gaps among pupils within Israel are unparalleled in the Western world, with all of the social and economic implications that this has for the country's future.

Table 2. **Educational Inequality in the Western World**

Average achievement levels in 25 OECD countries relative to Israel
over the last decade* (base: Israel = 100)

	TIMSS ¹ 1999	PISA ² 2000/02	TIMSS ¹ 2003	PISA ² 2006	TIMSS ¹ 2007
Israel	100.0	100.0	100.0	100.0	100.0
OECD	80.8	77.6	87.4	85.0	77.5
1 Australia	83.1	78.4	92.4	83.4	79.5
2 Austria		75.6		89.9	
3 Belgium ³	72.6	88.8	82.4	93.4	
4 Canada ⁴	75.1	73.7	73.5	81.7	69.8
5 Czech Rep.	79.1	78.4		92.5	72.5
6 Denmark		78.9		79.0	
7 England ⁵	86.6	79.5	90.6	88.0	84.5
8 Finland	71.1	69.9		73.3	
9 France		77.5		89.0	
10 Germany		86.6		91.9	
11 Hungary	84.1	80.8	91.8	80.9	81.0
12 Iceland		72.6		79.5	
13 Ireland		74.0		79.5	
14 Italy	86.6	76.4	91.2	88.7	77.0
15 Japan	77.6	72.1	88.8	86.8	81.0
16 Korea	81.6	64.4	90.6	80.1	84.0
17 Netherlands			76.5	83.0	
18 New Zealand	90.5	84.4	89.4	90.4	
19 Norway		80.0	82.9	86.6	69.5
20 Portugal		75.9		82.2	
21 Slovak Rep.			92.9	86.6	
22 Spain		74.2		79.3	
23 Sweden	74.6	76.2	85.3	83.4	74.0
24 Switzerland	76.1	82.7		86.0	
25 U.S.A.	92.0	83.3	94.7	86.8	79.5

* Not including ultra-Orthodox Jews in Israel.

¹ National average in math and science exams.

² National average in math, science and reading exams.

³ Flemish Belgium in TIMSS.

⁴ Average of Canadian provinces participating in TIMSS 2003 and 2007.

⁵ U.K. rather than England in PISA.

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

Data: from TIMSS and PISA.

At a time when Israel's poverty rates are among the highest in the West, it is interesting to examine the education provided to the weakest pupils – those who are in the bottom five percentiles – and compare them with the weakest pupils in OECD countries. As it turns out, Israel's weakest students are the weakest in the Western world, and by a relatively large margin.

Over the span of all five international exams administered over the past decade, the average achievements of the OECD's weakest pupils were about one-third higher than their Israeli peers' (Table 3). Italy's weakest pupils were at the bottom of the OECD in 2007. Yet, their low achievements were still 24 percent higher than those of Israel's children.

The problems of Israel's educational achievements do not end with the low national average (lower than every OECD country in nearly every one of the exams), with the highest educational inequality in each exam versus each OECD country, or even with the very poor achievements of its weakest pupils relative to their peers in all other OECD countries in all years. These problems also manifest themselves in the achievements of the country's top pupils.

The State of Israel has one of the finest higher education systems in the world: more Nobel laureates in the sciences over the last decade than in all but four other countries; research universities ranking among the world's 150 best by scientific citations; a high-tech sector with more patents and inventions than most countries of the world; and, physicians who are considered among the world's best. It seems reasonable to assume that behind these achievements in science, research, medicine, and patents are the outstanding pupils of the past. What awaits Israel's next generation? How do Israel's top pupils compare to the top pupils in other Western countries?

Table 3. **Comparison of the Weakest Pupils in the Western World**

Average achievement levels of bottom 5th percentile in 25 OECD countries relative to Israel over the last decade* (base: Israel = 100)

	TIMSS ¹ 1999	PISA ² 2000/02	TIMSS ¹ 2003	PISA ² 2006	TIMSS ¹ 2007
Israel	100.0	100.0	100.0	100.0	100.0
OECD	135.1	148.9	113.8	131.4	134.6
1 Australia	133.7	157.9	110.1	139.1	129.2
2 Austria		151.7		125.7	
3 Belgium ³	144.2	132.1	114.0	124.7	
4 Canada ⁴	139.0	163.5	123.0	143.0	139.5
5 Czech Rep.	137.8	144.7		126.0	139.3
6 Denmark		143.6		135.3	
7 England ⁵	128.5	156.4	113.1	129.4	132.0
8 Finland	140.0	169.2		159.5	
9 France		148.6		122.3	
10 Germany		130.2		126.3	
11 Hungary	136.9	139.7	117.0	131.1	136.2
12 Iceland		153.0		128.5	
13 Ireland		154.4		138.2	
14 Italy	116.0	135.7	102.6	115.6	123.5
15 Japan	148.1	166.0	124.0	134.1	146.4
16 Korea	146.7	173.8	126.2	149.0	148.7
17 Netherlands			121.9	138.4	
18 New Zealand	118.4	151.6	108.9	135.4	
19 Norway		143.0	102.4	124.5	124.5
20 Portugal		130.9		121.2	
21 Slovak Rep.			109.5	121.8	
22 Spain		143.3		125.2	
23 Sweden	141.1	151.6	111.5	133.2	129.4
24 Switzerland	139.7	143.4		132.8	
25 U.S.A.	121.1	140.0	108.8	124.7	131.7

* Not including ultra-Orthodox Jews in Israel.

¹ National average in math and science exams.

² National average in math, science and reading exams.

³ Flemish Belgium in TIMSS.

⁴ Average of Canadian provinces participating in TIMSS 2003 and 2007.

⁵ U.K. rather than England in PISA.

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

Data: from TIMSS and PISA.

A comparison of the outstanding pupils in different countries – the top five percentiles of each country – appears in Table 4, and it does not provide much support for the expectation of continued national success in academia, medicine, or high tech at the levels and rates that the country has thus far known. Israel's top pupils ranked below those of nearly all OECD countries in each of the years examined.

These outcomes pertain primarily to lower secondary school pupils who participate in the international exams. Bridging the gap between this age group and the entrance requirements of Israel's universities, which are still among the best in the world, is not a simple hurdle to overcome – especially for secondary school pupils from families without the financial wherewithal for obtaining oft-needed private assistance that can fill in knowledge deficits left by the public education system. Even with this assistance, there nonetheless exists a sense among much of the senior academic faculty – particularly in the more technical disciplines – that an increasing number of students arrive with knowledge deficits when they begin their academic studies. (Unfortunately, this feeling is based on no more than anecdotal evidence, since it has not been examined in any methodical manner.)

In its six decades of existence, the Israeli educational system has failed to introduce any form of consistent and systematic measurement that would enable it to monitor improvements or deterioration over time. While the industrialized world has been examining itself in core curriculum fields for many years, at least by means of representative samples in international tests, Israel has neither utilized the international exams to evaluate the quality of education provided to all its children, nor has it conducted national examinations that are comparable over time.

There is no evidence that can enable the government to know whether the achievement levels in Israel have risen or fallen over the years. There are only impressions, which are no substitute for facts. Following the recommendations for education reform of the government-appointed Dovrat Commission (2005), a measurement and evaluation unit was created as an independent authority within the Ministry of Education.

Table 4. Comparison of the Top Pupils in the Western World
 Average achievement levels of top 5th percentile in 25 OECD countries
 relative to Israel over the last decade* (base: Israel = 100)

	TIMSS ¹ 1999	PISA ² 2000/02	TIMSS ¹ 2003	PISA ² 2006	TIMSS ¹ 2007
Israel	100.0	100.0	100.0	100.0	100.0
OECD	106.2	103.8	102.1	104.5	103.9
1 Australia	106.6	107.6	102.0	106.8	103.0
2 Austria		103.9		105.0	
3 Belgium ³	106.0	104.9	100.2	106.2	
4 Canada ⁴	105.0	106.5	101.0	107.5	102.0
5 Czech Rep.	106.8	103.2		106.6	103.8
6 Denmark		102.3		102.7	
7 England ⁵	106.2	107.9	103.1	105.5	106.5
8 Finland	103.5	106.5		109.3	
9 France		103.6		103.2	
10 Germany		102.8		106.2	
11 Hungary	109.0	102.0	105.5	101.9	105.9
12 Iceland		101.9		102.4	
13 Ireland		103.4		104.1	
14 Italy	100.4	98.2	97.4	99.8	98.2
15 Japan	110.3	106.9	108.5	106.9	111.2
16 Korea	112.3	104.4	110.2	108.9	113.8
17 Netherlands			101.8	106.3	
18 New Zealand	103.5	109.0	100.6	109.5	
19 Norway		103.0	93.7	102.4	94.7
20 Portugal		96.0		98.6	
21 Slovak Rep.			102.1	101.6	
22 Spain		99.4		98.5	
23 Sweden	106.0	104.2	100.1	104.5	100.0
24 Switzerland	106.0	105.0		106.0	
25 U.S.A.	105.5	104.4	102.8	102.8	103.6

* Not including ultra-Orthodox Jews in Israel.

¹ National average in math and science exams.

² National average in math, science and reading exams.

³ Flemish Belgium in TIMSS.

⁴ Average of Canadian provinces participating in TIMSS 2003 and 2007.

⁵ U.K. rather than England in PISA.

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

Data: from TIMSS and PISA.

This authority recently began administering tests that are calibrated and will enable today's results to serve as future benchmarks.

In contrast to the education system, the Israel Defense Forces (IDF) examines all individuals who report for compulsory military duty, though it does not make this information publicly available. Very limited findings pertaining to reading comprehension were made public in lectures by Shlomo Dovrat, who headed the government's education task force.

In the mid-1980s, 60 percent of native-born Israeli children passed the test at level 9 or higher (in the military's literacy tests, level 9 is considered satisfactory). By 1997, this number had dropped to 40 percent. By 2002, it was down to only 32 percent. In other words, within less than two decades, the share of native-born Israelis with satisfactory reading comprehension declined by close to 50 percent. The IDF tests are apparently not calibrated every year, with all that this implies with regard to the accuracy of comparisons over time. However, it is hard to believe that a drop of this magnitude over such a short period of time does not imply a substantial decrease in the reading comprehension abilities of Israel's children.

Despite the statistically significant relationship between achievements in the core disciplines and economic growth, there are a non-negligible number of people in Israel who do not attach great importance to the fact that Israeli pupils' achievements are low. In fact, many argue that education quality is not measurable and, therefore, it makes no sense to try to quantify it. Furthermore, there is a prevailing notion in the country that Israelis tend to think more "outside the box" than is common in other countries. It is unclear whether this presumed advantage can be attributed to Israeli education or to the Israeli character. In any event, developing creativity does not have to come at the expense of basic knowledge and tools.

It is difficult to know, and even more difficult to measure, the importance of creativity. But there is no doubt that this is a very important asset when it comes to coping in the economic marketplace.

However, the measured and proven fact is that the knowledge of Israel's children in fundamental core disciplines is below that of children from other countries, with whom they will have to compete in a few years. Whatever relative advantages Israeli children may or may not possess in the realm of creativity will not be sufficient to overcome major deficiencies in the areas of basic knowledge.

Why are educational achievement levels so low in Israel? Among the reasons commonly provided are insufficient budgets, cutbacks in instructional hours, crowded classrooms, sub-standard teachers, inadequate curricula, discipline problems and violence, large scale immigrant integration, and more.¹ While limited scope and space preclude the possibility of addressing all these claims, the next section, focusing on educational inputs, will address the main conjectures under the following headings: What is being taught? How is the material being taught? Who is doing the teaching?

3. Educational Inputs

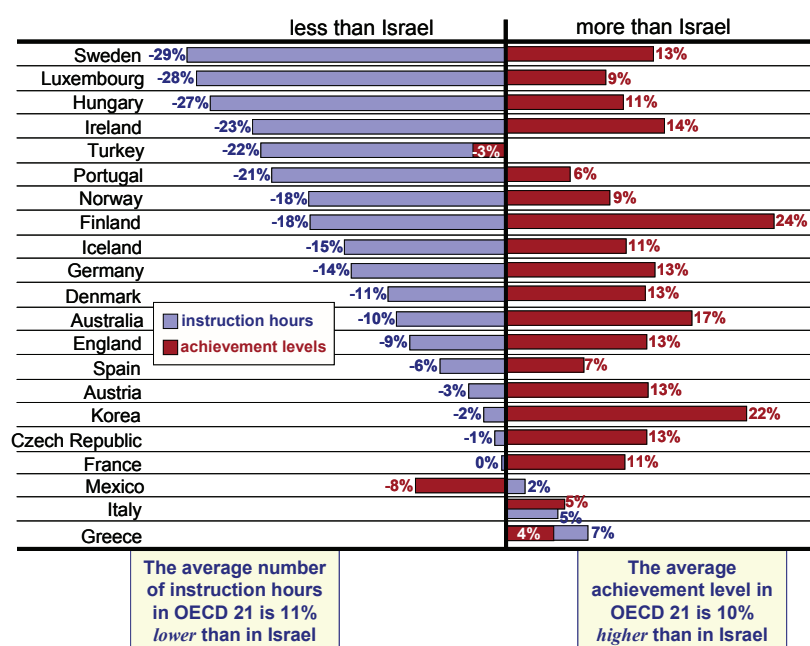
3.A. What is being taught?

Are the poor achievements of Israeli children in international exams due to an insufficient number of instructional hours? A comparison of the number of instructional hours in 21 OECD countries in 2007 indicates that the total number of instructional hours given to 15-year-olds (the age of participants in international tests) varies considerably between countries: from 741 hours per year in Sweden to 1,117 hours per year in Greece. Compared to an average of 921 hours per year for 15-year-olds in 21 OECD countries, Israeli pupils receive 1,040 hours. The study showed not only that the average number of instructional hours in the OECD is lower than Israel's, but also that 18 out of the 21 countries provide fewer

¹ Shavit and Blank (2009) find a significantly link between achievements in the 2003 TIMSS international exams and violence and discipline problems in class.

instructional hours than Israel (Figure 1). This did not prevent 19 of these 21 countries from attaining higher achievement levels than Israel in the latest PISA (Programme for International Student Assessment) tests conducted by the OECD. In other words, although the average number of instructional hours in 21 OECD countries was 11 percent lower than Israel's, their average achievement in the tests was 10 percent higher.

Figure 1
Instruction Hours and Achievement*
21 OECD countries relative to Israel



* Cumulative number of intended instruction hours for 15-year-olds in public institutions (2007) and average achievement levels in math, science and reading in PISA 2006.

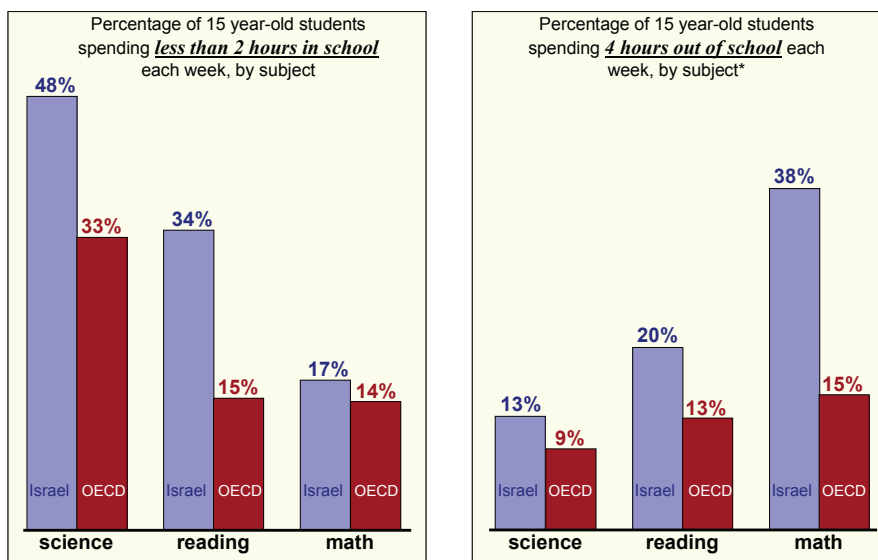
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: OECD.

In some respects, this issue is similar to the discussion regarding the impact of education quality versus number of years of schooling as the primary factor affecting incomes and economic growth. The total number of budgeted hours appears to be less important than how those hours are being utilized. Pupil surveys conducted by the OECD in 2006 shed some light on this question. Fifteen-year-old pupils in OECD countries and in Israel reported how many hours per week were spent in school studying the core subjects, and how many hours were devoted to out-of-school lessons, self-study and homework.

The percentage of pupils studying science for less than two hours a week in school was 33 percent on average in OECD countries. In Israel the share was 48 percent – almost 50 percent more than the OECD (Figure 2). In reading, 15 percent of OECD pupils studied less than two hours per week in school, while more than twice as many, 34 percent, studied under two hours in Israeli schools. The mathematics picture is more balanced, but still tilted toward the OECD, where 14 percent of the pupils had less than two hours per week of math in school compared with 17 percent in Israel. This is the situation despite the fact that Israel budgets more instructional hours than 18 of 21 OECD countries.

Figure 2 also shows the flip side of these findings: the percentage of pupils who studied for four hours outside school every week. In Israel the share of those pupils is higher by roughly 50 percent than in the OECD for science and reading, whereas in mathematics it is more than double – an average of 38 percent in Israel compared with just 15 percent in the OECD studied for four hours outside school every week.

Figure 2
Amount of Learning – In and Out of School
 Israel and the OECD, 2006



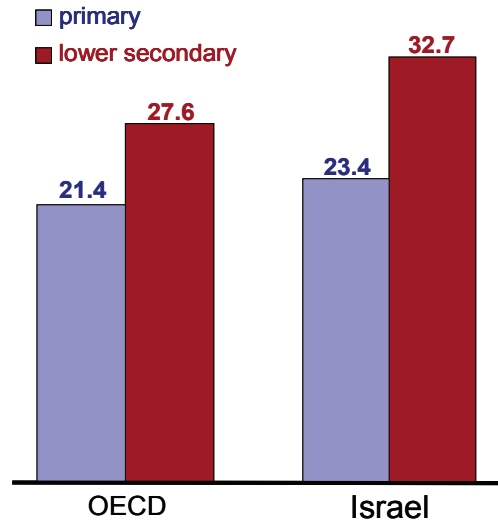
* Out-of-school lessons, self-study or homework.

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

3.B. *How is the material being taught?*

Figure 3 compares class sizes in Israel to the OECD average. In primary schools, the Israeli class has two more pupils on average. In lower secondary schools, classes are larger both in the OECD and in Israel, and the difference rises to five additional pupils in an Israeli class.

Figure 3
Average Class Size, 2007
 number of pupils per class



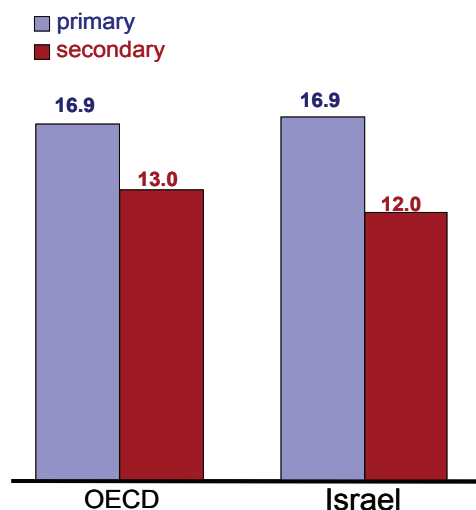
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: OECD.

To the extent that large classes have a negative effect on educational achievements – a premise that is not universally accepted – the question remains, why are there so many pupils in Israeli classrooms? Is there really an insufficient number of teachers in Israel to facilitate a reduction of class size to levels that are more common in the West? The OECD publishes comparative data of the number of full-time-equivalent (FTE) positions and pupils. As shown in Figure 4, the number of pupils per teacher in Israeli and OECD primary schools is nearly identical: 16.9 vs. 16.0, respectively. The FTE numbers are very similar for secondary schools, with a slightly lower ratio of pupils to teacher in Israel (12.0) than in the OECD (13.0).

The lack of teacher mobility between Israel's four education streams and the splitting of classes between boys and girls that is done in some of these do not contribute to greater equality in class sizes, but neither do they resolve the conundrum of Israel's relatively large class sizes and the country's pupil per teacher ratios that are on a par with the OECD's. One possible explanation could be the high proportion of part-time teachers in Israel. But since the number of teachers in this analysis reflects full-time equivalent positions, the issue of part-time jobs is not relevant in this context. Thus, the discussion returns to square one: if the number of pupils per teacher in Israel is similar to that of the OECD, then why aren't average class sizes similar as well?

Another possibility is that more than one teacher is present in the class – with one teacher, for example, helping a small group of pupils, while the head teacher teaches the larger group. If this is the explanation for the contradiction between class size and the number of pupils per teacher, then the issue is not the lack of teachers but a matter of policy. Alternatively it may be the case that many teachers are not involved in

Figure 4
Number of Pupils Per Teacher*, 2007



* According to full-time equivalents.

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

Data: OECD.

actual teaching but in other roles (such as administration, training or supervision) while being listed in the records as teachers.

There may be another explanation: If Israeli pupils receive more instructional hours, while the number of instructional hours per teacher in Israel is similar to that of the OECD, and if the number of pupils per teacher is also similar in Israel and in the OECD, then the number of pupils per class should indeed be larger in Israel. But according to data published by the OECD, net in-class teaching time per teacher per school year in the OECD is 22 percent lower, on average, than in Israel. Since pupils receive 10 percent more instructional hours in Israel than in the OECD, then combining these numbers indicates that the ratio of pupils per teacher should be lower in Israel than in the OECD – while in fact the ratios are similar.

OECD data for lower secondary schools show that teachers in Israel teach 11 percent more hours per year – so here, too, there is a problem reconciling the official numbers. Consequently, either the number of hours taught by Israeli teachers is in actual fact lower than the number of hours reported, or the number of instructional hours provided Israeli students is higher than reported. If a full-time position in Israel consists of fewer instruction hours than in the OECD, then for the same number of teachers in Israel and the OECD, the number of positions in Israel, in terms of full-time equivalents, must be higher, and the pupils per teacher ratio in Israel must be lower – which in fact it is not.

The bottom line is that there seems to be substantial discrepancies in data reported regarding the number of instructional hours, the number of teaching hours, class sizes, and the number of pupils per teacher in Israel. It is not possible to reconcile the reported data, which raises questions about the degree of transparency in Israel's education system and about its actual distribution of resources.

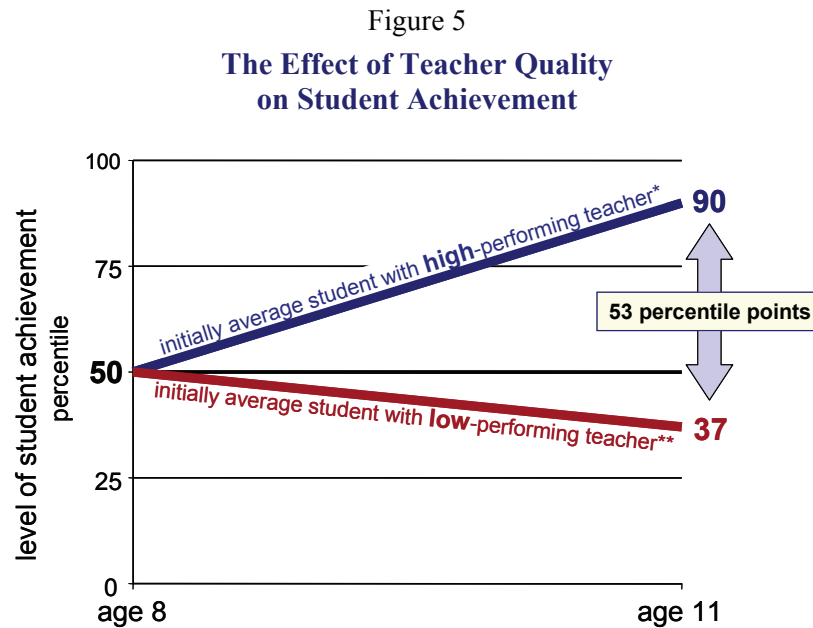
The non-compatibility issues in the data regarding crowded classrooms are also reflected within a more specific dimension – namely, science classes. The number of pupils per teacher in science classes is 12.7 in Israel and 13.4 in the OECD. In light of the fact that the OECD

also funds less instruction hours, then it is not clear why almost half of Israel's 15-year-olds receive fewer than two hours of science instruction in school per week while only one-third of the OECD pupils in this age group receive less than two hours in school.

3.C. *Who is doing the teaching?*

In Israel there are about two dozen teaching colleges of varying academic levels. Admission requirements in these teaching colleges are lower than those in almost every academic department in the country's universities. While the personal ability of some teachers is very high, which would have enabled them to be admitted to university studies had they so desired, many teachers choose this vocation due to an inability to get accepted to better academic alternatives. It may be unrealistic to expect teachers with relatively low academic ability to sufficiently challenge and teach children with higher personal capabilities than their own.

In this context, it is useful to note the impact of teachers on children's educational future. Studies emanating from a Tennessee project on the impact of teachers with different qualities on pupils' educational future are illuminating in this regard. Sanders and Rivers (1996; 2002) found that on average, two pupils who are both at the 50th percentile (i.e. at the median) in terms of achievements when they are eight-years-old will have an achievement gap of 50 percentage points develop between them by the time they are 11 as a result of differences in the quality of their teachers (Figure 5). In other words, the substantial impact of a teacher on pupils' achievements can be observed at least four years after the pupil left that teacher's class. The upper quintile of teachers (in terms of teaching quality) provides substantial improvements in pupils' achievements at all levels, regardless of ethnic background.



* Among the top 20% of teachers.

** Among the bottom 20% of teachers.

Sources: Sanders and Rivers (1996 and 2002), McKinsey (2007).

4. Educational Expenditures

The provision of high quality education and the reduction of educational disparities depend not only on the allocation of existing resources but also on their availability in sufficient amounts. The key question in this context is what constitutes “sufficient” levels of education expenditure? This question can be addressed using a comparative approach at two levels: Israeli expenditures in comparison with other countries and in comparison with the past. Expenditure levels will also be compared to

achievement levels to attain a better understanding of what can be achieved with different levels of spending.

How do Israel's education expenditures look from an international perspective and in comparison to the past? The share of gross domestic product (GDP) that is spent on public education in Israel is greater than in any other country in the world. Expenditure to GDP ratios are commonly used in international comparisons of education spending across countries. In Israel's case, however, this measure is a bit more problematic because of the high percentage of pupils in the Israeli population compared with most Western countries. With relatively more children per capita, it is only natural that the country spends a greater share of its total output on education.

For this reason, a more relevant international comparison in Israel's case would be to focus on expenditure per pupil in each country. While there are few disagreements within Israel that comparisons of expenditures per pupil are preferable to comparisons of expenditure-GDP ratios, there are differences of opinion as to how to continue the international comparisons from this point on. Many in Israel are content to divide education expenditures per pupil by purchasing power parity (PPP) as a way of translating expenditures into U.S. dollars and facilitating comparison with other countries. Such a translation of shekel-denominated expenditures to dollars using PPP is preferable to the use of official exchange rates (which are subject to volatility due to speculation and other activities), but it does not take into account differences in living standards across countries.

Some of the public debate in Israel during recent years has revolved around misunderstandings of the difference between comparisons using purchasing power parity and those using GDP per capita – which reflect living standards. A numerical example can be useful in highlighting these differences in measurement. Say a book costs NIS 100 in Israel and \$40 in Australia. Suppose, too, that the official exchange rate between the Australian dollar and the Israeli shekel is 3 shekels per dollar while the purchasing power parity equals 4 shekels per dollar. In this case, the price

of the book according to the exchange rate will be \$33 and its price according to purchasing power parity is \$25 – with the latter considered the more accurate reflection of the price in Australian dollars. However, the more relevant question here is not the dollar price of the book, but the quantity of books that the average citizen can buy in each country. If GDP per capita in Israel equals NIS 10,000 while GDP per capita in Australia equals \$3,600, then the average Israeli can buy 100 books while the average Australian can buy only 90.

This is how Israel's expenditure per pupil should be compared to other countries. In light of the fact that (a) the lion's share of education expenditure in all countries is spent on salaries; and (b) the level of wages in each country is strongly related to the country's standard of living, then it is problematic to compare education expenditures across countries without adjusting for differences in living standards.² In other words, it is insufficient to adjust education expenditures for exchange rate differences, as is done using purchasing power parities. The normalization of education expenditures across countries needs to account for differences in living standards.

For example, average public expenditure per Israeli primary school pupil in 2006, adjusted by purchasing power parity, was \$5,006. Expenditure per pupil in Australia that same year was \$5,686 (also adjusted by PPP). Had this been the only comparative measure used, then educational expenditure per pupil in Australia is higher than in Israel. However, in 2006, the PPP-adjusted GDP per capita in Israel was \$24,756, while in Australia GDP per capita was \$35,666. Hence, the standard of living in Australia was 44.1 percent higher than in Israel, while expenditure per pupil there was 13.6 percent higher.

A comparison of education expenditures that takes into account differences in living standards – that is, dividing expenditures per pupil in each country by GDP per capita – indicates that this normalized

² As shown in Ben-David (2003), the correlation coefficient between educational expenditure per pupil and GDP per capita across 40 countries is 0.93 in primary schools and 0.95 in secondary schools.

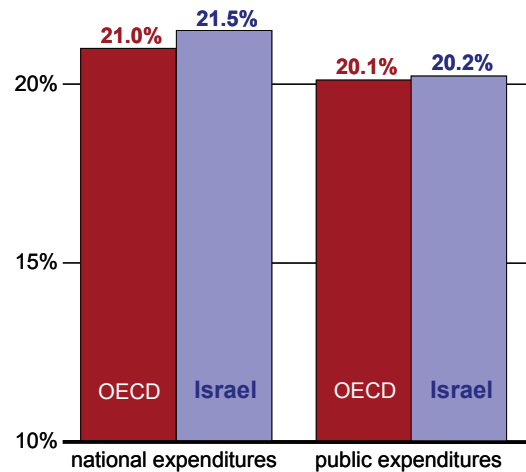
expenditure per Australian pupil equals 15.9 percent of the annual per capita income in Australia. In Israel, however, the educational expenditure per pupil represents 20.2 percent of the average income. In other words, Israel spent more of its per capita income on education per primary school pupil than did Australia.

There is ostensibly an alternative method for comparing educational expenditures across countries. It involves using the ratio of public expenditure on education (E) to GDP (Y) which, as noted, is generally agreed on as an insufficient measure for comparison because Israel has more pupils (P) per capita (N) than in most other developed countries. To normalize the expenditure to GDP ratio (E/Y) and make it comparable across countries, it is possible to divide this measure by the number of pupils per capita (P/N). Note that this normalization, represented by the division of (E/Y) by (P/N), is algebraically equivalent to the normalization of expenditure per pupil represented by the division of (E/P) by GDP per capita (Y/N).³ Both forms of normalization lead to the same outcome, and this – rather than the simple use of purchasing power parities – is the most accurate way to compare educational expenditures across countries.

Figure 6 compares educational expenditures per primary school pupil – after normalization by GDP per capita – in Israel and in 24 OECD countries in 2006. It turns out that primary educational expenditures in Israel are very similar to the OECD average. National educational expenditure per pupil is 21.5 percent of GDP per capita in Israel, compared to 21.0 percent in OECD countries, while public education expenditure per pupil is 20.2 percent of GDP per capita and 20.1 percent in the OECD.

³ A more complete analysis appears in Ben-David (2003).

Figure 6
Expenditures – Primary Education
 per pupil, as a share of GDP per capita, 2006

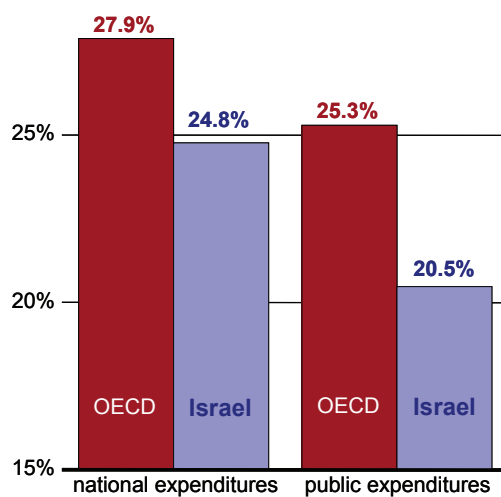


Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: OECD.

National educational expenditure per secondary school pupil in Israel was 24.8 percent of GDP per capita in 2006, reaching 27.9 percent of GDP per capita in the OECD (Figure 7). Differences favoring the OECD were even greater in the realm of public expenditures, with secondary education expenditures per pupil in Israel reaching 20.5 percent of GDP per capita while in the OECD it was 25.3 percent of GDP per capita – that is, 23 percent greater expenditures in the OECD. These differences in educational spending are considerably different than those in the 1990s. They are the product of ongoing cutbacks in educational budgets throughout this decade.⁴

⁴ It is important to note that the high rate of immigration into Israel had a strong impact on the education system. Achievements among immigrant children are initially usually lower than those of the native-born while substantial expenditures need to be made to facilitate their integration.

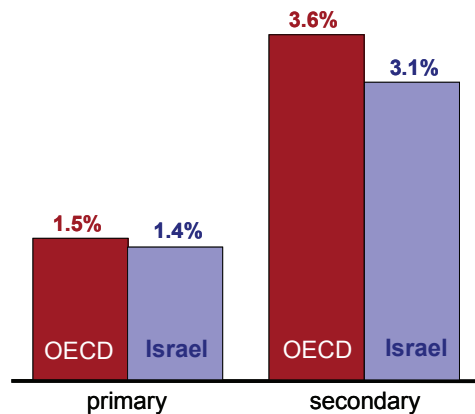
Figure 7
Expenditures – Secondary Education
per pupil, as a share of GDP per capita, 2006



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

Household spending on primary education (Figure 8) shows many similarities between Israel and OECD countries, namely 1.4 percent of GDP per capita is spent in Israel compared to 1.5 percent in the OECD. For secondary schools, household spending is more than double that of primary schools: 3.1 percent of GDP per capita in Israel and 3.6 percent in the OECD.

Figure 8
Household Expenditures
Primary and Secondary Education
 per pupil, as a share of GDP per capita, 2006



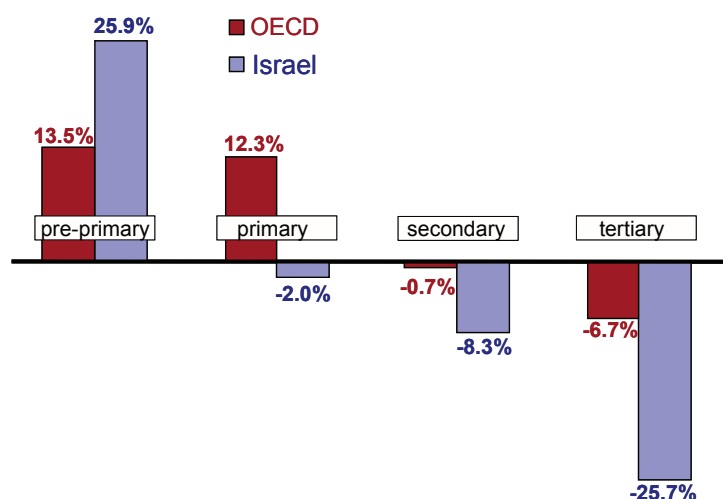
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: OECD.

Figure 9 summarizes the changes in public expenditure on education between 1999 and 2006. For pre-primary education, expenditure per pupil – normalized by GDP per capita – grew by 14 percent in OECD countries and by 26 percent in Israel. This is a process of closing gaps, as spending per student in Israel rose to 13 percent of GDP per capita, compared with 14 percent in the OECD. Household expenditures in Israel and in the OECD for pre-primary education are similar, at about 3 percent of GDP per capita. These expenditures have changed little since 1999.

In primary education, public expenditures rose 12 percent in OECD countries compared with a decline of two percent in Israel. This pincer movement reduced gaps between the two, although expenditures per pupil in Israel remain higher. Secondary education expenditure in Israel has declined much more sharply than primary education expenditure,

while in the OECD, expenditures exhibited very little change. Consequently, a gap was created between the OECD's relatively higher public expenditure on secondary education and Israel's.

Figure 9
Percent Change in Public Expenditures, 1999-2006
per pupil, as a share of GDP per capita



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

The problem with the international comparison is that the data ends in 2006, which was a turning point in Israel's education expenditures. The chapter "Public Expenditures" reviews Israel's budgetary allocations over the past several decades, including a focus on the government's education expenditures. The chapter illustrates not only changes in education expenditures in recent years, but also shows these changes within a long run perspective that makes it possible to distinguish between annual and short run changes on the one hand, and multi-year trends and changes in trends on the other. The budgetary changes that have taken place since

2006 have manifested themselves primarily in a substantial increase in the primary education budget (full details in the chapter “Public Expenditures”). Pre-primary education expenditures per pupil were less than half the primary school expenditures per pupil and were stable (in real terms) from 2000 to 2009, after having steadily risen from the mid-1980s to the late 1990s.

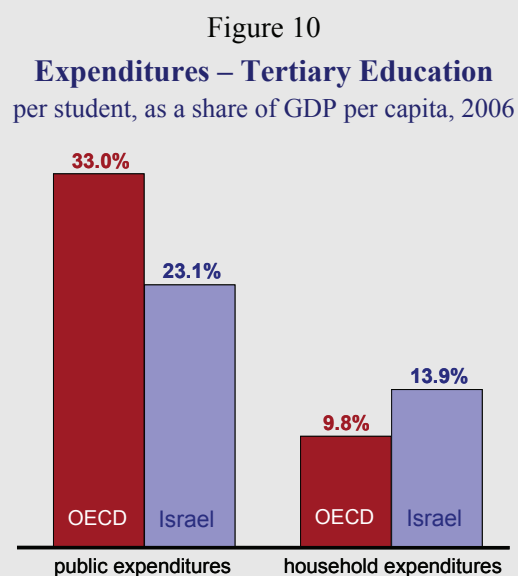
The behavior of secondary education expenditures has been much more complex over the years. Expenditures per pupil for secondary education in the mid-1980s were double that of primary education and 4.7 times that of pre-primary schools. However, these differences in education spending at various educational levels narrowed considerably by 2009. Secondary education expenditures per pupil in 2009 were only eight percent higher than primary school expenditures and 2.7 times higher than those of pre-primary schools.

The reduction in spending gaps over the past 25 years was the result of a larger increase in expenditures per pupil for primary education (182 percent) and pre-primary education (160 percent) than in secondary education (52 percent). This is not just an issue of greater growth in primary and pre-primary education spending. Since 1997, while education expenditures per pupil rose by 35 percent in primary schools and by 14 percent in pre-primary schools, they fell by nearly eight percent in secondary schools – this, despite a six percent increase in secondary school spending over the past three years.

Spotlight: A Glance at Higher Education

The steepest decline in education expenditure between 1999 and 2006 occurred in higher education (Figure 9), both in Israel and among the OECD countries. Public expenditure per student (as a percentage of GDP per capita) in the OECD fell by seven percent and in Israel by 26 percent of GDP per capita.

Expenditure per student in Israel, which reached 31 percent of GDP per capita in 1999, was lower than the OECD average of 35 percent. Since then, expenditure per student in Israel fell to 23 percent of GDP per capita (Figure 10), a level 30 percent lower than that of the OECD countries. In fact, Israel's public higher education expenditure per student in 2006 was lower than that of 21 of the 24 OECD countries, for which comparable data are available.



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

Conversely, household expenditure per student in Israel was higher compared to 16 out of 21 OECD countries for which data are available. This expenditure, amounting to 13.9 percent of GDP per capita, is 42 percent higher than the corresponding expenditure in the OECD, which stands at 9.8 percent of GDP per capita.

The various problems plaguing the Israeli higher education system are reflected in – among others things – an academic brain drain that is unparalleled in the Western world (Ben-David, 2008a). The severe crisis that recently befell the American economy affected many leading American universities, providing Israel with an exceptional opportunity to bring back many researchers who, but for the crisis, might have remained in the United States.

A more extensive overview of the changes in Israeli higher education and in its research universities, in the number of academic staff positions and in budgets, as well as a focus on the academic brain drain, can be found in Ben-David (2008a and 2008b).

5. Education Outcomes Versus Expenditures

When Israel is compared to the five leading countries – in term of their children's educational achievements – in the recent 2006 PISA tests (Figure 11), there are only slight differences in education spending, but much greater differences in achievements.⁵ Average achievements of Finnish children were 24 percent higher than those of Israel's children, while achievement gaps between Finnish children – expressed in standard deviations in these tests – are 27 percent below the Israeli gaps (data on the gaps appear in Table 2). While Finland had considerably higher achievements and much smaller gaps than Israel, its expenditures per pupil, normalized by GDP per capita, were just four percent higher than

⁵ In the absence of education expenditure data for Canada, the country is not included here even though its children's achievements would have allowed it.

Israel's – while Finnish primary school expenditures per pupil were actually two percent lower than Israel's.

In the other four countries whose pupils scored highest in the international tests, achievement gaps between the countries and Israel ranged from 17 percent (in Australia) to 22 percent (in South Korea). On the other hand, achievement gaps within these countries were 10-12 percent smaller than in Israel. The OECD achievement leaders accomplished these outcomes with secondary education budgets per pupil (adjusted to standards of living) no greater than four percent above the Israeli budgets. In fact, primary education expenditures in these countries were even lower than Israel's.

Figure 11

Educational Achievement and Public Expenditure

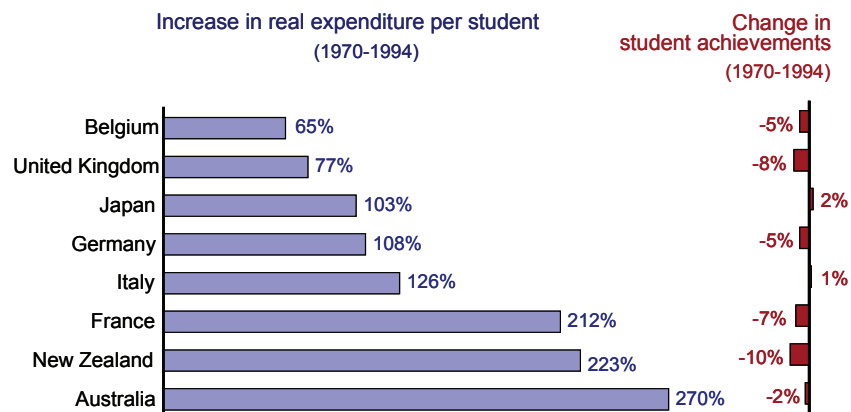
Israel and the top five scoring countries in PISA, 2006



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

There is plenty of evidence on the lack of a relationship between expenditures and outcomes in education. Figure 12 shows results from McKinsey and Company (2007) on the lack of a relationship between real changes in expenditures per pupil and changes in achievements in eight Western countries over 25 years. Similar results arise when the focus is on 23 OECD countries and Israel between 2000 and 2006. The lack of a relationship between changes in secondary education expenditures per pupil in secondary schools (normalized by GDP per capita) and changes in PISA test achievements is reflected in a correlation coefficient of -0.29. This result also aligns with the Hanushek and Kimko (2000) finding of a non-significant relationship between the ratio of educational expenditures to GDP and economic growth. Increasing education budgets without also prioritizing and specifying methods that have been shown to produce educational improvements is tantamount to wasting limited and valuable resources.

Figure 12
Education Spending and Outcomes in the OECD



Source: McKinsey, 2007.

Data: McKinsey, 2007; UNESCO, 2005; Pritchett, 2004; Woessmann, 2002.

6. Policy Proposal: Comprehensive Educational Reform

Given the centrality of education as a key component in Israel's primary infrastructures, and taking into account that the State of Israel is situated on socioeconomic trajectories that are unsustainable in the long run (see the chapter "A Macro Perspective of Israel's Society and Economy"), it is imperative that the country formulate and implement a comprehensive and systemic reform in its educational system. There are no magic solutions nor is there a consensus regarding the necessary policy.

A number of major proposals were made over the past decade for a systemic reform in Israeli education. The E.L.A. Commission (2003) and the National Taskforce for the Advancement of Education in Israel (more popularly known as the Dovrat Commission) in 2004 were the earliest and most comprehensive. Other reform proposals came from teachers' unions and the Ministry of Education. In addition, a Presidential Task Force in cooperation with the Minister of Social Affairs and Social Services and the Taub Center presented a report recommending reforms in the education system (Taub Center, 2008).

With the exception of large increases in the education budget in recent years – including an increment of NIS 3.4 billion in the government's 2006-2009 primary and secondary education budgets, which in fact reflects a net budgetary expansion of NIS 2.6 billion (after adjusting for growth in the pupil population) – no systemic reform was implemented. In the absence of such a reform, there is no reason to expect dramatic changes in the educational achievements of Israeli children, with all the implications that this has on future rates of poverty and income inequality and on the country's average living standards and economic growth rates.

The Taub Center recently published "*A Comprehensive Program for Reducing Inequality and Poverty and Increasing Economic Growth in Israel*" (Taub Center, 2009), which provides a general strategic perspective and guidelines for systemic reform in the country's education system. This program is based on recommendations by the E.L.A.

Commission (of which this author was a member), the Dovrat Commission and those of the Taub Center. There are three fundamental legs in this strategic program: teachers, curricula, and management and organization on all levels.

6.A. Teachers

- A substantial increase in teachers' salaries to make them comparable to Western levels (relative to GDP per capita) alongside a significant improvement in the quality of the teaching workforce and in the professional requirements of teachers.
- Professional training requiring attainment of at least a BA degree from a university or general college with similar admission requirements, as well as a teaching certificate.
- The number of work hours per day and work weeks per year for full-time teachers should be similar to the norm in other sectors of the economy.
- There needs to be more flexibility in the employment of teachers and in the determination of their salaries to provide appropriate financial incentives for achievement. Every attempt should be made to complete this transition in cooperation with the unions representing the teachers.
- Each teacher should have an individual workspace in the school.

6.B. Curricula

- Establishment of a professional and non-partisan National Education Authority with a mandate to determine the credo of the education system and its core curriculum. The authority should comprise a staff of 20-25 professionals and a limited number of administrative staff.

- Implementation of a core curriculum that is binding in all the education systems. In order to receive a license, each school in Israel must adopt and implement the core curriculum.
- The core curriculum must be uniform in content and in quality if the future economic playing field is to be level.
- While Israeli society is characterized by numerous lifestyles, each of which demands an education that reflects its distinct social and religious perspective, there is only one economic market in which all the country's citizens must compete and thrive without becoming a burden on society. Therefore, a country that wants an egalitarian – and not just a successful – society must ensure that the enhanced “toolbox” be provided at equal levels in all its education systems, in all its towns and neighborhoods, in all parts of the country. The various education systems can emphasize additional areas above and beyond the core curriculum.

6.C. Management and organization on all levels

- Financial resources should be provided to the schools on the basis of transparent and equal budgetary criteria, with supplementary funding that takes into consideration the socioeconomic status of the student population and incentive programs. This requires a shift from budgeting per class to budgeting per child for all levels of schools. Funding should be in monetary terms and not based on teaching hours.
- Special budgets should be provided to individual schools as an incentive for rewarding school achievement.
- The State of Israel must provide free education – in practice and not just on paper – to every child from age three through the end of grade 12. This budget should enable schools to implement a comprehensive study program, including both the core curriculum and the elective curriculum. The balance between the core curriculum and the elective curriculum should be determined by the National Education

Authority. Only a national education system with a systemic perspective can reduce regional, ethnic and religious gaps. This is the role of the State.

- The school principal – who should have professional management training – will prepare the work plans and allocate resources. The principal will be responsible for implementing the work plans, achieving the goals, adhering to the budget, and for recruiting and dismissing teachers (subject to labor agreements).
- A school board (similar to a firm's board of directors) should be established for each school. The board's main duties will be: supervising the work of the principal; approving the school's work plans and budgets; and approving the appointment and dismissal of teachers. The school board will include representatives of four groups: the Ministry of Education, the local authority, parents, and teachers – with a majority of representatives from the Ministry of Education and the local authority.
- Activation of an education department in the local authority.
- The education department will set educational targets – beyond the national core curriculum – adapted to local community preferences, which will be implemented in the framework of elective studies and/or extracurricular frameworks.
- Members of the education department will represent local interests on each of the school boards within its jurisdiction, thereby enabling the municipality to have an input on the choice of principal, the school's educational targets, and also the approval of the principal's work plan.
- For the reasons specified above, the core and elective curriculums should be funded entirely by the Ministry of Education. The local authority and the parents will be able to augment these budgets in order to implement local educational priorities.

6.D. *Conclusion*

Improvements in one of these elements without consideration for the remaining two will not be successful and will lead to a waste of resources. Talented teachers who are carefully chosen and properly compensated must be able to work with substantially upgraded curricula that are much more focused on core subjects (reading, writing, mathematics, science, English, and so on). Yet even this is not enough. The education system must make the connection between personal accountability and personal authority and must utilize positive and negative incentives, as needed, to get people engaged in education to do their best.

A systemic reform in education will not be cheap and will require additional resources. With the exception of defense, however, there is no more important or more justified investment in the future of the State of Israel.

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Israel's Education System

A Domestic Perspective

Nachum Blass*

Abstract

Demographic developments within the education system indicate the advent of a new situation in which pupils in the Jewish State school system will be a minority of the overall pupil population. This situation has potentially more damaging implications due to the fact that the achievements of Arab Israeli and ultra-Orthodox pupils in core curriculum subjects do not meet global market requirements and this will make it difficult for them to be integrated fully into Israeli society. The Ministry of Education budget utilization data revealed that, despite the fact that affirmative action has long been an integral part of the Education Ministry policy, there are still significant gaps between different parts of the education system. An in-depth examination of the system in this chapter reveals its positive and negative aspects.

In the past decade two processes with important and long-term implications for the Israeli education system are at work – the substantial change in Israel's demographic makeup and the inadequate

* Special thanks to Yulia Cogan from the Taub Center for her help in data processing and for preparation of the figures in this chapter.

expansion of the education budget. The demographic change consists of a growing share of ultra-Orthodox schools and Arab Israeli schools in the overall education system, and the budgetary problem is expressed in all its severity in the continuous decline, which only recently stopped, of the level of expenditure per pupil in large parts of the system. Both processes have critical implications for the nature of the education system, its ability to reach the goals of the State Education Law (1953)¹ and its graduates' abilities to cope successfully with the challenges they face in a modern, democratic society.

The new State budget for 2009-2010, as well as the Ministry of Education's goals as phrased in comments made by the Education Minister, Mr. Gideon Sa'ar, to the Knesset Education Committee (Ministry of Education, 2009), pertain primarily to the Jewish State and State-Religious schools, which constitute today no more than 55 percent of the education system and are expected to be only about half of it or even less by 2013. They do not reflect these changes and are inadequate considering the full implications of these demographic processes.²

This chapter reviews developments that took place in the pupil and teacher populations of the education system (sections 1 and 2), various aspects of budget allocations for education (sections 3 and 4), and highlights the educational and social implications of demographic changes. The chapter ends with an overall look at the education system against the backdrop of the developments discussed (section 5).

¹ See, for example, Article 2 in *the State Schools Law, changes to the law 2000*, "to inculcate the principles of the declaration on the establishment of the State of Israel and the values of Israel as a Jewish and democratic State and to develop respect for human rights, fundamental freedoms, democratic values, following the law, the culture and worldview of others, and to educate for pursuing peace and tolerance in relations among humans and peoples." See explanations and commentary in: <http://lib.cet.ac.il/Pages/item.asp?item=3332> (Hebrew).

² Although the 2010 State Budget indicates a considerable increase in the budget of about 7 percent compared with the budget for 2009, it should be pointed out that the 2009 budget is identical to the 2008 budget, except for the price increases in 2008.

1. Pupils in the Education System³

Israel's education system is composed of and divided along a number of lines, the main and most commonly accepted of which are ethnicity (as reflected in the division into Arab Israeli and Jewish sectors), and the type of supervision within the Jewish sector, which relates to the level of religious observance in schools (divided into State, State-Religious and ultra-Orthodox schools). Most publications by the Ministry of Education and the Central Bureau of Statistics (CBS) separate the education system by sectors (Jewish and Arab) and, within the Jewish system, by type of supervision. However, this approach does not reflect, and may even obscure, the real meaning of the greatest change that took place in the education system over the past decade. This change consists of the transformation of two groups of pupils, those of the Arab Israeli and ultra-Orthodox Jewish sectors, from relatively small minorities to a very large component. They already represent 43 percent of all the primary and secondary school pupils, and are expected to become the majority – unless unforeseen changes occur in Israel's population growth pattern – in the near future.

The very rapid changes in Israel's pupil population will soon turn into large changes in the composition of the adult population. In view of their low employment rates (see the chapter "Israel's Labor Market"), the high rates of poverty in Israel in general and in these two population groups in particular, and Israel's low economic growth rate in the past three decades (see the chapter "A Macro Perspective"), a key question arises: what kind of education does the State of Israel provide for the ultra-Orthodox and Arab Israeli pupils today? Is the education given today to Israel's future adult majority adequate for the needs of Israeli society?

³ Most tables and illustrations in this section, unless otherwise stated, are based on data provided by the Educational Management Information System, Ministry of Education, on the Internet. Occasionally there are differences between that system's data and that of the Central Bureau of Statistics but the data is more up to date and based on administrative data of the Ministry of Education.

When reflecting on this question it is important to recall two facts that may have a great impact on the answer. One, which is uncontested, is that the Arab Israeli pupils' achievements are significantly lower in all the tests and in all the criteria than those of Jewish pupils; the other is that since the ultra-Orthodox pupils do not take part in State-wide comparative tests or in international tests, there are no measures to reflect their knowledge level in the basic educational study areas.

1.A. *The Education System as a Whole and Its Key Components*

Israel's education system expanded from about 400,000 pupils in 1960, to about 800,000 in 1980, to nearly 1.3 million in 2000, and to 1.5 million in the past year (Table 1). Because of the massive increase of the education system as a whole, over the decades the rate of growth of the system declined even though the absolute increment (about 200,000 on average per decade) did not change. In the past decade the increment was smaller (about 175,000 pupils by 2009) while in the 1990s it was above average, following the large immigration wave, which expanded the education system by nearly 300,000 pupils.

Table 1. **Pupils in Primary and Secondary Education, 1960-2014***

	Total	State	State-Religious	Ultra-Orthodox	Arab
1960	396,329	239,264	94,776	23,605	38,685
1970	608,826	347,588	135,707	29,574	95,956
1980	800,036	475,899	133,927	30,949	159,261
1990	995,324	584,500	155,525	47,513	207,787
2000	1,293,350	673,762	187,975	152,585	279,027
2009	1,468,264	651,045	200,550	226,694	389,975
2014*	1,561,368	624,878	211,090	278,554	446,847

* Forecast of pupils of the Central Bureau of Statistics (CBS). It is important to note that since 1999 the ultra-Orthodox statistic includes pupils in *Talmud Torah*.

Source: CBS (2009). *Statistical Abstract of Israel*, No 60.

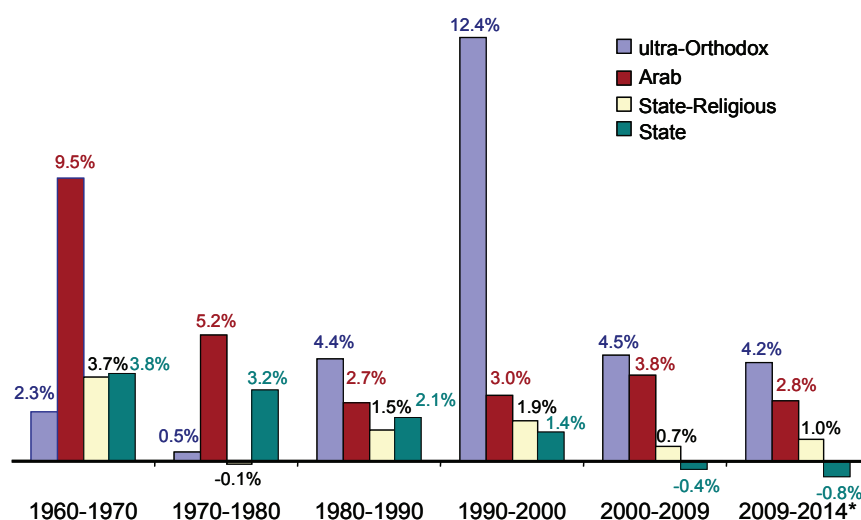
The rate of growth in the number of pupils gradually declined over the decades. From 4.4 percent on average per year in 1960-1970 it dropped to 1.3 percent on average per year in the last decade 2000-2009, and is expected to further decline to 0.6 percent on an annual average between 2009 and 2014. Nonetheless, the growth in the total number of pupils in the education system does not reveal the most significant change that occurred in this system. This is the change in the composition of the pupil population resulting from different growth rates in various parts of the system (see Table 2 and Figure 1).

Table 2. **Overall Growth in Primary and Secondary Education, 1960-2014***, Rate of average overall annual change, by decades

1960-1970	1970-1980	1980-1990	1990-2000	2000-2009	2009-2014*
4.4	2.8	2.2	2.7	1.3	0.6

Figure 1

Pupils in the Education System
rates of change, annual average, by decades



* CBS projection of the number of pupils.

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

The growth rate in the number of Arab Israeli pupils (ensuing from rises in both fertility and the rate of school attendance)⁴ was, in all the decades, higher than those of the State and State-Religious schools systems, even during the decades of very large waves of immigration. Thus, the number of pupils in the Arab Israeli sector expanded from about 10 percent of the overall pupil population in 1960 to 22 percent in 2000 and over 25 percent in 2009. Their share is expected to reach 29 percent by 2014 (see Figure 2).

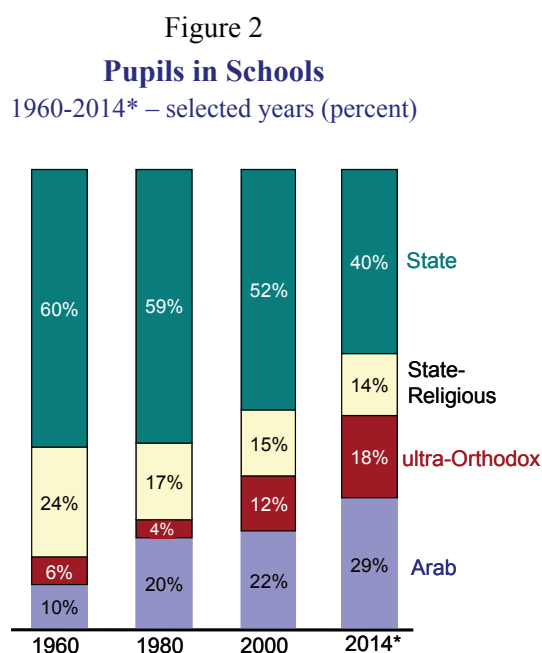
The expansion of the pupil population in the ultra-Orthodox sector began to intensify in the 1980s and persisted at a higher rate than in any other population group. The growth of the ultra-Orthodox pupil population reached a peak in the 1990s. This resulted in part from a change in the Central Bureau of Statistics' reporting method, namely the inclusion of pupils in *Talmud Torah* and exempted institutions.⁵ The numbers kept growing in the 2000s and are likely to continue. Ultimately the ultra-Orthodox sector grew from 4 percent of the overall pupil population in 1980 to 15 percent in 2009, and is expected to reach 18 percent by 2014.

In comparison with these two population groups, the Jewish State schools – which were the majority in 1960, with 60 percent of the overall pupil population – already constitute a minority. Currently only 44 percent of pupils are in the State schools, and its share is expected to continue declining to 40 percent by 2014. In fact, from the beginning of this decade it is no longer an issue of merely a decrease in the share of the

⁴ The Ministry of Education distinguishes between the Arab, Bedouin, Druze, and Circassian sectors. Here we include all four of these sectors under the title “the Arab Israeli sector,” avoiding the term the “Minorities Segment” or the “non-Jewish sector”, which are resented by Arab educators. Notwithstanding the above, according to the issue under discussion, we shall also refer to the distinction in the Arab sector, between Arab Israelis, Druze, and Bedouins, and between the formal and the recognized education in this sector.

⁵ “Exempted” schools are schools (mostly ultra-Orthodox) that are not bound by most educational laws concerning curricula, staffing, etc., but are still allowed to operate. These schools receive only limited state funding.

Jewish State schools, but of an actual decline in the number of pupils in it, a trend that has been getting stronger since 2000.



* CBS projection of the number of pupils.

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

To summarize, the differences in rates of growth of the pupil population in the different sectors, as observed in the separate sectors of the education system, clearly reflect a rapidly rising share of ultra-Orthodox and Arab Israeli pupils in the overall education system – and a substantial decline in the share of the Jewish State schools system.

1.B. The Education System by Education Level

Pre-primary schools

The growth in the number of pre-primary school pupils – kindergartens and pre-kindergartens (ages 3-5) – is not uniform in the different sectors of the education system. The overall number of children in pre-primary schools in Israel grew by about 22 percent over the last decade (until 2009). The growth rate was negligible in the State and State-Religious schools (2.4 and 7.6 percent, respectively for the whole period) but very fast in the ultra-Orthodox (47.5 percent) and Arab Israeli (53.4 percent) schools.

In the State and State-Religious schools, most of the rise resulted from natural population growth; there were no changes in attendance rates, since most children had already been enrolled in municipal and public pre-primary schools (attendance rates of close to 100 percent). On the other hand, following the introduction of the Compulsory Education Law for 3 to 4-year-olds, ultra-Orthodox pre-kindergartens showed an increase in attendance. This led to a higher proportion of private (neither municipal nor public) pre-kindergartens, the preferred type among ultra-Orthodox parents. That is, the proliferation of ultra-Orthodox schools in the overall pre-primary education was predominately in the share of children in private pre-kindergartens. Also among the Arab Israelis there was an exceptional increase. Attendance rates of 3 to 4-year-olds in pre-kindergartens rose, from 34 percent for 3-year-olds and 43 percent for 4-year-olds in 2000, to 75 and 83 percent, respectively, in 2008. Higher attendance rates and rapid natural population growth led to a total expansion in Arab Israeli pre-primary schools of 82 percent for 3-year-olds, 62 percent for 4-year-olds, and 33 percent in 5-year-olds. Most probably, a large percentage of this growth resulted from increased attendance rates following the introduction of the free pre-primary school

education law for children aged 3-4 and from increased awareness in the Arab Israeli sector of the importance of early childhood education.⁶

Table 3. **Pre-Kindergarten and Kindergarten Pupils, by Education Sector, 2000 and 2009**

	Total	State	State-Religious	Ultra-Orthodox	Arab
2000	300,934	130,490	52,540	61,955	55,949
2009	367,394	133,619	56,555	91,376	85,844
Rate of Increase	22.1	2.4	7.6	47.5	53.4
<i>Distribution in Percent</i>					
2000	100.0	43.4	17.5	20.6	18.6
2009	100.0	36.4	15.4	24.9	23.4
Rate of Increase		-16.1	-11.8	20.8	25.7

Ultimately, the share of ultra-Orthodox and Arab Israeli pupils in pre-primary schools rose from 40 percent in 2000 to 49 percent in 2009, and the maximization of attendance rates of pre-primary school age children in the coming years is bound to cause these two groups to become the majority in the overall number of pupils in the population.⁷

Primary Education

Changes in the primary education best reflect the demographic changes in the 6-11 age group, since attendance rates of this age group in the education system (in all its components) are already very high. In the

⁶ An inspection in permanent Bedouin settlements showed that some children are registered in the pre-primary schools but do not participate in the activities, yet the State transfers tuition financing for these children to the school operators (Blass, 2007).

⁷ A particularly interesting phenomenon in the ultra-Orthodox schools is that the number of children in these kindergartens is significantly higher than the number of children in the first grade in the same education system: the number of pupils aged 5, enrolled in ultra-Orthodox kindergartens, is around 29,000, whereas the number of first grade pupils is about 21,000-22,000.

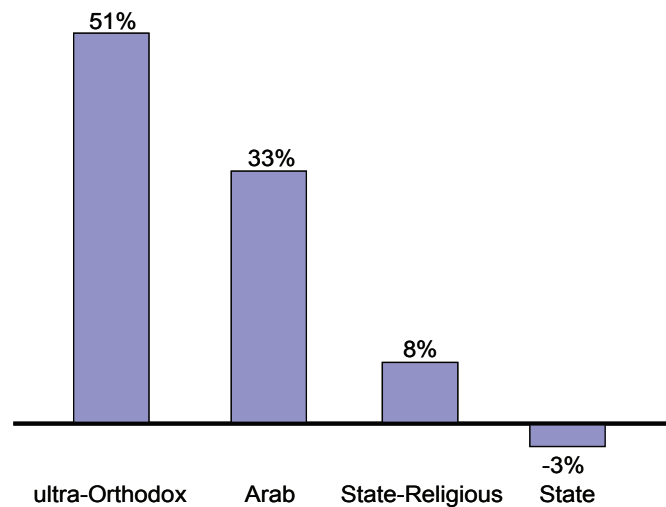
absence of significant transfers from sector to sector, only the natural demographic growth is responsible for the changes in the number of pupils in primary schools. The composition of pupils in primary schools is not essentially different from those in kindergartens, but there are differences in the rate of the changes.

While the overall pupil population in primary schools grew by 15 percent over the past decade, in the State schools it declined by 3 percent and in the State-Religious schools it grew by only 8 percent, compared with 51 percent growth rate in the ultra-Orthodox schools and 33 percent in the Arab Israeli schools (Figure 3). The growth in the Arab Israeli primary schools is less than the growth that took place in kindergartens (due to the rise in pre school and kindergarten attendance, as stated). The share of the Arab Israeli primary schools rose from 24 to 28 percent of the overall system (see Section 1.C. for a detailed composition of the Arab Israeli sector).

Figure 3

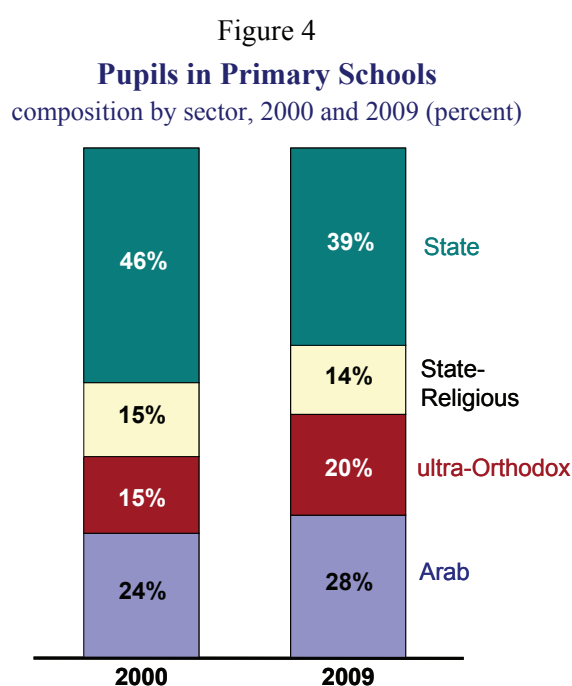
Pupils in Primary Schools

overall change in the decade, 2000-2009, by education sector



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

As a result of the difference in growth rates, the share of the State schools in the overall education system declined over the decade by seven percentage points (Figure 4). During the first part of the decade there was indeed a sharp decline in the number of pupils, which later stopped and even reversed and since 2006 began a certain renewed growth, but the number of pupils in the State schools never regained its 2000 level. It should be noted that the rise in the number of pupils in the primary Jewish State schools conflicts with the Central Bureau of Statistics forecast and differs from the secondary Jewish State schools, which grew until 2002 and have been declining ever since.



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

Table 4. **Primary Education, by Sector and Supervision Type, 2000 and 2009**

	Total	State	State-Religious	Ultra-Orthodox	Arab
2000	743,583	342,030	107,946	112,184	181,423
2009	857,956	331,914	116,105	169,121	240,816
Rate of increase	15.0%	-3.0%	8.0%	51.0%	33.0%
Average annual rate of increase	1.6%	-0.3%	0.8%	4.7%	3.2%

The share of the primary State-Religious schools in the overall education system declined over the past decade by only one percentage point. It is estimated that two factors explain the difference between the development of State-Religious schools and that of the State schools: one is a higher natural population growth rate among parents of this sector in general, and residents of Judea and Samaria in particular (the number of pupils in State-Religious schools in Judea and Samaria increased in the same period by 35 percent),⁸ the other is the referral of all the children immigrating from Ethiopia to State-Religious schools. Since in this community the share of children aged 0-15 is 34 percent (much higher than the 18.5 percent national average) that decision stopped the decline in the number of pupils typical in the State schools. Without this addition, the State-Religious schools would have probably also undergone a process of contraction or of slower growth.

The substantial growth of the ultra-Orthodox schools raised its share in the overall primary education system from 15 percent to 20 percent

⁸ Some of this was doubtlessly due to pupil transfers between sectors, but most of it is a result of natural population growth. For the sake of illustration we can say that the rate of natural population growth of Jews in Judea and Samaria in 2008 was about 5.1 percent, compared with 1.6 percent of the overall Jewish population. Although some Judea and Samaria residents are ultra-Orthodox, like those in *Betar Illit*, *Modi'in Illit*, etc., fertility in the Zionist-religious communities is also above average.

within one decade. There were attempts to explain the great expansion of the ultra-Orthodox school system as a result of massive transfer of pupils from the State and State-Religious schools to ultra-Orthodox schools, which provide children with long school days and lunch. A study conducted by the Taub Center showed clearly, however, that this explanation is baseless and that pupil transfers between the State system and the ultra-Orthodox system are marginal (Blass, Douchan, 2006). The growth in the ultra-Orthodox school system is due to the rapid natural population growth of the ultra-Orthodox population. Further corroboration for this can be found in the correlation between ultra-Orthodox fertility rates and the rates of growth in the number of their pupils.

a) *The Ultra-Orthodox Education.* The evolution process of the entire ultra-Orthodox education system (in both the primary and secondary schools)⁹ over several decades (from 1960 to 2009) indicates two sub-periods displaying opposite trends: in 1960-1980 the share of ultra-Orthodox pupils declined to the low level of 4 percent of the overall education system. Conversely, as of 1980, there has been a continuous trend of increase in the number of ultra-Orthodox pupils, as well as the share of the ultra-Orthodox schools, within the general education system. It is expected to reach 18 percent in 2014.

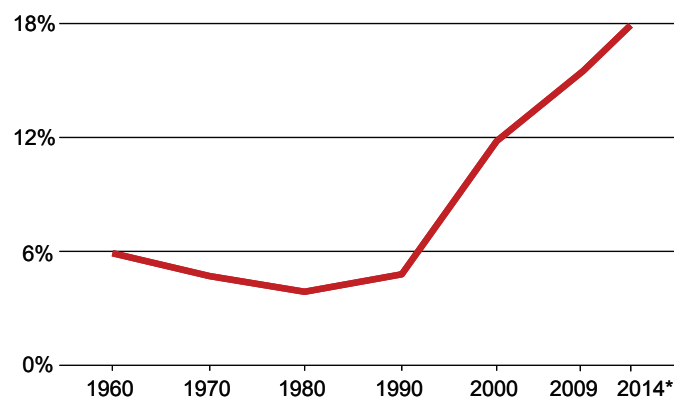
⁹ The presentation of the development by education levels in the context of ultra-Orthodox education is presented early in this discussion, since presenting the ultra-Orthodox education system as a whole and its composition by sectors contributes to the development of its share of the overall education system. We should bear in mind that the share of the ultra-Orthodox in secondary education is relatively low compared to its share in primary education, since many of the ultra-Orthodox pupils enroll in *Yeshivas*, which are not included in secondary education.

Table 5. **The Share of Ultra-Orthodox Sector in the Overall Primary and Secondary Education System, 1960-2014***
(absolute numbers and percents)

	Total	Ultra-Orthodox	Percent of Total
1960	396,329	23,605	6.0
1970	608,826	29,574	4.9
1980	800,036	30,949	3.9
1990	995,324	47,513	4.8
2000	1,293,350	152,585	11.8
2009	1,468,264	226,694	15.4
2014*	1,561,368	278,554	17.8

* Beginning in 2000 the statistics were changed to include pupils in *Talmud Torah* who were not included until then in the official statistics. The data until 1999 regarding the extent of ultra-Orthodox education and its share of the total pupil population is thus skewed downward.

Figure 5
Pupils in the Ultra-Orthodox Sector, 1960-2014*
as a percent of all pupils in the education system



* CBS projection of the number of pupils.

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

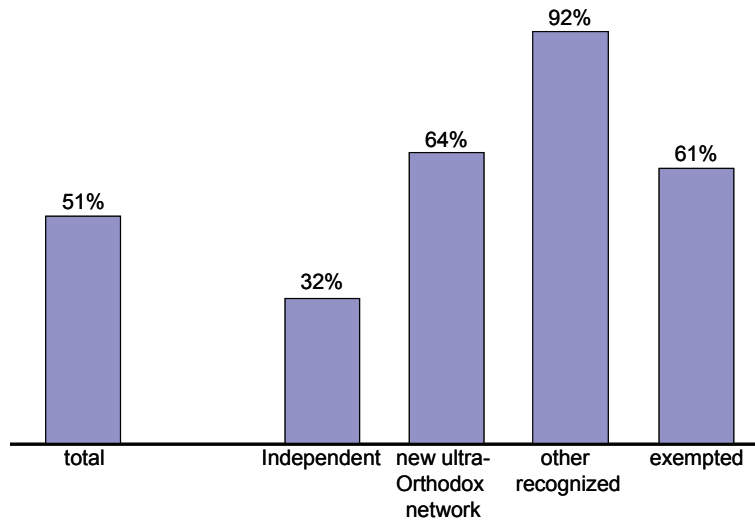
When discussing the ultra-Orthodox schools we should remember that this sector is not a uniform one. In fact it includes four separate systems: the well established ultra-Orthodox network, *Reshet haHinukh ha'Atzmai*; the relatively new ultra-Orthodox network, *Ma'ayan haHinukh haTorani*; unofficial recognized ultra-Orthodox institutions, which are not part of the former two; and the exempted institutions. Considerable differences exist between the four systems in terms of socioeconomic status, content and teaching methods, as well as the demographic dimension, reflected in the rates of increase in the number of pupils they serve (see table 6 and figure 6).

Table 6. **Pupils in Ultra-Orthodox Primary Education, by Educational Network, 2000 and 2009**

	Total	Independent	New Ultra-Orthodox Network	Other Recognized	Exempted
2000	112,184	56,155	14,719	13,463	27,847
2009	169,121	74,226	24,212	25,883	44,800

Whereas the older, larger and well established *Reshet haHinukh ha'Atzmai*, whose schools are relatively larger, grew over the past decade “only” by 32 percent, *Ma'ayan haHinukh haTorani* and the exempted institutions grew by 60 percent and more, and the other recognized institutions grew during the same years, 2000-2009, by 90 percent (Figure 6). The implication of these differences is that most of the growth occurs in smaller institutions and with less rigorous supervision by the Ministry of Education. Our assessment is that while the overall growth in the ultra-Orthodox school system comes from natural population growth, the differential growth of each of the ultra-Orthodox school networks comes from pupils transferring between them.

Figure 6
Pupils in Ultra-Orthodox Schools
 percent growth, 2000-2009



Source: Taub Center for Social Policy Studies in Israel.

Data: CBS.

The demographic development of the ultra-Orthodox schools, like other issues relating to this education sector, has not been sufficiently researched. Yet it can be speculated, that their decline in the earlier years of the State had demographic as well as political reasons. The massive immigration to Israel in the early years of the State, which was primarily secular or Religious-Zionist, turned to the State and State-Religious schools, and consequently the relative share of the ultra-Orthodox schools declined between 1960 and 1980. From the 1980s onward, except for the years of the large immigration wave from the former Soviet Union, the immigrant component in the composition of pupils in the education system lessened and that of natural population growth strengthened.

b) *Public Education and Private Education*. In the context of the expansion of the ultra-Orthodox school system and the educational networks within it lies the issue of the future of public education and the assumed increased demand for private education.¹⁰ However it turns out that this phenomenon – at least in terms of its volume – is relatively insignificant in the Jewish State system. The number of Jewish State school pupils in regular recognized schools (usually referred to as private schools) indeed grew from 1,600 in 2000 to 3,800 in 2009, but it is still negligible at 1.1 percent of the entire Jewish State education system. Also in the State-Religious education system the extent of this phenomenon is small. The number of pupils in the State-Religious education system who are enrolled in unofficial recognized institutions grew from 3,000 to 3,800 and although the growth in question is by nearly 30 percent, the overall number is still negligible relative to the system as a whole (about 3.5 percent).

It is important to note, incidentally, that the fact that most of the pupils in the State and State-Religious schools are enrolled in official institutions (or in public education) does not necessarily indicate a high level of parent satisfaction with public education.¹¹ The choice of the public system may be indicative of the fact that most of the parents who strive for “improved private education” find ways to overcome obstacles and difficulties that arise within the public education without leaving it.

¹⁰ See for example an extensive discussion in *Ha'aretz* newspaper, August 27, 2009. Another important note in this context is that about half of the aforementioned pupils attend one school, the *Real* School in Haifa.

¹¹ Although, as should be noted, a Central Bureau of Statistics publication in 2009 indicated that 75 percent of the public expressed satisfaction with the primary schools their children attended and another 70 percent expressed satisfaction with the secondary schools (CBS, 2009).

Thus, for instance, “unique” schools or complete networks were established within the official education system, which function like private schools for all practical purposes. In this way they can circumvent the high cost required to finance private education for their children, while reaching part of their objective by sending their children to selective institutions or those with their preferred values.

Secondary Education

The secondary education system is characterized by the fact that, in addition to demographic growth and in contrast to what has been found in primary education, it still reflects the influence of the rise in attendance rates, especially in the Arab Israeli sector. Attendance rates among Arab Israeli 17-year-olds reached 84 percent in 2007 versus only 54 percent a decade ago. These rates are still low compared to those of Jewish pupils, 92.5 percent in 2007, and stable for over a decade. Both components (higher fertility rates and increasing attendance rates) contribute to the growth of the share of Arab Israeli schools in the secondary system, from 17.6 percent in 2000 to 25 percent of all pupils in 2009.

In the Jewish sector, as in the primary education sector only to a greater extent, the size of the State secondary education system declined (in absolute terms) and its share dropped from 60 to 52 percent of all pupils. The State-Religious secondary education system grew very slightly (by 2.5 percent), while the ultra-Orthodox expanded by 27 percent and increased its share to over nine percent of the overall system. The share of the ultra-Orthodox in the secondary education system is small, relative to its share in the primary education system, since a large proportion of the ultra-Orthodox pupils attend *yeshivas*, which are not part of the secondary system.

Table 7. **Secondary Education, by Sector and Supervision Type, 2000 and 2009**

	Total	State	State- Religious	Ultra- Orthodox	Arab
2000	570,175	341,829	82,460	45,348	100,538
2009	610,219	318,895	84,482	57,532	149,310
Rate of Increase	7.0	-6.7	2.5	26.9	48.5
<i>Distribution in Percent</i>					
2000	100.0	60.0	14.5	8.0	17.6
2009	100.0	52.3	13.8	9.4	24.5
Rate of Increase		-12.8	-4.3	18.5	38.8

1.C. *Composition of Arab Israeli Education*

The Arab Israeli sector is divided into four sub-sectors according to population groups: the Arab, Bedouin, Druze and Circassian¹² sectors. Another division of this sector makes the distinction (as in the Jewish education), between the State (official) education system, which serves primarily Muslim pupils, and the recognized education system, which is not official, serving mostly the Christian Arabs (but, as we will see below, not only them).

Table 8 and Figure 7 indicate wide differences in growth rates among the different education systems. The Bedouin and the recognized education initially intended for the Christians (see below) stand out in their high growth rates, 60 percent and 90 percent, respectively, versus the average (33 percent) in the whole Arab Israeli sector and the relatively low growth rates in the Druze sector (only 6 percent).

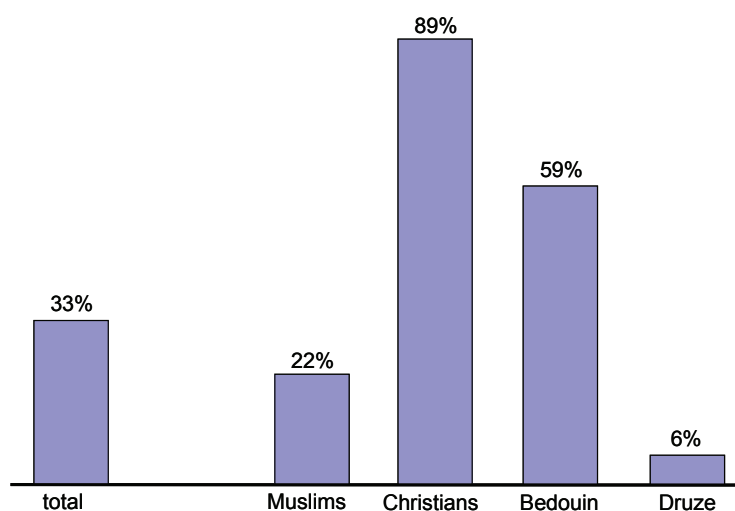
¹² The number of the Circassian pupils is very small and therefore we are not taking them into account in this analysis.

Table 8. **Arab Education** (official and recognized), **Bedouin Education** and **Druze Education, 2000 and 2009**

	Total	Muslim* (Official)	Christian* (Recognized)	Bedouin	Druze
2000	181,268	116,345	15,513	32,203	17,207
2009	240,712	141,883	29,271	51,347	18,211

* The Arab official education includes mainly Muslims and the Arab recognized network is administrated by the church but does not include only Christians.

Figure 7
The Arab Sector*
growth in a decade, 2000-2009 (percent)



* Official Arab education includes primarily Muslims; recognized Arab education is administered by the church but does not include only Christians.

Source: Taub Center for Social Policy Studies in Israel.

Data: CBS.

The Bedouin education system grew quickly since the beginning of the decade, at a rate of 60 percent – close to that of the Jewish ultra-Orthodox schools sector. Its growth rate is expected to decline in the future, though, for two reasons: one is that part of the past growth came from a rise in attendance rates, which will taper off as attendance nears total compliance; the other is that natural population growth rates in this sector are on a path of decline, stemming to some degree from trends towards modernization and in part from changes in the child allowance policy.¹³ Such trends do not characterize the ultra-Orthodox sector (at least not in the same intensity).

The considerable growth of recognized educational settings in the Arab Israeli schools, which are administered by the Church and intended for the Christian population, is surprising, since the natural population growth rate among Christian Arabs is lower even compared with that of the secular Jewish population. This should have led to a decline in the number of pupils in those schools, but the opposite is the case. The recognized schools are the fastest growing ones – nearly doubling the number of pupils over the decade.

It should be noted, that like the ultra-Orthodox schools, the recognized Arab Israeli schools, which are not official, have not been researched sufficiently. Schools in this sector are unique in many ways, including their very high achievements in the matriculation exams. In the present context, we can speculate that these schools absorb, in addition to Christian Arab children, a large number of Muslim pupils who leave the official education system due to dissatisfaction with its level. This applies to the most established population strata in the Arab Israeli sector, which can afford to pay for sending their children to these schools, which charge high tuition fees and are very selective.

¹³ Opinions on the impact of changes in child benefits policy are divided. See, for example, Cohen and colleagues (2007), Toledano and others (2009) for one perspective, and Schelleken (2009), for another. Without going into details it should be mentioned that it is possible that the time period examined is too short to reach unequivocal conclusions on this issue.

1.D. *Implications for the Future*

The CBS pupil forecast to 2014 was recently published, sketching the education system in the coming years (CBS, 2009) (see Table 9). In addition, data has recently been published from a study of the overall fertility of the different population groups in Israel (Toledano et al., 2009) (Table 10). These data show the far reaching influence that changes in the demographic distribution will have on Israel's education system and indicate changes expected in the future, both on the more immediate academic-educational plane (low academic achievements in the core areas), and even more, on the long term social and economic planes.

Table 9. **Primary and Secondary Education, by Sector, 2014**

	State	State- Religious	Ultra- Orthodox	Arab	Total
<i>Absolute numbers (thousands)</i>					
Total	1,561	625	211	278	447
Primary	915	329	125	203	257
of this: first year	140	52	18	30	40
Secondary	647	296	86	75	190
<i>Distribution in percents (%)</i>					
Total	100.0	40.0	13.5	17.8	28.6
Primary	100.0	36.0	13.7	22.2	28.1
of this: first year	100.0	37.1	12.9	21.4	28.6
<u>Secondary</u>	100.0	45.7	13.3	11.6	29.4

Source: CBS (2009). *Projection of the number of pupils* (Table 8.11, 8.21).

Table 10. **Overall Fertility by Population Groups: Before and After Cutbacks in Child Allowances as Part of the Economic Recovery Plan (June 2003)**

Population Groups		1996-1997	2001-2002	2006-2007
Total		2.81	2.78	2.77
Jews	Ultra-Orthodox	7.50	7.24	6.74
	Others	2.22	2.13	2.20
Arabs	Bedouin – South	7.08	6.76	5.62
	Bedouin – North	4.06	4.04	3.25
	Jerusalem	4.05	3.97	3.56
	Others	3.71	3.70	3.08
Druze		3.30	2.85	2.52

Source: Toledano et al. (2009); National Insurance Institute (2009).

The reasons for the low achievements in the sectors whose share of the population is rapidly growing are different: in the Arab Israeli sector the low achievements are explained to a large extent by many years of discrimination against that sector, reflected in the inadequate resources allocated to it (see below). In the ultra-Orthodox sector, the low achievements come, among others, from the inability to come to an agreement about the content to be studied and achievement levels required¹⁴ – especially in mathematics, English and sciences.¹⁵

¹⁴ It should be noted that the high potential ability of pupils of this sector was proven, for example, in the achievements of ultra-Orthodox girls who participated in the Ministry of Education's *Meitzav* tests. [Meitzav: acronym of School Efficiency and Growth Measurements.]

¹⁵ It is interesting to mention a finding from the Taub Center Social Survey. In the 2009 survey, 41 percent of respondents think that the State should set a compulsory core curriculum of no less than 75 percent of the hours of schooling, and about another quarter of respondents think a curriculum should be set with no less than 50 percent of hours devoted to compulsory studies. In contrast, only 23 percent thought that the State does not need to impose a core curriculum in the basic areas (see "The 2009 Social Survey" chapter in this book).

Continuous growth of the Arab Israeli sector and the ultra-Orthodox sector without a significant change in the achievements of their pupils in the core studies casts serious doubt on the ability of the Israeli education system to raise the average achievement level of its pupils and to prepare them to assume full and productive participation in Israel's society and economy.

2. Teachers and Teacher Training in the Education System

The key changes in the educational workforce in Israel are reflected primarily in the rapid academic upgrade of the profession, a rise in the average age and seniority of school and kindergarten teachers, closing gaps between the Jewish and Arab sectors in some of the characteristics of the teaching workforce (education and job scope) and widening gaps in other characteristics (see Table 11 and previous overview, in Taub Center, 2009).¹⁶ Each of these trends has the potential for far-reaching influence on the processes taking place in the education system, the Ministry of Education budget, and its educational workforce policy.

In the educational area, an accelerated retirement for older and very senior teachers and their replacement with young teachers can be an opening for difficulties and opportunity alike. The opportunity lies with the introduction of young and fresh forces that were newly trained on the basis of the most recent knowledge. The difficulty lies with the loss of the older teachers' knowledge, experience and long term commitment. The balance between the two is not at all clear.

¹⁶ The latest annual data are not presented here due to difficulties in their analysis. The Ministry of Education continues to define teacher positions in elementary education as consisting of thirty weekly hours, although some of them have already shifted to a new job format following the new wage agreement. Also, the CBS' decision to combine the data on post primary school teachers prevents a proper comparison.

Table 11. **Selected Characteristics of Teacher Workforce, by Sector, 1995 and 2008**

	Jews		Arabs	
	1995	2008	1995	2008
Pre-Primary				
Age: up to 29 (%)	15.9	8.7	41.5	26.2
50+ (%)	10.4	32.7	3.4	8.9
Degree holders (%)	14.6	68.4	1.8	68.6
Weekly teaching hours – average	24.6	24.8	26.3	25.3
Seniority (years) – average	13.5	17.7	11.4	11.6
Primary				
Age: up to 29 (%)	18.7	12.8	27.9	28.6
50+ (%)	12.4	24.1	7.0	12.7
Degree holders (%)	31.2	70.5	16.4	72.9
Weekly teaching hours – average	20.6	22.6	24.4	24.1
Seniority (years) – average	13.8	15.8	13.4	12.0
Lower Secondary				
Age: up to 29 (%)	14.2	5.4	23.2	20.3
50+ (%)	14.0	34.2	7.6	14.0
Degree holders (%)	60.2	91.1	43.0	87.9
Weekly teaching hours – average	18.8	21.2	19.8	21.1
Seniority (years) – average	14.7	18.9	13.4	13.9
Upper Secondary				
Age: up to 29 (%)	10.5	7.1	23.9	18.0
50+ (%)	22.2	38.1	9.7	16.9
Degree holders (%)	69.9	91.5	72.9	85.7
Weekly teaching hours – average	18.8	18.6	22.0	22.8
Seniority (years) – average	17.1	18.9	12.3	13.7

From a budgetary standpoint, the rising share of teachers with higher education and with greater seniority raises their cost to the system. On the other hand, changing (in the near future) the balance between older and younger teachers might work in the opposite direction. This influence – of rejuvenating the teaching force – may be weakened by the trend of raising younger teachers' pay faster relative to older ones in order to

attract good candidates to teaching. Ultimately it seems that the rise in teachers' educational level and seniority tends to increase the share of teacher salaries in the education expenditure without a parallel increase of the number of teaching hours allocated to the system. Since many studies question the correlation between teachers' seniority and education variables and their quality (as reflected in pupils' achievements, at least) (see Blass, 2008), we recommend coping with the problem of rising teaching costs by looking for an existing pay mechanism (or designing a new one) with better linkage between wages and proven characteristics that impact pupils' educational and academic achievements.

From the human resources policy standpoint, it is clear that accelerated retirement increases the risk of teacher shortages in certain regions and study areas.¹⁷ Conducting effective State-wide forecasts of teacher supply and demand is difficult due to the multiple segmentation of the system into sectors, age bracket, supervision type, geographic location and subjects of study. Nonetheless, it is still possible to act to help prevent the teacher shortage on both the national and local levels. On the national level it is possible to encourage currently employed teachers to expand their workload;¹⁸ induce desirable teachers not to retire early; and plan for reinstating teachers who had left the teaching profession for various reasons. On the local level, townships and schools can and should get organized for the expected developments. Many and varied means are at their disposal, which may allow them to cope with temporary teacher shortages.¹⁹

¹⁷ There is a certain balancing element, since the job position-hours of young teachers is greater than those of older ones. On the other hand, the proportion of mothers, who receive a 10 percent reduction in their position-hours, is higher among younger teachers.

¹⁸ There is evidence that this is possible, as can be seen in the differences of position-hours between Jewish and Arab Israeli female teachers, and in the growth of position-hours between 1995 and 2008, for which there is indication also in 2009 (CBS, 2009).

¹⁹ For example, retraining teacher from subjects that are less in demand to subjects that have a current or projected shortage.

Next we shall examine the changes in the educational workforce and among students in teachers' training institutions as they relate to changes that took place in the education system's structure by sectors and the pupil population.

2.A. Teachers in the Education System, by Sector and Type of Supervision

Between 2000 and 2008, the overall number of kindergarten and school teachers in the education system grew by 21 percent (while the overall number of pupils grew by about 13 percent). As in the case of pupil growth rate, the growth rate of the number of teachers also differs by sector: A growth of six percent occurred in the State schools, 19 percent in the State-Religious schools, 65 percent in the ultra-Orthodox schools, and 56 percent in the Arab Israeli schools (Table 12 and Figure 8). In all sectors and in all levels of education the growth in the number of teachers was higher than the growth in pupils. Nevertheless, it did not reach the growth rate characterizing the previous decade, 1990-2000.

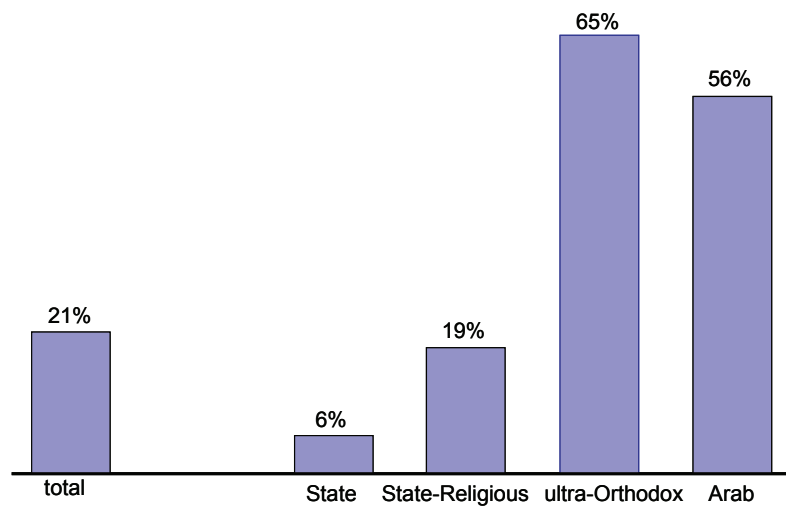
The teachers' average work load shows stability over the past decade, and it hardly changed from the range of 70 to 80 percent of the requirement for a full-time teaching post, with differences between the various parts of the system (the average workload is higher in the Arab Israeli sector and in the secondary education and lower in the ultra-Orthodox sector).

The number of pupils per teacher declined over the past two decades. Several reasons could be at the root of this change, whether adding teaching hours at a higher rate than the rise in the number of pupils, or reducing the average teaching position and/or class sizes. The separate contribution of each cause, its relative weight and importance are worthy of a separate, in-depth examination, which is beyond the scope of this chapter. However, the exceptionally rapid expansion in the ultra-Orthodox schools supports an initial assessment that the explanation lies primarily in the rapid growth in small classes.

Table 12. **Teachers in the Education System, by Sector and Type of Supervision, 2000 and 2008**

	Total	State	State-Religious	Ultra-Orthodox	Arab
2000	127,156	71,081	25,431	9,716	20,928
2008	153,863	75,116	30,116	15,995	32,575

Figure 8
Teachers, by Education sector
growth in a decade, 2000-2009 (percent)



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

2.B. Teacher Training: Changing Population Composition

Changes in the composition of pupils in the education system influence the demand for educational workforce and may be reflected in the teachers' initial recruitment stages and their later training stages. The composition of students in teacher training institutions by sector highlights this dimension. Table 13 presents the changes in recent years in the distribution of student teachers in teacher training institutions by supervision type. The table distinguishes between Arab Israeli students and Jewish Israeli students, although most of the Arab teachers in Israel receive their training in the Jewish State institutions. The data indicate a decline during the past decade of about 24 percent in the number of Jewish students in the State teacher training institutions, compared to a 32 percent rise in the number of Arab Israeli students in the same institutions. One should note that Arab Israeli students constitute 34 percent of the overall number of students in the academic colleges of education in 2007-2008 (CBS, 2009). Relative to the developments in State institutions, the numbers of students in the State-Religious institutions was stable, but the ultra-Orthodox institutions had a substantial growth, more than two-fold, in the number of new teachers they train.

Table 13. **Students in Teacher Training Institutions, 2000 and 2008**

	Total	State	State- Religious	Ultra- Orthodox	Arab
2000	28,442	11,603	6,743	6,347	3,749
2008	33,893	8,824	6,714	13,392	4,963

Source: Central Bureau of Statistics (CBS).

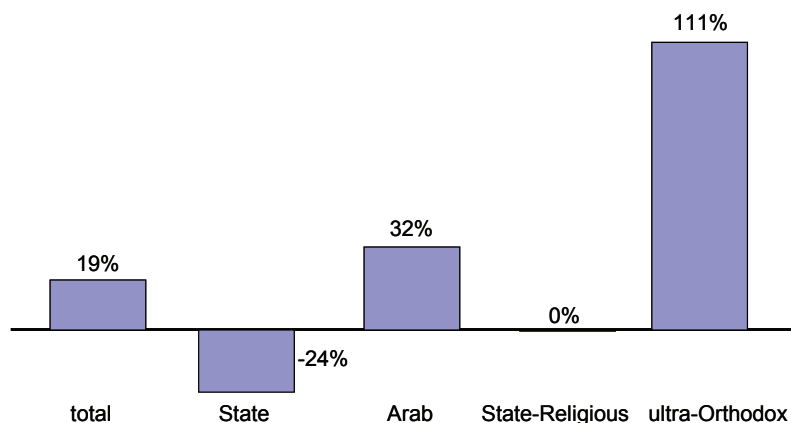
The overall growth in the number of students in teacher training institutions (19 percent) is close to the overall growth in the number of teachers during the same years (21 percent), but there are significant differences when comparing the rates of change in the number of teachers and education students in the different sectors of the education system

(Figure 9). The number of teachers in the State schools grew by six percent, while the number of students in State teacher training institutions declined by 24 percent. The number of Arab Israeli students in teacher training institutions, which grew by 32 percent, and the number of students in the State-Religious teacher training institutions (which did not grow at all), lags behind the growth rate in the number of teachers in the same education sectors. On the other hand, the number of female students in the ultra-Orthodox teacher training institutions far exceeds the number of teachers in the ultra-Orthodox education system (111 percent rise in the number of students versus 65 percent growth in the number of teachers). These data imply that in the not-so-distant future it will be difficult to replace teachers who retire from the official Jewish education system, with graduates of teacher training institutions, and it will be necessary to use other sources to recruit the needed teachers (like limiting the rate of departure of teachers from the system, increasing the average teaching position, etc.).

Figure 9

Students in Teacher Training Institutions

by education sector, total growth 2000-2008 (percent)

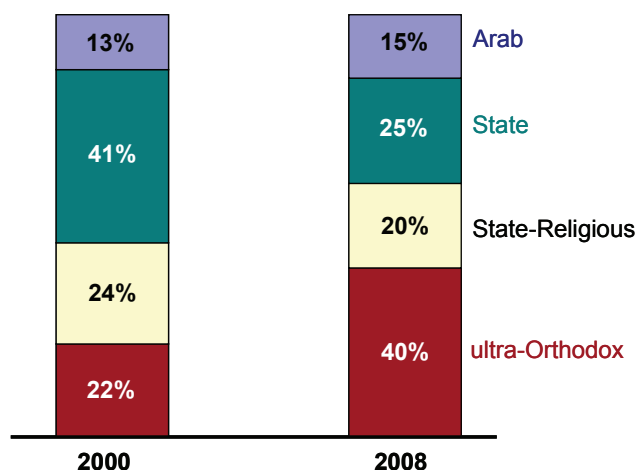


Source: Taub Center for Social Policy Studies in Israel.

Data: CBS.

One of the interesting phenomena found in the data on the composition of students in teacher training institutions, which is not yet widely known or examined, is the continuous rise in the share of Arab Israeli students, especially women, in teacher training institutions (Figure 10). Arab Israeli students already constitute 15 percent of the overall number of students in teacher training institutions and 34 percent of the students in the academic teacher training institutions. Findings of a study recently published by the Central Bureau of Statistics (Scheinberg, 2009) indicate that this trend is well anchored in a pragmatic assessment of the reality of the Israeli job market.

Figure 10
Students in Teacher Training Institutions
composition by sector, 2000 and 2008 (percent)



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

This is further confirmed by the fact that the rate of Arab Israeli female graduates of the teacher training institutions who take a job after earning their bachelor degree is the highest of all other graduates, as shown in Table 14. The rate is 97 percent, compared with 90 percent among all bachelor degree graduates and 93 percent among Arab Israelis.²⁰ Also, the average and median income of Arab Israeli female graduates of the teacher training institutions is higher than those of female graduates in the humanities and the general average of graduates in the humanities, and equal to that of their Jewish peers. These data raise a question about the prevalent opinion regarding massive unemployment among graduates of teacher training institutions in the Arab Israeli sector, as well as difficulties of teacher training institutions graduates to join the workforce, while they confirm the data about wage disparities between Jews and Arabs in other professions (Table 14).

²⁰ Here we refer to taking a job rather than teaching, and therefore it can not be said that all female teachers who are college graduates were employed in educational institutions, but we can at least point to their advantage over other candidates in finding a job.

Table 14. **Rates of Employment
Average and Median Annual Income in 2004**
among B.A. graduates from 2000, by area of study
and population groups

Population Group	Absolute numbers	Employed in 2004 (%)	Average income (NIS thousands)	Median income (NIS thousands)
Grand Total				
Total	32,771	90	110,670	90,100
Jews	30,789	89	113,000	92,300
Arabs	1,982	93	78,780	70,100
Education and Teacher Training				
Total	5,039	92	79,780	74,600
Jews	4,600	91	79,650	74,700
Arabs	439	97	81,050	74,100
Humanities				
Total	5,936	87	81,330	69,200
Jews	5,506	87	82,730	70,000
Arabs	430	90	66,080	61,300
Social Sciences				
Total	9,000	89	105,730	88,200
Jews	8,570	89	107,050	90,200
Arabs	430	92	82,160	67,600

Source: Data analysis based on CBS; Scheinberg, 2009.

Spotlight: The Relative Prestige of the Teaching Profession

Are teachers' wages and cognitive skills higher or lower from those of other professions, and how does this affect teachers' relative status? A recent study (Romanov and Blass, 2010, Taub Center, in process) deals with the question of teachers' qualifications, based on scores of female teachers in psycho-technical tests taken upon enlisting in the IDF and before enrolling in institutions of higher education. The scores were checked against female teachers' wage data, classified by their place of residence. The findings shed a new light on the issue of the relative status of the teaching profession. Below are some of the main findings of the study:

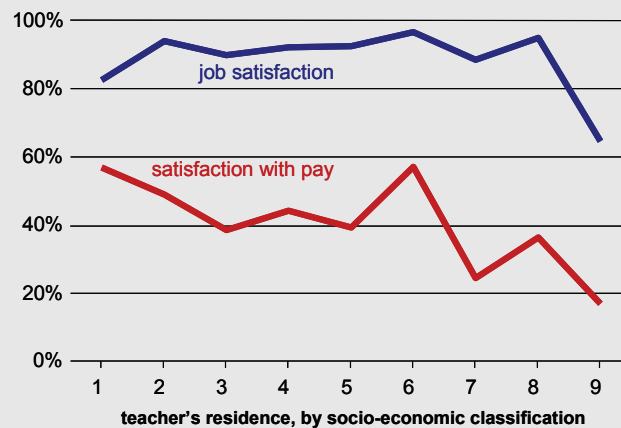
Teachers' wages are uniform across the country with a slight tendency toward higher wages in weaker townships. This finding stands out especially in the Northern and Southern Regions compared to all others. Likewise, there are no notable differences in teachers' cognitive abilities by region, as reflected in the psycho-technical and psychometric tests of teachers residing in townships with different socio-economic levels.

Regarding changes in teacher quality over time, it was shown that the quality of teachers, as reflected in their scores in the psychometric and psycho-technical tests, not only did not decline from the late 1980s to 2006, but actually rose.

It was found that one cannot generalize about education and wage disparities between teachers and other professions. The study shows that in townships in the lower municipal socioeconomic clusters, the average wages as well as the cognitive skills of teachers are higher than the average wages and qualifications of all other professions and in some cases higher than in other academic professions. Conversely, in townships and regions of higher socioeconomic levels, teachers' average wages and cognitive skills are lower than those of other professions.

It is interesting to note that this is supported to some extent by the social survey of the Central Bureau of Statistics, which indicates high job satisfaction among teachers. Teachers' satisfaction with their work is higher than their satisfaction with their wages. Also, the public's satisfaction with the schools and the teachers' quality declines as the socioeconomic level of the township in which they are employed rises.

Figure 11
Teacher Satisfaction with Pay and Work
 by municipal socioeconomic clusters*



* By deciles – the first decile is the lowest decile.

Source: Taub Center for Social Policy Studies in Israel.
Data: analyzed from CBS, Social Survey 2007 and 2008.

The findings in Romanov and Blass' study imply the likelihood that a uniform pay scale and a relatively narrow gap between teachers' starting salaries and maximum wages throughout their working years, contribute to a uniformity (relative to other liberal professions) in the level of cognitive skills of candidates joining the profession. The status of the teaching profession in townships ranked low socioeconomically seems to be higher than in townships with a higher socioeconomic level. These findings are counterintuitive and contradict various publications about the low prestige of the teaching profession, but they match findings of various surveys, indicating that large parts of the public do ascribe high status to the profession. Reality is probably somewhere in the middle: the teaching profession has considerable prestige in the public in general, but it is much higher in low socio-economic townships than among those who live in higher socio-economic settings.

Table 15. **Teacher Satisfaction in Primary and Secondary Education by Municipal Socioeconomic Cluster** (percent)

Socio-Economic Cluster	Primary Schools		Secondary Schools	
	Generally satisfied with the school	Generally satisfied with the level of teaching	Generally satisfied with the school	Generally satisfied with the level of teaching
1-2	83.8	80.8	84.5	72.1
3-4	79.9	77.4	75.0	72.3
5-6	83.1	75.2	72.0	67.9
7-8	73.3	62.2	71.7	65.3
9-10	64.8	40.1	57.4	22.5

Source: CBS (2009). *The Shape of Society in Israel, Report No. 2* (October).

3. *The Education budget and Its Utilization by the Ministry of Education*

The discussion of the education budget and its utilization necessitates an explanation about different definitions in the Ministry of Education Budget:

- *Proposed Budget.* The proposal submitted to the Knesset for approval (“The Blue Book”) includes two levels – the Gross Budget and the Net Budget.
- The *Gross Budget*, including income from other sources – or, in the budgetary jargon, income-dependent expenses – is indeed the number with the **greatest** public significance, although its operative significance is extremely **low**. The reason is that most of the public debate revolves around it, while it will be the furthest from the utilization in practice. The *Net Budget Proposal*, on the other hand, refers only to Ministry of Education sources.

- *The Original Budget.* The budget as approved by the Knesset.
- *The Effective Budget.* The budget as ultimately shaped at the end of the fiscal year, being the end result of various changes during the year. At times there are supplements to the budget and at other times cutbacks adopted by the government throughout the year. The effective budget also reflects changes and transfers between budget lines. This is, in fact, the real budget of the year, which is known only at the end of the year.
- *The Effective Implemented Budget (Report of the Accountant General).* Although the Proposed Budget enjoys great public importance, the Effective Implemented Budget is politically, educationally, socially, economically, and practically more important. It is published as the Report of the Accountant General. Its importance lies in the fact that it is the ultimate financial reflection of the actual policy.

The budget implementation data for 2008 (see Table 16 and Figure 12) still indicate that the Ministry of Education is not utilizing the total budget at its disposal.²¹ The average rate of utilization since 1995 is around 95 percent. With a budget of about NIS 30 billion there is an annual non-utilization of NIS 1.2-1.5 billion.²²

Several reasons may be responsible for this:

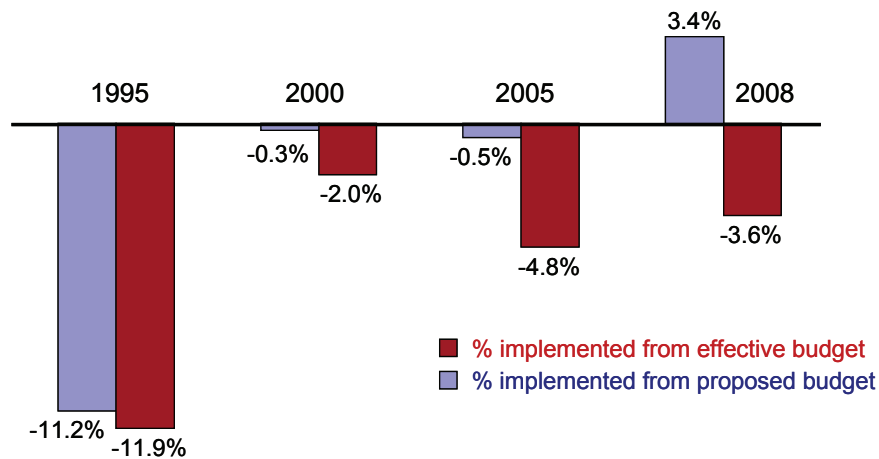
- *The budget available for the Ministry is effectively lower than that approved by the Knesset.* The Ministry of Education budget, like that of other ministries, includes reserve items designed to provide for unexpected needs, such as future wage agreements, various unexpected claims, etc. The reserves amount to about NIS 1 billion, and using it for other purposes requires an authorization by the

²¹ The Taub Center has been following this issue in recent years, which is described extensively in the Taub Center Annual Socio-Economic Report for 2006 and presented in the reports every year.

²² While there were exceptional years in which the utilization rate was higher, they indicate the on-going missed opportunity of under-utilizing the budget.

Ministry of Finance and the Knesset. Normally the Ministry of Finance does not authorize a change in the use of those items, even when it turns out that there were no changes in wage agreements or other items requiring the use of the reserve. This policy of freezing the funds designed for price increases even when they do not occur is, in our opinion, contrary to the intention of the legislature (which considers the approved budget, including the reserve for price increases, as the budgetary framework for operating the Ministry of Education).

Figure 12
Utilization of the Education Budget
gross budget



Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Finance, *Budget Proposals*, various years;

The Account General, *Financial Statements*, various years.

- *Lack of prior planning for use of previous year's unused budget surplus.* Apparently the Ministry has no mechanism for taking advantage of the yearly unutilized budget surplus. This phenomenon recurs every year.

Table 16. **Gross Budget Proposal, Gross Effective Budget and Effective Implemented Budget, current prices, 1995-2008**

	Proposed Budget	The Effective Budget	Implemented Budget
1995	14.0	14.1	12.4
2000	22.0	22.4	21.9
2005	25.9	26.9	25.6
2008	29.1	31.2	30.1

- *Not sufficiently effective oversight of the current budgetary expenditure.* The Ministry of Education does not seem to have an effective mechanism for on-going budgetary control, allowing immediate transfer of budgets from programs that are impossible to execute that year to viable programs.
- *The administrative and political reality.* In the current governmental-organizational system, two key officials are responsible for economic affairs in the Ministry of Education, the accountant and head of economics and planning administration. These officials are subject to a system of dual loyalties and identities (by virtue and essence of their positions, and not due to their personalities or characteristics). On the one hand, they serve the education system striving to promote its objectives. On the other hand, they must coordinate their acts with the “treasury people” in general (the accountant is formally considered an official of the Ministry of Finance), and with the “referents,” or account managers, for the education system in the Budget Bureau, in particular. The high rate of turnover at the head of the Ministry of Education in recent years, while the professional leadership remained fairly constant, strengthened the relationships of the latter with the Ministry of Finance. In such a reality the Ministry of Education leadership functions under constant and frustrating budgetary pressures, whereas, in fact, the non-utilized budgets are much bigger than the size of the anticipated cuts.

4. The Ministry of Education's Affirmative Action Policy, by Sector²³

Narrowing educational and social gaps between different social strata has been a central goal of the Ministry of Education since the early 1960s. This policy was directed, in fact, primarily toward State schools and State-Religious education in the Jewish sector. Its outcome can be seen in the fact that the vast majority of students (nearly 70 percent) who socio-economically need assistance (Arab Israelis and ultra-Orthodox) receive nothing or only a fraction of the affirmative action budgets.²⁴ Nonetheless, the affirmative action policy is still active in the Ministry of Education granting priorities to pupils from weak social strata (even though mainly in the Jewish State sector) (Blass, 2009).

4.A. Affirmative Action in Primary Education

The existence of affirmative action in primary education is evident from Table 17 – per class teaching hours²⁵ allocation in the lower third, which serves the socioeconomically weak pupils, is 15 percent higher than the allocation for the upper third in schools attended by pupils from socioeconomically well-off backgrounds. Regarding the per pupil teacher hour allocation, the extent of affirmative action is even higher, reaching 27 percent. The number of pupils per class in schools serving weaker pupil populations is also lower.

²³ This paragraph is based on different data than those that were used in the previous part of the chapter, since in this chapter we include only schools for which there are full data about the remedial index.

²⁴ Klinov, 2009. When this policy was initially voted in, its beneficiaries represented a much higher percentage, since the share of Arab Israelis and ultra-Orthodox in the system was smaller.

²⁵ “Teaching hours” in the Israeli educational jargon is a financial term describing the cost of teacher salary for one hour per school year.

Table 17. Class Size, Hours Per Class and Hours Per Pupil*, Primary Education, 2008**

Schools by ranking	Number of pupils	Average number of pupils per class	Average hours per class	Average hours per pupil
Overall average	749,242	27.00	43.37	1.66
Upper third	249,528	28.55	41.05	1.46
Middle third	272,649	25.93	42.07	1.69
Lower third	227,649	26.87	47.41	1.84

* Hours paid for by educational institutions only (does not include hours funded from other sources, like the Karev Educational Program, parents, local authorities, etc.).

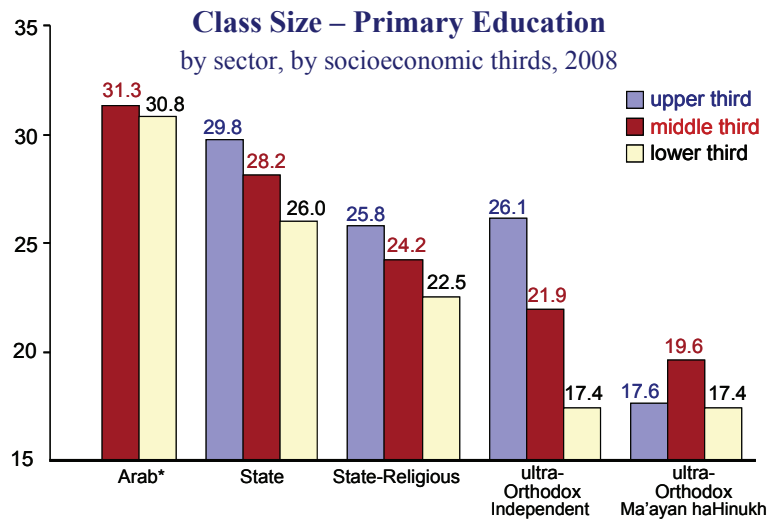
** The upper third includes schools in the upper three deciles (1-3), the middle third includes schools in deciles 4-7, the lower third includes deciles 8-10.

Source: Ministry of Education – Klinov, 2009.

However, while the overall picture indicates the existence of affirmative action in schools serving weak pupil populations, Figures 13-15 (and data presented in the Appendix) indicate gaps in this area between the Arab sector and the Jewish sector in primary and middle schools (see below). Affirmative action in the Jewish sector is much larger than the overall affirmative action, which means that it is very low in the Arab sector.²⁶

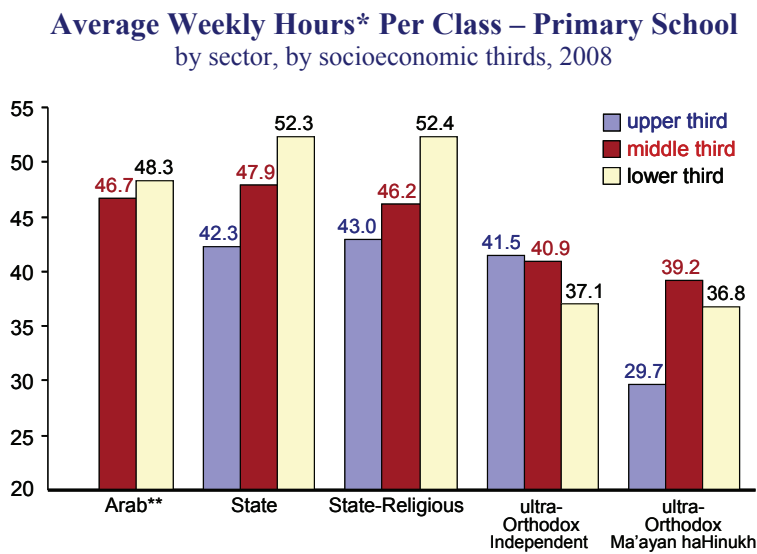
²⁶ Especially interesting is the fact that the Druze sector has a substantial advantage in per-class and per-pupil teacher hours. When the average number of pupils per class is 29, the number of teacher hours per class is 54 and the number of teacher hours per pupil is 1.9. Possibly the reason for this is the inclusion of this sector in the long school-day program.

Figure 13



* In the upper third there is one school where Arabs and Jews learn together.

Figure 14



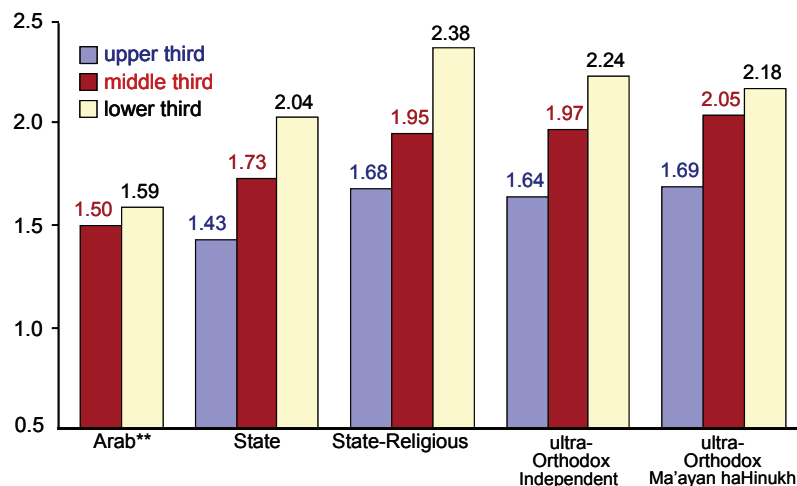
* Weekly hour is a budgetary term.

** In the upper tercile there is one school where Arabs and Jews learn together.

Source for Figures 13-14: Taub Center for Social Policy Studies in Israel.

Data: CBS.

Figure 15
Average Weekly Hours* by Pupil – Primary School
 by sector, by socioeconomic thirds, 2008



* Weekly hour is a budgetary term.

** In the upper third there is one school where Arabs and Jews learn together.

Source: Taub Center for Social Policy Studies in Israel.

Data: CBS.

As for differences in the extent of affirmative action by type of supervision in the Jewish sector, it was found that affirmative action in State and State-Religious schools is similar in terms of weekly teacher hours per class, but the allocation per pupil in State-Religious schools is much higher, due to the smaller classes in this sector (Appendix Table 1).

Compared with the two State-run education sectors, in the ultra-Orthodox sector the number of teacher hours per classroom is much smaller than the minimum required for maintaining the curriculum. However, the number of teacher hours per pupil in this sector is closer to that of the State-Religious system than to the State system. This is due to the small classes – that is, the average number of pupils per class, which is much lower in the ultra-Orthodox sector, results in a higher allocation

per pupil. In the *Ma'ayan haHinukh haTorani* system, a pupil receives an average of 2.08 teacher hours versus 1.98 teacher hours in the State-Religious schools, 1.63 teacher hours in the State schools, 1.68 teacher hours in the Druze sector, and 1.57 teacher hours in the Arab Israeli sector.

The gaps between sectors regarding allocation of teacher hours per pupil stand out in the lower third, which is weaker socioeconomically. A pupil in a State-Religious school receives an average of 2.38 teacher hours, in the Independent Education Network – 2.24 teacher hours, in the *Ma'ayan haHinukh haTorani* system – 2.18 teacher hours, in the Bedouin sector – 1.68 teacher hours, and in the Arab Israeli (Muslim) – 1.59 teacher hours (on average).

It should be noted that the division of schools into thirds by their socioeconomic ranking somewhat obscures the inferior level of affirmative action directed to the Arab, Druze, and Bedouin sectors, since none of them have any upper third school, and in the Bedouin sector – not even in the middle third. In any case, although the number of classroom teacher hours in these sectors is high, this is due to class sizes and not the result of channeling resources for affirmative action. On the other hand, while the ultra-Orthodox sector indeed receives fewer teacher hours per class, due to the smaller classes and the budgeting method, for the very same reason the allocation per pupil in this sector is relatively high.

4.B. Lower Secondary Schools

The debate about affirmative action in lower secondary schools makes possible a more precise examination of the effect of this policy, given that the current budgeting method was introduced in 1995 and has not changed since then. In general it can be claimed that the system accords affirmative action for schools serving pupil populations from weaker socioeconomic backgrounds in all three dimensions of the allocation – class size, teacher hours per class, and teacher hours per pupil – but with

very large differences in the amount of affirmative action between the various parts of the system.

Table 18. **Class Size, Hours Per Class and Hours Per Pupil, Lower Secondary Schools, 2008**

Schools by ranking	Number of pupils	Average number of pupils per class	Average hours per class	Average hours per pupil
Overall average	250,591	29.5	49.8	1.76
Upper third	75,257	30.5	46.3	1.54
Middle third	73,222	28.5	51.8	1.88
Lower third	75,537	29.8	50.6	1.82

In the Jewish sector there is affirmative action in all its three aspects: classes in schools serving established populations are larger than in those serving populations of lower socioeconomic backgrounds, with class sizes ranging from 30.5 in the upper third to 25.7 in the lower third. The number of teacher hours per class in the weak third is 58.1 compared to 46.3 in the upper third, and the allocation per pupil is 2.4 versus 1.5 teacher hours on average, respectively. In contrast in the Arab Israeli schools there is no such affirmative action, and the weak third of the schools is not prioritized (see Figures 16-18 and Appendix Table 2).

Concerning differences within the Jewish sector, one can only discuss the official Jewish sector (since the ultra-Orthodox sector does not have lower secondary schools). Apparently, the State-Religious schools have an advantage in every socioeconomic third which increases as the level of socioeconomic level decreases. The difference in the allocation per class in the Jewish State schools between the upper and the lower third is 22 percent and the difference in allocation per pupil is 47 percent. However in the State-Religious schools the rates are 29 and 58 percent, respectively.

Figure 16

Class Size – Lower Secondary School

by sector, by socioeconomic thirds, 2008

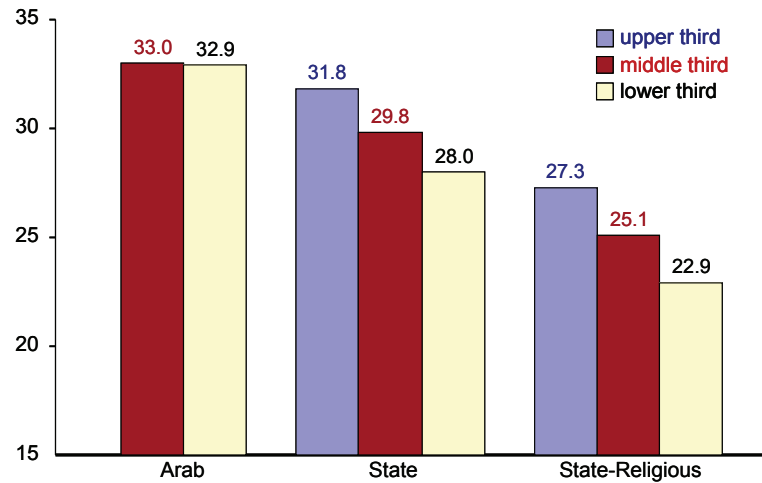
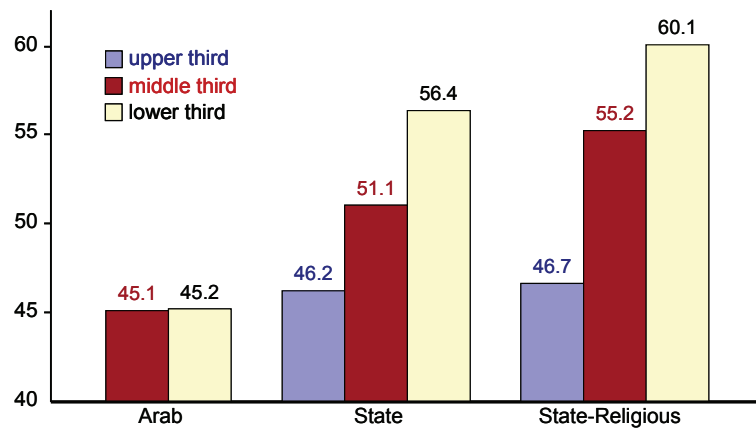


Figure 17

Average Weekly Hours* Per Class – Lower Secondary School

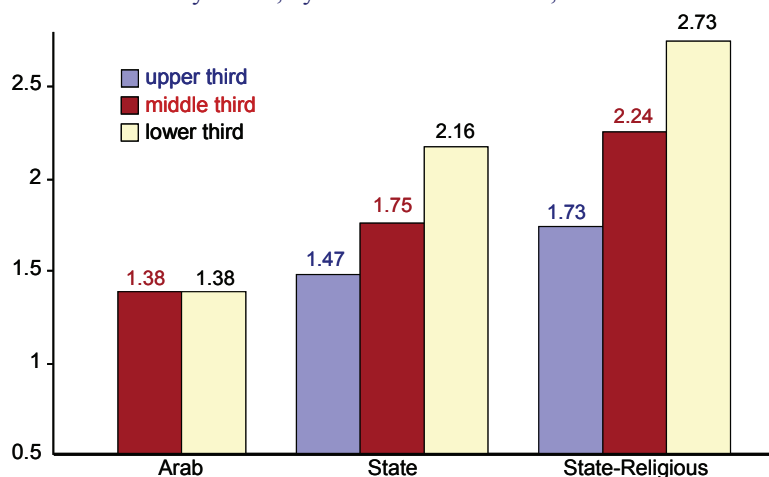
by sector, by socioeconomic thirds, 2008



* Weekly hour is a budgetary term.

Source for Figures 16-17: Taub Center for Social Policy Studies in Israel.
Data: CBS.

Figure 18
Average Weekly Hours* Per Pupil – Lower Secondary School
 by sector, by socioeconomic thirds, 2008



* Weekly hour is a budgetary term.

Source: Taub Center for Social Policy Studies in Israel.

Data: CBS.

In conclusion, although the degree of affirmative action in the budgeting of primary schools is higher than in lower secondary schools, in Jewish sector lower secondary schools it is higher than in primary schools.

In the context of affirmative action, a separate study (Blass et al., 2008) examined differences between teachers' characteristics according to the socio-economic index of their schools compared with findings in other countries. In fact, as expected, two key variables – seniority and education level (which are known to reflect the quality of the teaching personnel) – were higher in schools serving established populations. However, while in other countries there were very large variations in the characteristics of teachers in schools with different socioeconomic compositions, in Israel differences are not very large. On the other hand, the cost of a teaching hour in schools for weak pupil populations is higher

than that of established schools. This finding, in addition to those indicating that the teacher hour allocation per pupil in these schools is higher (Romanov et al., 2007; Klinov, 2008), indicates that in Israel there is, in fact, a consistent policy of affirmative action (although it is believed to be insufficiently comprehensive and effective and not always a deliberate process).

5. Conclusion: General Overview and Assessment of Education

Against developments that have taken place recently in the composition of the pupil population, teaching personnel, the budget, and affirmative action, it is important to take a more comprehensive view of the education system, especially since most of the Israeli public judges it harshly. The education system is judged by various criteria, some having to do with its current performance, and others concerning the anticipated impact of current performance on long range issues. Evidently, it is easier to judge the current performance of the system than to assess their future influences. It is especially easy to judge using quantifiable criteria, as reflected in various paper and pencil tests, compared with “more elusive” criteria, like the atmosphere in the school, the inculcation of educational and humanitarian values, and so on. But do the results of these tests actually give a reliable picture of the level of education in the country?

Many scholars, notably Hanushek and Woessman (2009), believe that the answer is positive. Conversely, quite a few scholars think differently (Bracey 2005; 2007; Ramirez et al., 2006; Rothstein, 2008; Rotberg, 2006). The main bone of contention is the overall impact of education in general and of academic achievements reflected in international tests results, in particular, on economic developments and especially on future growth. The former consider current educational academic achievements a significant and central factor in determining the future level of economic development, while the latter see in education only one of the

components – and not always the most important – that affect the pace of economic development.

This chapter is not intended to offer a definitive answer to this question. However, it should be said, that if we assume that the effect of the education system is reflected roughly 20 years after its graduates are fully integrated into the labor market, then there is – hypothetically at least – a serious contradiction between the Israeli economy's "lost decade" and the economic crisis of Japan in the 1990s on the one hand, and the very high scores of their education systems in international achievement tests in the 1970s and 1980s, on the other. Equally difficult to explain is the success of the Chinese economy in recent years in the context of the Chinese education system's achievements in the 1980s. Clearly the answer is that there are many other variables that have affected the economic developments, which brought Israel and Japan to the crises they experienced. Clear as well is the answer to arguments about the central role of the education system in promoting the economic growth of a country.

Even without resolving this issue, it seems indisputable that there are other important yardsticks that can and should serve as worthy criteria for the level of the education system, such as:

- Quality of life at school;
- Teacher-pupil relations;
- Pupil's sense of self;
- Volunteering rates in military service (to special units) and in various civilian settings;
- Number of registered patents per population;
- Number of new books and movies in a year, per capita;
- Number of people who attend cultural performances;
- Acceptance rates of Israeli students to institutions of higher learning abroad.

Such yardsticks and others can provide at least as reliable a picture of the success of the system at the same point in time, and perhaps even more importantly, of the chances of graduates of the system to integrate into society in the future, as paper and pencil achievement tests. In addition, the picture needs to be completed by an objective look at relevant measurements indicating achievements and improvements in the education system, which shed light on what is going on in the system in recent years.

- Attendance rates in the education system at all levels of education are on the rise, although they are already high by international standards.
- Percentage rate of high school graduates and those who passed matriculation exams have risen.
- Teachers are better educated and more experienced than in the past and probably (at least in recent years) with higher cognitive skills.
- Input/output gaps between schools serving pupil populations of established socioeconomic background and schools serving pupils of weak socioeconomic backgrounds have narrowed.
- In the one and only test in Israel which is calibrated over many years, the psychometric test (administered by the National Center for Testing and Evaluation) the scores of Jewish Israeli pupils rose by 10 points, and those of Arab Israelis by 17 points between 1991 and 2008.
- Israeli education system graduates studying abroad succeed in their studies and their accomplishments in science and technology have become world renowned.
- Israel's high-tech industry, which employs mostly young recent graduates, is the economic engine of the economy and is considered among the most developed in the world.
- The "brain drain" from Israel, which is indeed a warning sign for the state of higher education in Israel, is certainly a most negative social phenomenon, but it would not have been possible had these "brains" not received graduate and post graduate training in Israel, with further

training at some of the best academic institutions in the world. Apparently, it would have been possible to prevent a large part of the “drain” had there been more jobs available in institutions of higher education for graduates of these institutions.

- Of the 500 best universities in the world, seven are in Israel;²⁷ in the ratio of outstanding universities to GNP, Israel holds the first place in the world, and in relation to the population it is in third place, behind New Zealand and Sweden.²⁸
- In the World Economic Forum Index, reflecting Israel's competitive ability, published this year, Israel is ranked 23 overall, but also in first place in terms of investment in research and development; in second place in terms of skills in information technology; in third place in terms of quality of scientific research institutions; in fifth place in terms of number of registered patents per capita in Israel; and in sixth place in overall innovation.²⁹

These achievements are common measurements for assessing education systems in the Western world. The Israeli education system reached these achievements under difficult conditions of absorbing massive immigration, on-going security tension, and far-reaching demographic changes, which increased the share of the weaker populations in the population. Moreover, they achieved this while the investment per pupil barely rose in the past decade, and social and economic disparities in Israel have expanded considerably.³⁰

²⁷ <http://www.nationmaster.com>

²⁸ <http://www.arwu.org/Analysis2009.jsp>

²⁹ Schwab, Porter, 2008.

³⁰ The GINI Index after transfer payments and direct taxes rose from 0.35 in 1997 to 0.39, a rise of over 10 percent (Annual Report, National Insurance Institute, 2009), p. 367.

In conclusion, evaluating the quality of the present education system and comparing it to the past requires us to have a comprehensive and broad vision, taking into account all of the functions of the education system and the great potential impact on social processes. Such vision will ensure the knowledge, recognition and appreciation of the system's achievements on the one hand, as well as an awareness of its multiple defects and failures, on the other.

Appendix Tables

Table 1. **Class Size, Hours Per Class and Hours Per Pupil – Primary Education**

Schools by ranking	Average number of pupils per class	Average hours per class	Average hours per pupil
Jewish State Schools			
overall average	28.64	45.72	1.63
Upper third	29.76	42.26	1.43
Middle third	28.15	47.91	1.73
Lower third	26.00	52.33	2.04
State-Religious			
overall average	24.25	46.74	1.98
Upper third	25.80	42.96	1.68
Middle third	24.21	46.15	1.95
Lower third	22.51	52.35	2.38
Independent Schools			
overall average	22.38	40.49	1.92
Upper third	26.10	41.51	1.64
Middle third	21.94	40.88	1.97
Lower third	17.39	37.05	2.24
New Ultra-Orthodox Network			
overall average	18.74	37.90	2.08
Upper third	17.60	29.70	1.69
Middle third	19.63	39.19	2.05
Ultra-Orthodox Recognized			
overall average	21.66	34.04	1.69
Upper third	25.03	35.94	1.45
Middle third	21.74	34.28	1.69
Lower third	18.45	31.67	1.89
Arab Official			
overall average	30.88	47.77	1.57
Upper third	22.41	34.69	1.55
Middle third	31.32	46.65	1.50
Lower third	30.81	48.33	1.59
Bedouin – overall average	30.24	50.48	1.68
Lower third	30.24	50.48	1.68
Druze – overall average	28.92	54.41	1.90
Middle third	28.58	53.86	1.90
Lower third	29.38	55.16	1.89

Table 2. **Class Size, Hours Per Class and Hours Per Pupil –
Lower Secondary Education**

Schools by ranking	Average number of pupils per class	Average hours per class	Average Hours per pupil
Jewish State Schools			
overall average	30.4	49.7	1.68
Upper third	31.8	46.2	1.47
Middle third	29.8	51.1	1.73
Lower third	28.0	56.4	2.16
State-Religious			
overall average	25.3	53.5	2.18
Upper third	27.3	46.7	1.73
Middle third	25.1	55.2	2.24
Lower third	22.9	60.1	2.73
Arab Official			
overall average	33.00	45.2	1.38
Middle third	33.00	45.1	1.50
Lower third	30.81	45.2	1.38
Bedouin			
overall average	32.6	45.1	1.39
Lower third	32.6	45.1	1.39
Druze			
overall average	31.9	45.8	1.45
Middle third	31.4	43.7	1.39
Lower third	32.2	47.0	1.48

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Israel's Labor Market

Today, in the Past and in Comparison with the West

Dan Ben-David*

Abstract

While unemployment rates in Israel are similar to the OECD average, rates of non-employment among Israeli men are much higher. Three decades ago, Israeli rates of non-employment among men were very similar to those of the OECD. This chapter shows the change – sometimes, substantial– in work patterns among non-ultra-Orthodox Jews, ultra-Orthodox Jews and Arab Israelis. Not all of the conventional wisdom on Israel's labor market turns out to be correct. The relationship between education, employment and income is described here while the extent of education and employment among different population groups is detailed according to gender, religion and degree of religious observance. The phenomenon of foreign workers in Israel is examined and the negative income tax programs in Israel and the United States are compared.

* The initial debt for this chapter is owed to my father, Prof. Shaul Ben-David. He organized the labor force surveys of the Central Bureau of Statistics (CBS) from the 1960s until today so that we could both diagnose and analyze long-term trends in the data. After joining the Taub Center, it was possible to continue the project with Kyrill Shraberman on labor force surveys, Haim Bleikh on income surveys and Sagit Azary on both surveys and comparative

1. *Introduction*

This chapter links Israel's macro picture of high poverty, high income inequality and low steady-state economic growth (compared to Western countries) to the country's education and welfare systems. Specific chapters in this report focus on each of these issues separately. The focus here is on how some (though, not all) of the primary factors – education and welfare – translate through Israel's labor market into its macroeconomic outcomes. Education and welfare can have a considerable impact on the scope of employment and on the income levels of the working age population, which in turn affect rates of poverty, income inequality and economic growth.

Variables that are commonly used for cross-country comparisons do not always provide a very accurate picture when it comes to Israel and may lead to some incomplete interpretations that can sometimes be misleading. In light of the rather unique composition of Israel's population, with its distinctive relative weights of ethnic and religious groups, age groups and education levels, there is a need for additional perspectives when making comparisons and identifying trends.

The purpose of this chapter is to sketch a broad picture of the Israeli labor market's key characteristics and show how they tie into the state of the country's society and economy. The emphasis here is on providing a descriptive account of the facts that can serve as a launching pad for further research – by researchers at the Taub Center as well as elsewhere – that will identify the major causes of phenomena presented here. To the extent possible, conjectures regarding possible explanations will be provided, but the testing of such hypotheses is left for future research.

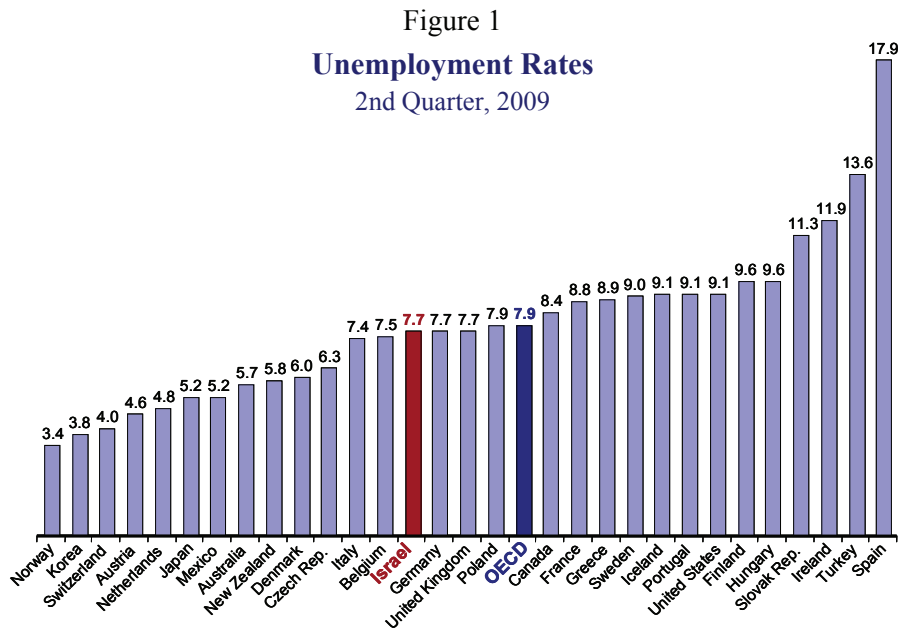
data from the OECD and the United States. This special team developed skills calculating and deriving unique time series' that provide a new look at Israel's labor market, and I thank them very much for their assistance. I would like to also thank Dr. Avner Ahituv, Nachum Blass, Yulia Cogan, Prof. Ayal Kimhi, Prof. Noah Lewin-Epstein, Dalit Nachshon-Sharon, Prof. Yossi Shavit, and Prof. Haya Stier for their comments and suggestions.

2. Recent Times

For many years, unemployment rates in Israel were higher than the Western average. Even before the wave of terror and recession of the early 2000s, the rate of unemployment in 2000 – a year of prosperity in Israel – reached 8.8 percent, compared with 6.1 percent on average in the OECD (the Organization for Economic Cooperation and Development – comprising the world's leading industrialized countries). With the outbreak of the terror wave and major recession that accompanied it, unemployment in Israel rose to 10.7 percent of the civilian labor force. Since then – and prior to the full impact of the current global recession that may or may not have ended – unemployment rates began declining toward those of OECD. In 2008, unemployment rates in Israel were almost equal to the OECD: 6.1 percent in Israel and 5.9 percent in the OECD.

The picture was reversed as the world entered the recent deep recession. Figure 1 shows that by the second quarter of 2009, unemployment rates in Israel were below the OECD average for the first time in decades: 7.7 percent in Israel versus 7.9 percent in the OECD. In fact, unemployment in Israel was lower than in most OECD countries, as some of them reached double-digit unemployment rates of up to 11.9 percent in Ireland, 13.6 percent in Turkey and 17.9 percent in Spain.

Ostensibly, Israel's labor market is beginning to look like a typical Western labor market. But the actual picture is very different. While unemployment rates are considered one of the most common indicators for examining economic activity, they illuminate only part of the labor picture. The working age population is composed of two groups, those who participate in the labor force and those who do not. The majority of those participating in the labor market find employment and become employed, while others are unable to find work and become "unemployed."



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

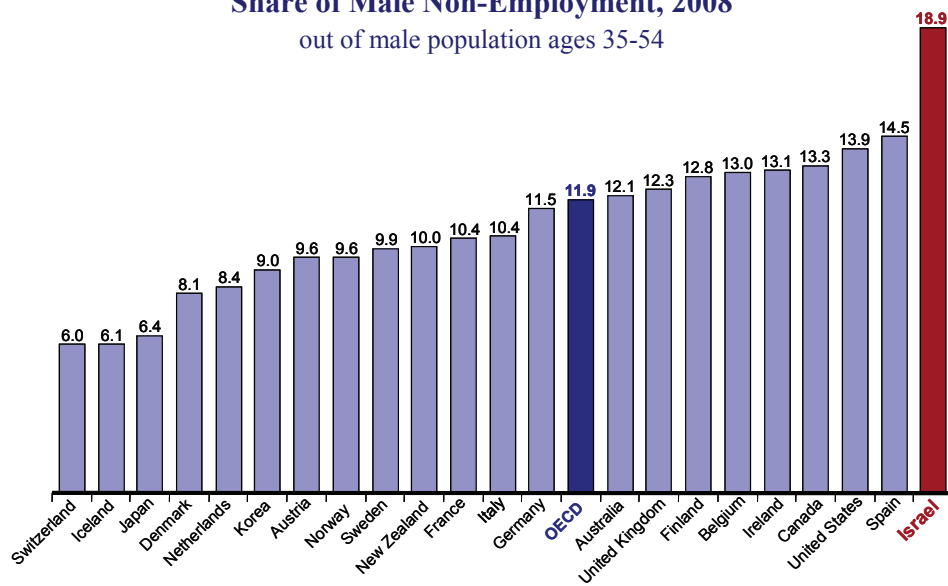
While Israel's unemployment rates are currently similar to those of the OECD, non-employment rates of the working age population (as opposed to just the labor force) are quite different – and herein lies the main problem of Israel's labor market. A very large share of the country's working age population does not participate in the labor force. While unemployment rates are based only on those who participate in the labor force, rates of non-employment reflect the ratio of all non-employed – whether the individual participates in the labor force and is unable to find a job or does not participate in the labor force at all – to the general working age population. Therefore, the emphasis here will be on rates of non-employment.

Another distinguishing characteristic of the following comparisons revolves around the definition of the working age. Age compositions in the population vary from country to country, and there are large differences in non-employment rates between age groups. For example, many people retire in their 60s. Hence, in populations with a high proportion of people aged over 65, non-employment rates will tend to be higher than in countries with a relatively young population. Similarly, very young people typically have relatively high rates of non-employment. This is not necessarily a negative phenomenon. Since the official working age in Israel is 15, then it is to the benefit of both the individual and society if the person stays in school instead of working.

To minimize the effects of age and schooling on comparisons between countries and over time, it is customary to compare employment rates by focusing on prime working age adults between the ages of 25 and 54. In contrast with most other Western countries, where it is common for individuals to continue their studies towards an academic degree with little or no time off after completion of secondary school, young Israelis face compulsory military service when they turn 18. Consequently, the Israeli road to higher education is not continuous as it is in the West, with a non-negligible number of Israelis enrolled for undergraduate studies while in their mid-twenties. Hence, cross-country comparisons of non-employment rates among 25-54 year olds may not be accurate when Israel is included in the sample. For this reason, some of the comparative analyses below focus on the 35-54 age group, which are peak employment years in all countries.

Figure 2 shows rates of non-employment of men aged 35-54 in Israel and most OECD countries for 2008. While non-employment rates in the OECD fluctuate around an average of 11.9 percent, the corresponding rate in Israel reached 18.9 percent. Even Spain, the unemployment leader in Figure 1, is far below Israel in terms of non-employment. The picture regarding women in Israel is better. While the OECD average is 32.0 percent (Appendix Figure 1), the rate of non-employment among Israeli women is 31.0 percent.

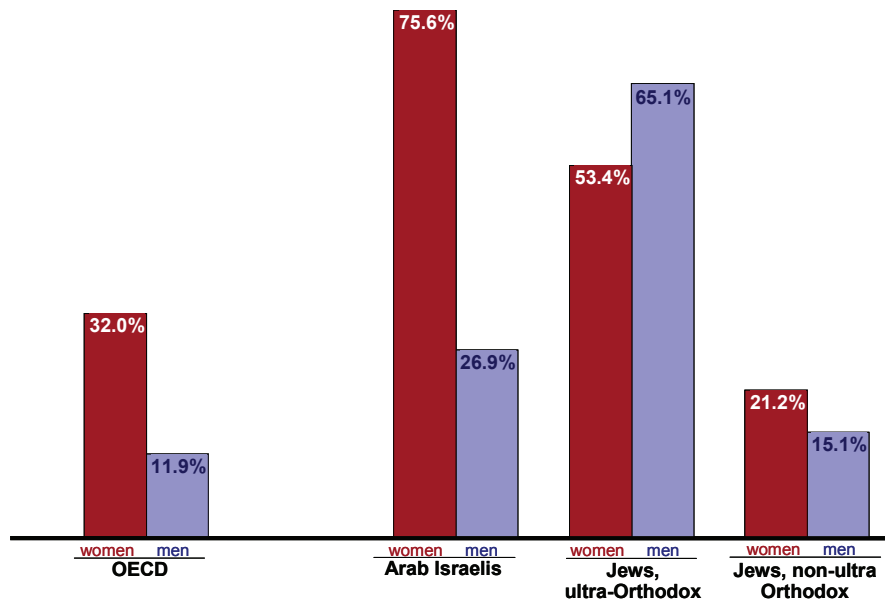
Figure 2
Share of Male Non-Employment, 2008
 out of male population ages 35-54



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: Israel Central Bureau of Statistics (CBS), OECD.

Who is not employed in Israel? Local prevailing wisdom is that the issue begins and ends with ultra-Orthodox Jews and Arab Israelis. Non-employment rates in these population groups are indeed high. However, most of Israel's population is neither ultra-Orthodox nor Arab. As shown in Figure 3, even after controlling for these two groups, the 15.1 percent non-employment rate among non-ultra-Orthodox Jewish men is still more than one-quarter greater than the OECD average rate of 11.9 percent. This reflects a substantial difference between the large part of Israeli society and much of the West. The picture differs considerably for non-ultra-Orthodox Jewish women, where the 21.2 percent non-employment rate is notably lower than the 32 percent average for women in OECD countries.

Figure 3
Rate of Non-Employment in Population, 2008
 ages 35-54



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

Rates of non-employment in the Arab Israeli and ultra-Orthodox sectors are much higher than is common in Western countries. While the 26.9 percent non-employment rate amongst Arab Israeli men is two and a quarter times the OECD average, the 75.6 percent non-employment rate among Arab Israeli women is two and a third times the OECD average of 32.0 percent.

These are very large differences, but the picture is not uniform across all segments of the Arab Israeli population. Christian Arab Israeli men aged 35-54 are characterized by an 18.1 percent non-employment rate, which is 20 percent higher than Jewish Israeli men and 54 percent higher than the OECD average for men. Rates of non-employment are much

higher among Muslim and Druze men: 27.8 and 29.8 percent, respectively.

The similarity of non-employment rates among Muslim and Druze men raises an interesting question regarding job discrimination against Muslims in Israel. While discrimination is illegal, it is often claimed that some employers require past military service as a method to avoid hiring Muslims. While Muslims and Christian Arabs do not serve in the Israeli army, the Druze do serve and are subject to the compulsory draft. On the other hand, rates of non-employment among Muslim and Druze are very similar and very high while non-employment rates among the Christian Arabs are much lower. Hence, it not obvious that the primary cause of the high rates of non-employment is discrimination. In fact, it may be low levels of education and skills that are the main factors limiting the ability of Muslim and Druze men – whose levels of education are considerably below those of Arab Christian men – to cope in the modern job market.

Non-employment rates among Christian Arab Israeli women aged 35-54 are 49.1 percent, 2.3 times that of Jewish women and 53 percent more than the OECD average. Among Muslim and Druze women the rate is much higher – 79.4 and 77.3 percent, respectively. In other words, while one-third of women aged 35-54 in the Western world and one-fifth of same age non-ultra-Orthodox Jewish women in Israel are not employed, this status typifies over three-quarters of Muslim and Druze women in Israel.

The non-employment picture among ultra-Orthodox men is much different than what is common among other men in Israel and abroad.¹

¹ The determination of ultra-Orthodox Jews – or *haredim*, as they are referred to in Israel – in the data is problematic. The group is not officially classified as such in the data and the common method of determining who is an ultra-Orthodox Jew – adopted here with slight variations – is not without its problems. Ultra-Orthodox Jews are defined here using the variable “last place of study,” as reported in the Labor Force Surveys of Israel’s Central Bureau of Statistics (CBS). Men for whom *yeshiva* (an institution for the advanced study of Jewish religious texts) is indicated as the last place of study are labeled here as ultra-Orthodox Jews. Of course, this is not necessarily the case. For

The rate of non-employment among ultra-Orthodox Jewish men aged 35-54 is 65.1 percent – five and a half times the Western average in the same age group. While rates of non-employment among women in Israel and in OECD countries tend to be higher than those among men, the picture is reversed among Israel's ultra-Orthodox Jews. Non-employment rates among ultra-Orthodox men are so high that they even exceed those of ultra-Orthodox women, whose non-employment rate of 53.4 is still two-thirds greater than the average OECD rate of female non-employment.

With such high rates of non-employment, it is not obvious how these families – which also tend to be very large – are able to survive economically. It is possible that substantial portions of these population groups may indeed be working, but receiving their salaries in a shadow – or underground/undeclared – economy. To the extent that this is the case, then it does not reflect a better situation but one that is in many ways much worse. Those who work, but do not declare their income, do not share in the tax burden, leaving others to bear it alone. In addition, these same individuals increase the burden on others when they appear in the records as non-employed and in need of assistance. It is not obvious that false employment declarations are more prevalent among ultra-Orthodox

example, those who study in a *hesder yeshiva*, serve in the army and may later pursue academic studies are labeled as ultra-Orthodox, even though this does not accurately reflect reality. That said, even when such non-ultra-Orthodox Jews are included, the results are sufficiently extraordinary as to indicate the presence of atypical characteristics in this population. Since ultra-Orthodox women do not attend *yeshivas*, they are defined here as ultra-Orthodox if they belong to households in which either the head of household is defined as ultra-Orthodox or the spouse of the head of household is defined as ultra-Orthodox. Some definitions of ultra-Orthodox women include women in households with an ultra-Orthodox man of any family relationship, even if he is only a sibling rather than the head of household or the spouse of the household head. This definition was not adopted here because it may include women in religious families that are not necessarily ultra-Orthodox, or in which a single member of a family may have become ultra-Orthodox but was not necessarily followed by the rest of the family. As noted above, in the absence of a better way to classify ultra-Orthodox systematically and over time, the method outlined above was selected as the best of the available alternatives.

Jews and Arab Israelis than among the rest of the population. In any case, it is unlikely that changes over time in their non-employment rates – of the magnitude shown below – stem from changes in the proportion of those who work and do not declare their income.

3. Demographic Changes

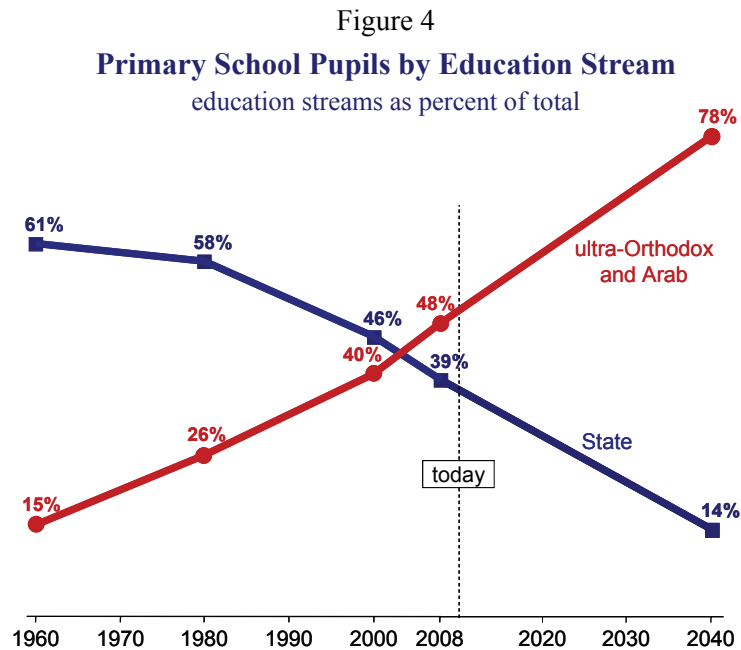
When the ability to choose non-employment as a way of life is made possible through government assistance, and when the share of the population making this choice is growing steadily, then the country's ability to fund such lifestyles becomes increasingly limited. What is the magnitude of the various population shares and how quickly is the composition of Israel's population changing?

3.A. Schools

One way to examine the demographic changes is through the distribution of pupils within the education system, which is divided into four sectors: State, State-Religious, Arab Israeli, and the ultra-Orthodox. All Israeli children must attend primary schools, so an examination of school enrollment patterns can provide an indication of the magnitude of each sector and of its rate of change. Figure 4 shows the share of primary school pupils in the ultra-Orthodox, the Arab and the State sectors.²

In 1960, 15 percent of all primary school pupils in Israel were enrolled in the ultra-Orthodox or Arab Israeli schools. Twenty years later, in 1980, their share increased to 26 percent. These children comprise a good part of today's adult population whose non-employment rates are shown in Figure 3. If the children of today's adults will have rates of non-employment that are similar to their parents', then what can be expected in the future?

² Pupils in the fourth sector, the State-Religious schools, complete the percentage to 100.



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

By 2000, the proportion of primary school pupils in the ultra-Orthodox and Arab israeli sectors reached 40 percent and by 2008 it had climbed to 48 percent. The Central Bureau of Statistics (CBS) projects that by 2013 more than half of Israel's primary school pupils will be enrolled in ultra-Orthodox or Arab israeli schools. While the share of Arab israeli and ultra-Orthodox pupils has grown steadily, the share of the non-religious State education sector has fallen considerably. Primary school enrollment in the State schools – where nearly all of the Israel's leadership (from the left to the right of the entire political spectrum) studied since the State's founding – comprised 61 percent of the country's total enrollment in 1960. By 2008, this share had declined to just 39 percent of all the primary school pupils in Israel.

Figure 3, in the chapter “Israel’s Education System – A Domestic Perspective,” shows how enrollment in the country’s primary school system has changed over the past decade. These changes range from a three percent decline in the non-religious State schools through an eight percent increase in the State-Religious schools, a 33 percent increase in the Arab Israeli schools, and an enrollment increase of 51 percent in ultra-Orthodox schools in just one decade. If the changes of this past decade in each of the four education sectors are indicative of future changes in enrollment – or, put differently, if enrollments will continue changing at these same rates for another three decades – what will be the face of Israel’s primary school system in 2040? It is important to note that the right side of Figure 4 is only an illustration of the long term consequences of trends that characterized Israel during the past decade. If these trends continue for another thirty years, then 78 percent of all primary school pupils in Israel will be in either ultra-Orthodox or Israeli-Arab schools while just 14 percent will study in the non-religious State schools.

It is improbable that the scenario described in Figure 4 will play itself out. Either the share of ultra-Orthodox and Israeli-Arabs in the overall pupil population will be smaller or it will be larger. A minority might be able to choose non-employment as a way of life, but when a majority adopts such a lifestyle, then this situation becomes unsustainable. It is inconceivable that the non-employment rates shown in Figure 3 will characterize the children in Figure 4 when they become adults. If non-employment rates decrease in both populations, then their birth rates are likely to decline as well.

On the other hand, if their rates of non-employment do not decline, then there is a question whether the rapidly shrinking minority who send their children to State schools and State-Religious schools will be able to continue to bear the country’s financial and defense burdens. In certain fields – higher education, medicine, engineering, etc. – the top individuals will have no difficulty finding work outside the country. If this happens, the share of those who stay behind in Israel and continue

sending their children to State or State-Religious schools could be even lower than indicated in Figure 4. Under such a scenario, it is unclear how an Israel that desires to remain a part of the modern world will be able to do so – and this is without even considering the existential question of who will bear the burden of physically protecting Israel, given the severity of the threats that continue to be made against its very existence?

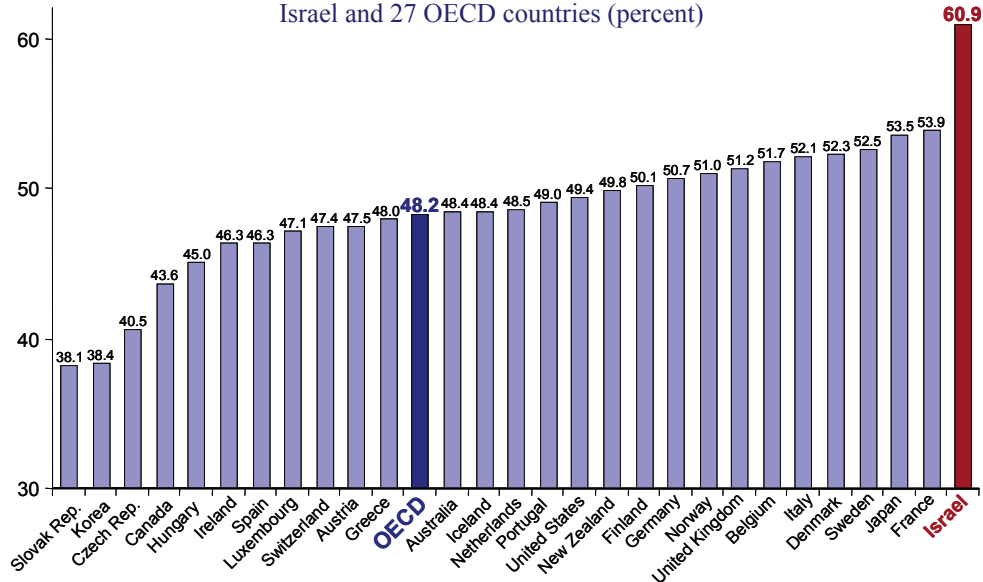
3.B. Dependency Ratios and Birth Rates

In some respects, Israel's demographic composition looks brighter than that of many Western countries. Dependency ratios reflect the ratio of dependents – as defined by the sum of children (ages 0-14) and retirement-age individuals (ages 65+) – to working age population (ages 15-64 years). The average dependency ratio in OECD countries is 48.2 percent (Figure 5), ranging from 38 percent in Slovakia and Korea to 54 percent in France and Japan.

Israel's dependency ratio of 60.9 percent is considerably higher than in all OECD countries. This was not the case 50 years ago. In five of the countries listed in Figure 5 (Korea, Iceland, Ireland, New-Zealand and Canada), dependency ratios were higher than in Israel. Since then, Israel's dependency ratio declined from its 1960 level (69.3 percent). But dependency ratios also fell in all of the OECD countries, leaving Israel alone at the top in 2008, as shown in Figure 5.

Figure 5

Dependency Ratios*, 2008
Israel and 27 OECD countries (percent)



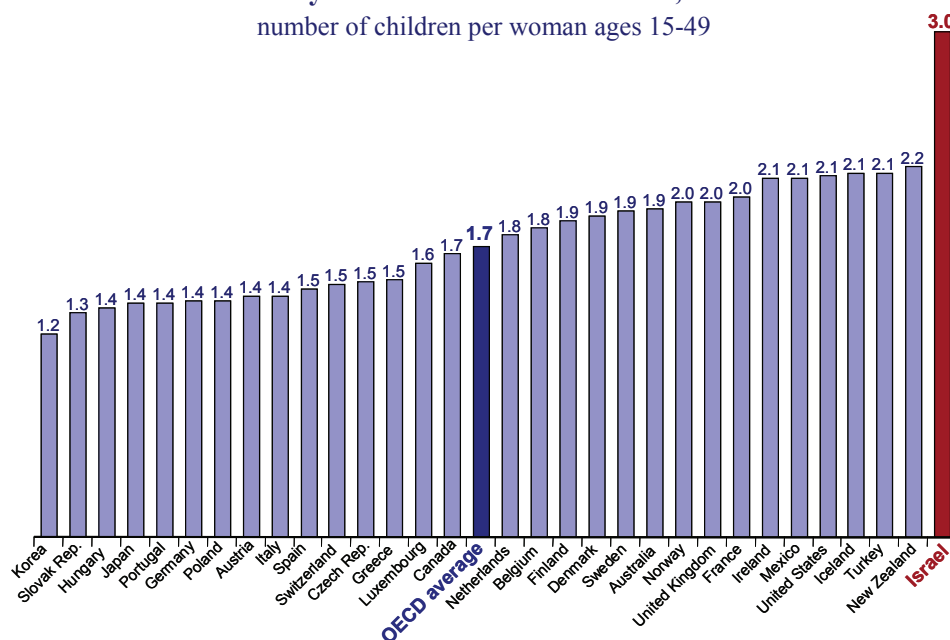
* Ratio of dependents (ages 0-14 and 65+) to working-age population (15-64).

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

Data: World Bank.

While dependency ratios fell across the West, the demographic process in OECD countries was different than Israel's. The population in most OECD countries has aged considerably and in some of these countries, there is a question regarding how future tax and social security systems will be able to meet the needs of the growing elderly population. Israel, as indicated in Figure 6, is a relatively young country and the number of children per woman is high. While the average number of children per woman in the OECD is 1.7, with relatively small differences between countries, the Israeli average is 3.0 – almost double the OECD average.

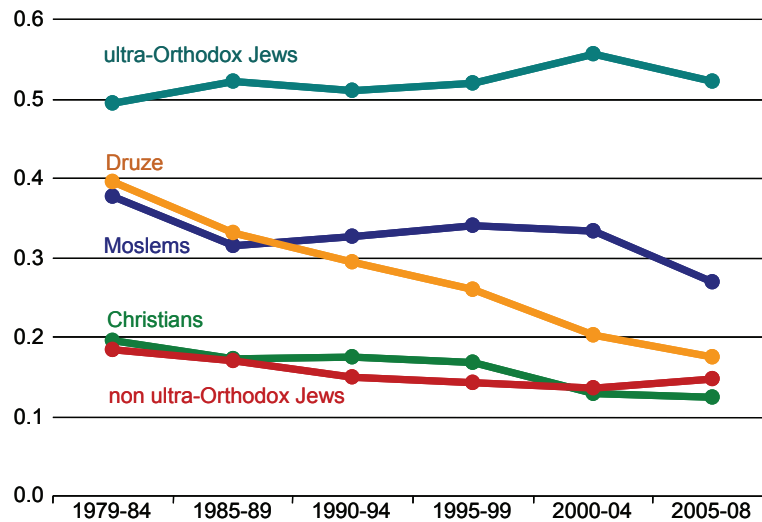
Figure 6
Fertility Rates in OECD and Israel, 2008
 number of children per woman ages 15-49



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

Figure 7 highlights Israel's fertility picture since 1979 by population groups. The figure shows the average number of children aged 0-1 to mothers aged 15-49 in five-year increments. In the first five-year segment, 1979-1984, the five population groups can be divided into three main groupings. The first grouping includes non-ultra-Orthodox Jewish women and Christian-Arab women, with a very similar number of children per woman (0.18 and 0.19, respectively). The second grouping includes Druze and Muslim women, with twice the number of 0-1 year-old children (0.40 and 0.38, respectively) as non-ultra-Orthodox Jewish women and Christian-Arab women. Ultra-Orthodox women had the greatest number of 0-1 year-old children: 0.49.

Figure 7
Fertility Rates in Israel, 1979-2008
 number of children ages 0-1 per woman ages 15-49



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

In the first four groups, fertility rates decreased over the past three decades, although the decline was not uniform. The similarity between non-ultra-Orthodox Jewish and Christian Arab women was maintained throughout the past three decades, with the number of 0-1 year-old children dropping to 0.15 and 0.12 per woman, respectively, by 2005-2008. Though Druze and Muslim women initially experienced similar reductions in fertility, this similarity ended after a few years. Druze fertility rates continued to drop steadily over the years, reaching 0.17 children under the age of one by 2005-2006, and nearly completing a convergence process with non-ultra-Orthodox Jewish women.³ After their initial decline, the fertility rates of Muslim women stabilized over the

³ Further analysis of Israel's demographic trends can be found in Rebhon and Malach (2008).

next two decades (from 1985 to 2004), displaying even a slight increase during this period.⁴

After 20 years of nearly constant fertility rates among Muslim women, ranging from 0.32 to 0.34, this rate fell to 0.27 in 2005-2008. Studies by Cohen, Dehejia and Romanov (2007) and Toledano, Sussman, Frisch and Gottlieb (2009) indicate that cuts in child benefits during the past decade led to a decline in birth rates among Muslim Israelis – particularly, among the Bedouin – and among the ultra-Orthodox. Both studies found that child benefits had a similar effect on Muslim birth rates while Toledano, Sussman, Parrish and Gottlieb found a lower impact than Cohen, Dehejia and Romanov among the ultra-Orthodox. Figure 7 shows that the number of children aged 0-1 born to ultra-Orthodox women was relatively stable, with a slight rise between 1979 and 1999. When child benefits were increased, ultra-Orthodox fertility rose from 0.52 in 1995-1999 to 0.56 in 2000-2004. After child benefits were reduced, the number of children returned to its previous level, 0.52, in 2005-08.

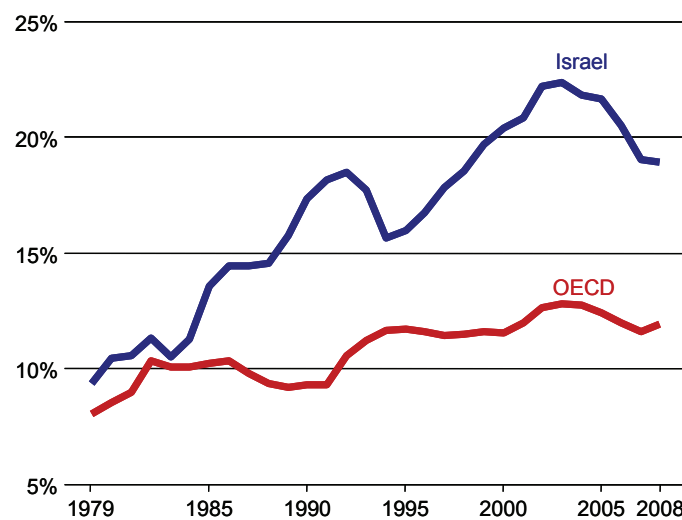
The ultra-Orthodox and Muslim Arab populations play a major role in Israel's high fertility rates relative to the OECD (Figure 6). If children born in these groups receive a good education in core subjects – which they are not receiving today – they will be better able to integrate in an open and competitive economy and will provide Israel with an advantage over many Western countries that face an increasing need to import labor from abroad (as immigrants or foreign workers). But if the ultra-Orthodox and Arab Israelis continue to receive a poor educational toolbox, they will find it increasingly difficult to become a part of a modern labor market, with a good chance of reliving their parents' high rates of non-employment – with all that this implies for the future of Israel's economy and society.

⁴ Within the group of Muslim Israeli women, the Bedouin women in the Negev desert have exceptionally high fertility rates.

4. Men in the Labor Market

The non-employment situation illustrated in Figures 2 and 3 has not always been typical of Israel. The country's labor market underwent some major changes in recent decades. Figure 8 shows the long run non-employment trends among 35-54 year old men in Israel and in the OECD since 1979.

Figure 8
Male Non-Employment Rates, Israel and OECD, 1979-2008
 as percent of 35-54 year-old male population



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

Three decades ago, rates of male non-employment in Israel and the OECD were similar, 9.4 and 8.1 percent respectively. Over the years, non-employment in the OECD increased by 48 percent (from 8.1 to

11.9).⁵ During this same period, Israel's rate of non-employment more than doubled. This happened despite two periods of correction that followed two difficult periods in Israel's economy.

The large immigration wave from the former Soviet Union in the early 1990s led to sharp increases in Israel's unemployment rates. The relatively rapid integration of the new immigrants was accompanied by a decline in unemployment rates together with a decrease in non-employment rates – almost back to the level that had prevailed prior to the immigration wave. At that point, non-employment rates resumed their earlier upward trend from the 1980s.

The severe recession and wave of terror in the early 2000s contributed to the rise in non-employment rates during those years. The end of the recession by mid-decade improved the employment picture and rates of non-employment declined. Even so, rates of non-employment among Israeli men are currently much higher than those in the OECD.

What caused the increasing gap between non-employment rates in the OECD and in Israel over the past three decades? The OECD average serves as a form of control group reflecting changes in Western countries during these years. The greater increases in Israel's non-employment rates could be due to a number of reasons, requiring a separate examination that is beyond the scope of this study. In general, economic growth is accompanied by a continuous process of structural changes. As a result, demand for skilled workers grows as demand for unskilled workers declines (in relative terms). If the share of educated workers in the Israeli economy does not increase along with the rising demand for such workers, it is possible that many workers lacking the necessary skills will find it increasingly difficult to find employment in the labor

⁵ A possible explanation for the rise in non-employment rates among men in the OECD could be related to the process of aging in countries belonging to the organization. For example, if over the decades the share of 50+ year-olds increases within the 35-54 age group in the OECD, and if non-employment rates of this age group are high relative to younger age groups, this may be a contributing factor for the increase in non-employment in the OECD observed in the figure.

market. Also, as Israel imports more unskilled foreign workers, it crowds out more and more unskilled Israelis from the labor market.

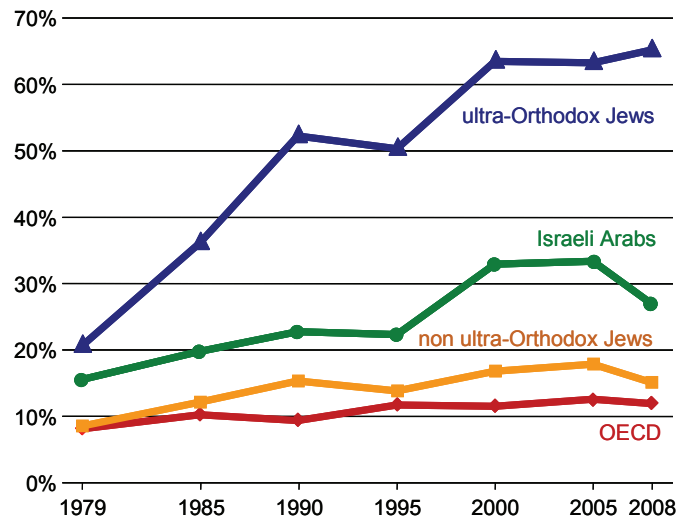
Another contributing factor is undoubtedly the poor state of Israel's education system (described in the chapter "Israel's Education System – An International Perspective") in the core subjects, which undermines the prospects of many children to acquire knowledge that might have helped them realize their potential.⁶ Furthermore, the less adequate Israel's physical infrastructure – especially its transportation infrastructure and the limited access to rapid and inexpensive means of transportation – the more Israelis find it difficult to find employment within a reasonable and inexpensive distance from their homes.

Figure 9 divides Israeli men aged 35-54 into three groups. In 1979, rates of non-employment among non-ultra-Orthodox Jewish men (8.5 percent) were almost identical to male non-employment rates in the OECD (8.1 percent). Since then, a gap developed in the rates of non-employment between the two groups – possibly due to some of the reasons outlined above.

Differences between rates of non-employment among Arab Israeli men (15.4 percent) and those of non-ultra-Orthodox Jewish men (8.5 percent) in 1979 increased only slightly by 1995, from a gap of 6.9 percentage points to one of 8.6 percentage points. In the second half of the 1990s, the gap almost doubled, reaching 16.1 percentage points by 2000. During these years there was a sharp hike in the number of unskilled non-Israeli workers employed in Israel. The primary reason for this rise in non-employment rates among Arab Israeli men may have been their replacement by foreign workers. Non-employment rates among Arab Israeli men remained high until 2005 and have since declined, as did those of non-ultra-Orthodox Jewish Israeli men. Most likely, these

⁶ This is not meant to imply that the share of adults with academic degrees is low in relation to the West, as will be shown. The problem is that many individuals with high potential are unable to reach higher education because of the inadequate primary and secondary education that they receive.

Figure 9
Male Non-Employment Rates, 1979-2008
 as percent of 35-54 year-old male population



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

declines in non-employment were due to the rebounding of the Israeli economy from the deep depression earlier in the decade.

In 1979, rates of non-employment among ultra-Orthodox men aged 35-54 were fairly high (20.6 percent) compared to the OECD average and to non-ultra-Orthodox Jewish men. These rates tripled within just 21 years to 63.4 percent by 2000. In contrast to the other two Israeli groups of men, as the economic situation improved between 2005 and 2008 and non-employment among Arab Israeli and non-ultra-Orthodox Jewish men fell, non-employment among ultra-Orthodox men rose from 63.1 to 65.1 percent.

Berman (2000) provides a picture that supplements the one in Figure 9 with regard to ultra-Orthodox men. In 1980, 41 percent of ultra-Orthodox

men aged 25-54 were enrolled full-time in *yeshivas*. By 1996, this share had increased to 60 percent. The employment situation among ultra-Orthodox men is extraordinary in terms of its severity for two main reasons: it has worsened considerably over the past decades, and there is no relation between employment rates among the ultra-Orthodox and the state of the economy.

What occurred between 1979 and 2008 that enabled such a substantial increase in the share of non-employed prime working age ultra-Orthodox men? One oft-cited explanation by Israeli ultra-Orthodox in private conversations is culture – though employment patterns among ultra-Orthodox men in other Western countries are quite different from those in Israel.

The National Economic Council (2009) compares 2006 employment rates among ultra-Orthodox men aged 16-60/64 in England (67 percent) with employment rates among all English men (79 percent), finding a difference of 12 percentage points between the two groups. The rate of employment among ultra-Orthodox men in England was 29 percentage points higher than that of Israeli ultra-Orthodox men of the same age (38 percent), while the employment rate of ultra-Orthodox women in England (47 percent) was seven percentage points lower than that of same-age Israeli ultra-Orthodox women (54 percent). These differences in employment rates exist elsewhere as well. Employment rates among ultra-Orthodox Jews in New York are also higher than those of the ultra-Orthodox Jews in Israel (Gonen, 2000). Even if one were to argue that the large employment differences between ultra-Orthodox in Israel and abroad might be due to cultural differences between countries, this argument does not adequately explain how male ultra-Orthodox non-employment rates within Israel could have tripled within the span of just two decades.

Another common explanation given for the high rates of non-employment among the ultra-Orthodox is their desire to avoid mandatory conscription to the IDF. Israeli law exempts all men from obligatory service who are enrolled in a *yeshiva*. However, these conditions also

prevailed 30 years ago, when non-employment rates were less than one-third of what they are today.⁷ According to the Economic Planning Administration of the Ministry of Industry, Trade and Labor (2009), which bases its study on the Central Bureau of Statistics's Social Survey for 2005-2007, 45 percent of ultra-Orthodox men aged 30-64 previously served or are currently serving in the IDF. Among ultra-Orthodox men aged 20-29, only 11 percent previously served or are currently serving in the IDF – compared with 91 percent among non-ultra-Orthodox Jewish men of the same age.

Part of the explanation for the high rates of non-employment may be due to the way that ultra-Orthodox Jews are identified in the sample – on the basis of the “last place of study” variable in the CBS's Labor Force Survey. For example, if non-employment rates among the religious Jews who are not ultra-Orthodox are lower than those among the ultra-Orthodox, and if more of this religious population used to go to a *yeshiva* after secondary school in the 1970s and 1980s compared with those who attend a *yeshiva* today, then part of the explanation for the rise in non-employment in the figure may be due to the different mix of the population defined here as ultra-Orthodox.

The facts, however, suggest that the process is actually operating in the opposite direction. A considerable proportion of the population previously defined as “traditional” or “religious” has become more religious and even ultra-Orthodox. A good example of this is the group of people who vote for the *Shas* political party, whose numbers have increased considerably in recent decades. As this phenomenon becomes more widespread, it is possible that changes in the population defined by the “last place of studies was a *yeshiva*” variable have had the opposite effect on non-employment numbers than described above. This is a population group that did not necessarily graduate from a *yeshiva* but

⁷ The initial number of exemptions in 1948 for those studying in *yeshivas* was 400, but by as early as 1953, it had reached 1,240. The number of exemptions reached 4,700 in 1968 and 16,000 in 1985. Today, over 40,000 ultra-Orthodox men receive exemptions each year from the military draft.

from a State-Religious secondary school (and at the time was not considered ultra-Orthodox) but has adopted and currently follows an ultra-Orthodox lifestyle regarding employment, military service, children's schools, and so on.

Another possible explanation, as noted above, is that many ultra-Orthodox Jews may be working, but do not truthfully declare their employment situation. Even if this is a large-scale phenomenon, only a substantial change in the share of those who are untruthful with regard to their work status could explain the large changes that have taken place in the extent of non-employment among ultra-Orthodox men aged 34-54. There does not appear to be any particular reason to assume that the share of non-law-abiding ultra-Orthodox Jews has increased by such a magnitude as to explain the increase in the rate of non-employment. In any event, if the explanation for the high and rising non-employment among ultra-Orthodox Jews lies in a culture that endorses not truthfully declaring employment, widespread tax evasion and fraudulent receipt of welfare benefits, then a root source solution should focus on enforcing the country's laws on all parts of Israeli society.

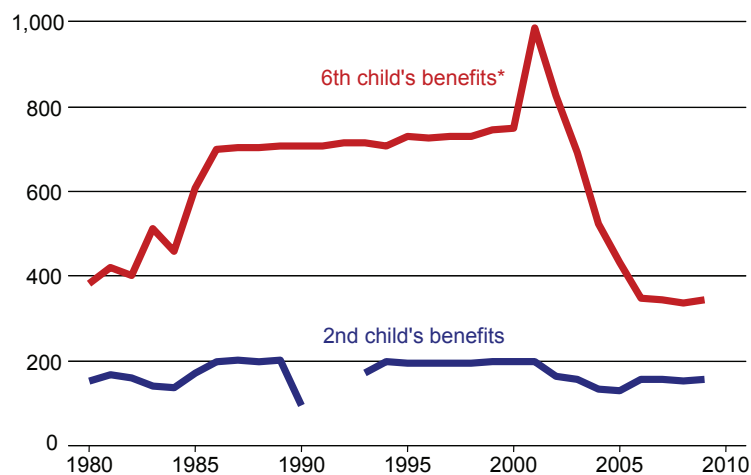
Since no major changes took place in the requirements for compulsory military service,⁸ and since there have probably not been large changes in the culture of fraudulent tax reporting, then the real explanation for the large rise in ultra-Orthodox non-employment rates is probably due to some other factor – quite possibly, the various forms of benefits and subsidies that the government provides Israel's ultra-Orthodox population. If the total amount of benefits provided to the average ultra-Orthodox family increased by a large amount, then this could enable the families to adopt non-work as a way of life, albeit at relatively low

⁸ If the requirement to choose between compulsory military service or enrollment in a yeshiva has not changed in any major way since 1979, and yet rates of non-employment have tripled, then it is possible that the source of the problem is unrelated to one solution favored by some in Israel, that of granting the ultra-Orthodox a blanket exemption from military service so as to free them from the purported need to study in a yeshiva to avoid the draft.

income levels. Child benefits have grabbed headlines in recent years, but it is possible that the research emphasis until now, which had been primarily on the effect of the benefits on ultra-Orthodox fertility, has been missing the main effect of this financial support – its impact on employment.

Figure 10 shows the size and changes in child benefits since 1980 for the second and sixth children in the family. Over the past three decades, there were no major changes in the second child's allowance (net of inflation). This was not the case regarding benefits from the sixth child and higher. As early as 1980, the allowance for the sixth or later child (NIS 384 per month, in 2008 prices) was at least double the second child allowance (NIS 153). From 1980 to 1985, it increased by 58 percent. By the end of the decade, in 1989, this benefit reached NIS 708 per month, 84 percent more than its level at the beginning of the decade. During the

Figure 10
Monthly Child Benefits by Child, 1980-2009
2008 prices



* For 6th or later child.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: National Insurance Institute.

1990s, the sixth-child allowance rose even further, reaching NIS 748 in 2000, spiking up in 2001 – with the Halpert Law – to NIS 987 (2.5 times its 1980 level, in real terms). Since then, child benefits declined markedly from the sixth child and on, to NIS 344 in 2008 prices, and today it is 10 percent below its 1980 level. While child benefits have apparently had little impact on ultra-Orthodox birth rates, their expansion over the years – keeping in mind that the sixth child allowance is multiplied by the number of children in the family – may have contributed to the increase in ultra-Orthodox non-employment rates.

But this is still not the full picture and there are other routes through which large budgets are being transferred to the ultra-Orthodox population. These other income sources facilitate: (a) the large growth in non-employment rates, described in Figure 9; and (b) high birth rates – despite lack of employment income – above and beyond other population groups in Israel and in the West (Figure 7).

Berman (2000) details the dependency that families headed by *yeshiva* students have on public assistance. In 1993-1996, only 18 percent of these families' income – compared with the national average of 81 percent – came from work (primarily the wife's). Assistance from institutions (aside from National Insurance benefits of various kinds) mostly in the form of scholarships for *yeshiva* students comprised 39 percent of their incomes. Child benefits contributed another 32 percent. In other words, at least 70 percent of the ultra-Orthodox family income – excluding pension payments, disability or other National Insurance programs – came from various forms of aid and benefits, mainly from the government. Berman finds that government assistance to ultra-Orthodox families more than doubled between 1979-1982 and 1993-1996.

The National Economic Council Report (2009) lists some possible funding sources for an ultra-Orthodox family with six children under the age of 18, including two under age 3. The family receives NIS 910 in child benefits. If the husband does not work, the family gets another NIS

700 as a *kollel*⁹ scholarship from the Ministry of Education, about NIS 1,000-2,000 (this is a minimum estimate) from additional *kollel* scholarships, and an additional NIS 500 in vouchers for the holidays (monthly average value) from charities. If the wife does not work, the family receives another NIS 940 in benefits from the Ministry of Religious Affairs. Together, this totals an assistance package of NIS 4,000-5,000 per month for a family in which neither parent is working. This does not include various subsidies in housing, child-care, transportation, municipal taxes, and so on, that ultra-Orthodox families often receive.

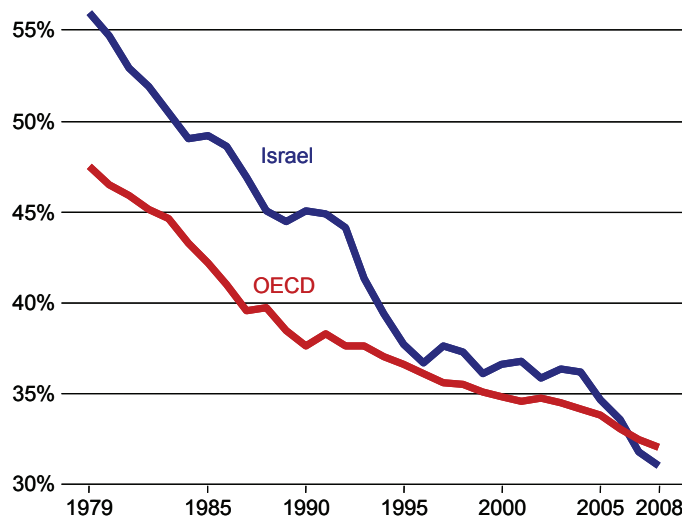
When the goal is a source treatment of non-employment among working age ultra-Orthodox men, then it is insufficient to focus just on the benefits and assistance that apparently enable such atypical rates of employment and fertility. The State of Israel needs to start focusing on the contents of the educational toolbox provided pupils in the ultra-Orthodox school system. Those who do not learn the subjects necessary for coping successfully in a modern labor market will find it hard to live above the poverty line as adults. In light of the fact that this population group – together with the Arab Israelis who also receive a poor education (albeit for other reasons) – will be the majority in Israel, time is rapidly running out for bringing a core curriculum to their schools that will provide the tools necessary to work in a global economy and to be contributing citizens in a modern democratic society.

⁹ *Kollels* are another name for what are called in Hebrew “higher” *yeshivas*.

5. Women in the Labor Market

Employment patterns among women aged 35-54 are very different from those of men, both in Israel and in the OECD countries (Figure 11). While male non-employment rates increased, female non-employment rates dropped considerably. Women's non-employment rates in the OECD declined from 47.5 percent in 1979 to 32.0 percent in 2008, a decrease of 15.5 percentage points. The main explanation for the large decline in non-employment rates among women has to do with women's increased levels of education. Higher levels of education are associated with increased income, and as incomes rise, the price of choosing the non-employment alternative rises too, encouraging more women to join the labor market. Other factors that decrease female non-employment

Figure 11
Female Non-Employment Rates, Israel and OECD, 1979-2008
 as percent of 35-54 year-old female population



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

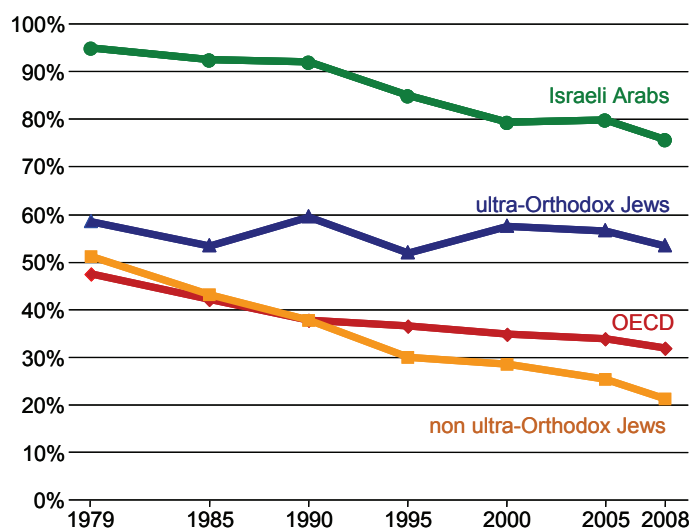
include opening public or subsidized day care centers and kindergartens, laws forbidding discrimination against women, fully or almost fully paid maternity leaves, and the expansion of the service sector in the economy.

Non-employment among Israeli women has declined even more precipitously than the OECD average. In 1979, the rate of non-employment among women was 56.0 percent, or 8.4 percent above the corresponding rate in the OECD. Within three decades, non-employment among Israeli women aged 35-54 fell to 31.0 percent, a decline of 25.0 percentage points, placing Israeli women in 2008 a full percentage point below the average for women in the OECD.

Two population groups contributed to the substantial decrease in Israeli non-employment among women: non-ultra-Orthodox Jewish women and Arab Israeli women. In 1979 the rate of non-employment among non-ultra-Orthodox Jewish women was 51.2 percent, or 3.7 percent above the corresponding rate in the OECD (Figure 12). By 2008, their rate of non-employment dropped by more than half, to 21.2 percent – a decline of 30.0 percentage points that caused the gap between OECD women and non-ultra-Orthodox Jewish women in Israel to reverse itself since 1979. Non-employment rates among non-ultra-Orthodox Jewish women in 2008 were 10.8 percentage points lower than those of OECD women.

Among Arab Israeli women, non-employment rates were very high in 2008 (75.7 percent). But 30 years ago, nearly all (95 percent) prime-working age Arab Israeli women were not employed. So high current rates notwithstanding, a substantial change in the employment rates of female Arab Israelis has taken place over the past three decades. In fact, between 1990 and 2008, the gap in non-employment rates between Arab Israeli women and non-ultra-Orthodox Jewish women – which was quite large – remained stable: a gap of 54.3 percentage points in 1990; 54.8 percentage points in 1995; 50.9 percentage points in 2000; 54.6 percentage points in 2005; and, 54.5 percentage points in 2008. That is, for the past two decades, the rate of decrease in non-employment among Arab Israeli women was similar to that of non-ultra-Orthodox Jewish

Figure 12
Female Non-Employment Rates, 1979-2008
 as percent of 35-54 year-old female population



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

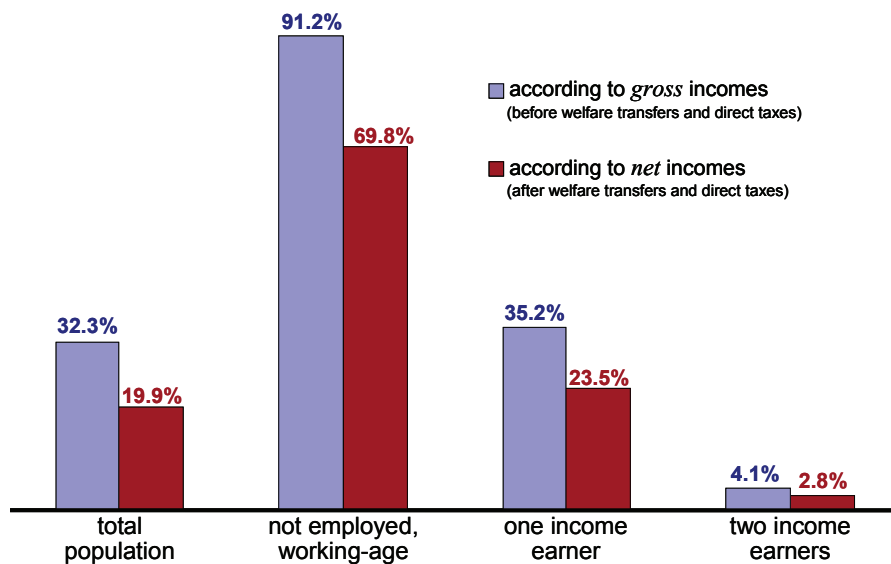
women – though rates of non-employment among Arab Israeli women still have a long way to go before they resemble those of non-ultra-Orthodox Jewish women.

The main characteristic of non-employment among ultra-Orthodox women is its relative stability over the last three decades. On the one hand, they did not display the rise in non-employment that typified ultra-Orthodox men. On the other hand, they also did not display the substantial decrease in non-employment rates among women that occurred in other countries and other sectors in Israel. In 1979, rates of non-employment among ultra-Orthodox women were 7.3 percentage points higher than those of non-ultra-Orthodox Jewish women, and in 2008 this gap increased considerably – reaching 32.2 percentage points.

6. Education and Employment

The issue of employment is strongly linked to the problem of poverty. Figure 13 shows 2007 data published by Israel's National Insurance Institute (Annual Survey, 2008).¹⁰ Among families whose working age head of household is not employed, 91.2 percent live below the poverty line in terms of gross income (i.e., before transfer payments and taxes). When one of the adults in the household earns an income, the incidence of poverty in terms of gross income drops to 35.2 percent, and with two

Figure 13
Percent of Families Under Poverty Line, 2007



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: National Insurance Institute.

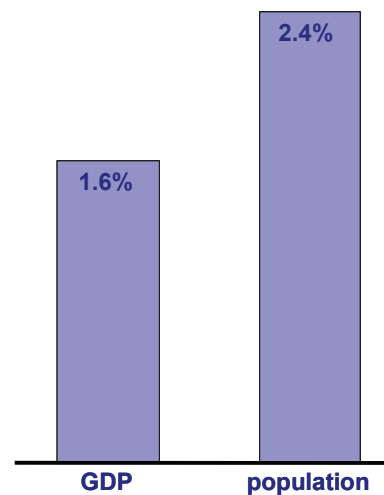
¹⁰ The National Insurance Institute is the Israeli version of the American Social Security Institute.

or more income earners, only 4.1 percent of all households live below the poverty line. Poverty in terms of net income (that is, after transfer payments and taxes) paints this picture in even greater relief. With two or more providers, only 2.8 percent of families live below the poverty line in terms of net income.

Nonetheless, according to the National Insurance Institute (*Poverty and Social Gaps Report*, 2008), working poor families constitute 46 percent of all poor families in Israel. The National Insurance Institute suggests two main reasons for this: a high percentage of people who are employed part-time and low salaries. One-third of the poor work full-time and earn less than minimum wage – indicating serious law enforcement problems.

Another important reason that there are so many working poor in Israel, perhaps even more important than the reasons specified by the National Insurance Institute, is the level of education in Israel that affects not only poverty but also the general standard of living in Israel. Figure 14 compares Israel and the United States with respect to both population and gross domestic product (GDP). While Israel's population equaled 2.4 percent of the American population in 2008, GDP in Israel that year was only 1.6 percent that of the United States'.

Figure 14
Comparison of Israel and U.S., 2008
ratio of Israel to U.S.



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

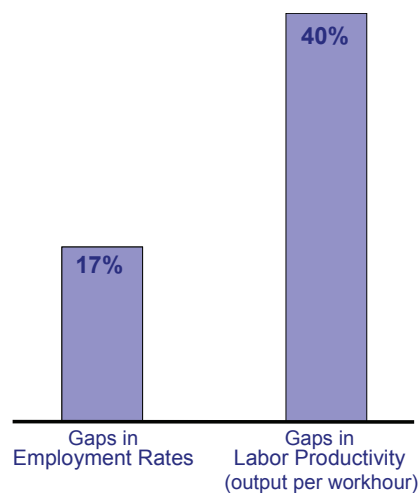
Two primary factors contributing to the large output gap between the two countries are employment and productivity. Figure 15 shows that the number of Americans employed as a percentage of the United States' working age population was 17 percent higher than the rate of employment in Israel.

The other key factor underlying the relative differences in production between the two countries is large gap in labor productivity. The fact that many Israelis do not work is not enough to cause output gaps of the magnitude observed between the United States and Israel. The average Israeli worker's output per hour worked is considerably

lower than the average American worker's. While there are areas where the productivity of Israeli workers does not differ by much from American productivity levels – and in some cases, even exceeds American productivity – the American lead over Israel at the national level is very large. After accounting for differences in purchasing power parity between the countries, GDP per hour worked in the U.S. is 40 percent higher than GDP per hour worked in Israel.

Economic growth in GDP per capita stems from the ability to increase productivity. This comes from upgrading the physical capital and infrastructures inherent in the manufacturing process, as well as from improving human capital – particularly through education. Human capital improvements, which increase productivity, make it possible for

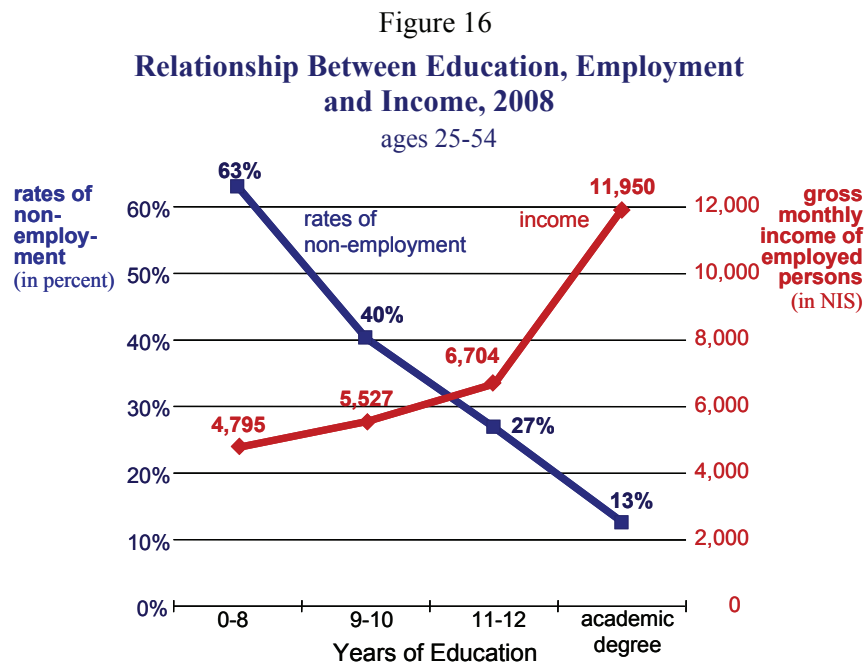
Figure 15
**Labor Force Comparison,
U.S. and Israel, 2008**
percent difference between U.S. and Israel



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

employers to pay employees more, which would contribute to alleviating part of the poverty problem and the low wages currently paid to many Israeli workers. As an economy grows, it needs more and more educated and skilled individuals, thereby increase their chances to find work and be employed.

These relationships do not exist only in theoretical models. They happen to be stylized facts characterizing Western countries, Israel included. Figure 16 shows the relationship between education, employment and income in Israel in 2008. Among 25-54 year-olds with 0 to 8 years of schooling, 63 percent were not employed and those who were employed earned an average monthly income of NIS 4,795. When the number of years of schooling increases to 9-10, average monthly income rises to NIS 5,527 and non-employment rates drop to 40 percent. Employment prospects for individuals with 11-12 years of schooling are



Source: Dan Ben-David, *Economic Quarterly*, 2003 (updated).
Data: CBS, OECD.

higher than those of the two other groups, with a non-employment rate of 27 percent. The labor market for academics with higher education is the best of all groups. Only 13 percent of them were not employed while the income of those who were employed reached nearly NIS 12,000. In Israel circa 2008, 46 percent of the 25-54 year-olds had no education beyond 12 years of schooling, while 29 percent of them had academic degrees.¹¹

As a result of major differences between secondary school education systems throughout the Western world, it is difficult to compare adult graduation percentages across countries. While the OECD provides data on the share of secondary school graduates, the variety of definitions for the term “secondary school” renders such comparisons of graduates meaningless. An alternative approach is to compare the number of years of schooling among working age adults across countries. Such international comparisons are also not as accurate as one would hope for, since a year of schooling in one country is not necessarily equivalent to that in another country. Table 1 in the chapter “Israel’s Education System – An International Perspective” shows just how much variability there is among Western education systems.

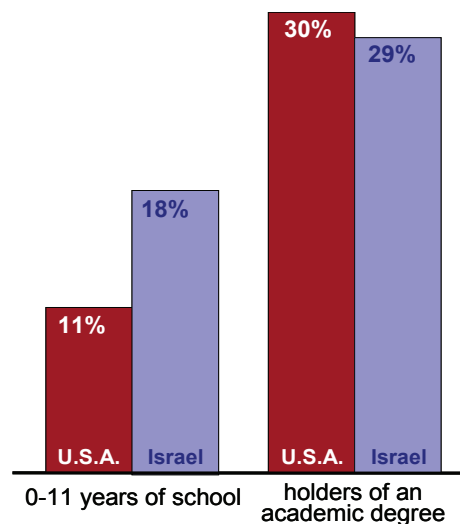
A comparison of the U.S. labor force with Israel’s in terms of education levels among adults can shed some light on the employment, productivity and output differences between the two countries, as depicted in Figures 14 and 15. Completion of 12 years of schooling is sufficient to be considered a “secondary school graduate” in the United States while in Israel, a secondary school graduate must be eligible for a Matriculation Certificate (*te’udat bagrut*), a concept with no equivalent in the United States, making comparisons of secondary school graduates much less meaningful.¹²

¹¹ Income inequality between education groups is not necessarily indicative of just productivity differences between groups. Such inequality can also result from, among other things, differences in employment rates across various occupations and the degree of organized labor in the different workplaces.

¹² In some American states there are secondary school exit exams.

On the other hand, if a person's level of education does not exceed 11 years of schooling, then it is unlikely that the person graduated from secondary school in either country. Figure 17 compares the 25-54 year-old populations of the two countries in terms of their education levels in 2008. While the share of prime working age adults with academic degrees is very similar in the two countries – though one could argue about the value of such a comparison in light of the variability of the concept within countries and across institutions of higher education – the share of adults with no more than 11 years of school is over 50 percent greater in Israel than in the United States. Figure 16 illustrated the link between higher non-employment rates, lower income levels and low level of education. Hence, the larger the share of relatively uneducated

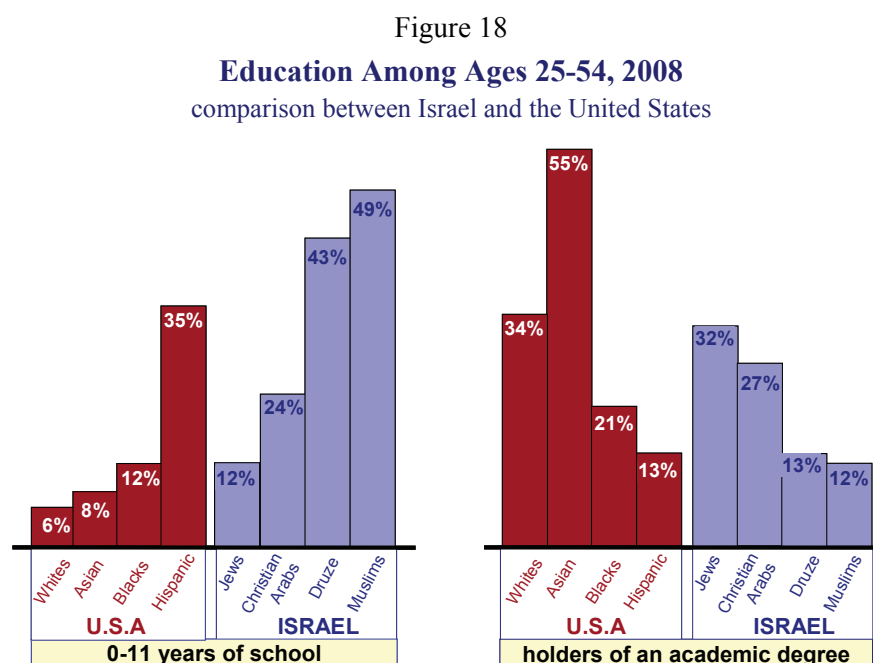
Figure 17
Education Among Ages 25-54, 2008
comparison between Israel and the United States



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: CBS, U.S. Census Bureau.

individuals within the working-age group, the lower the expected rates of employment and productivity.¹³

Despite the very large differences in scale between them, one common characteristic shared by both the United States and Israel – but not by many other countries – is the degree to which both are countries of immigrants with very heterogeneous populations. Figure 18 compares the level of education between major population groups at ages 25 to 54 in



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: CBS, U.S. Census Bureau.

¹³ The emphasis here is on the supply side in the labor market. Comparing levels of education among workers in Israel and the United States will yield similar employment rates between the countries the more the demand side for employees in both countries is similar.

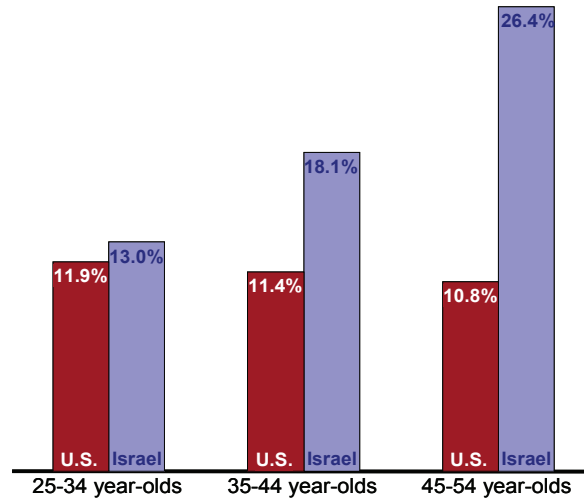
both countries. The population shares holding academic degrees among white Americans (34 percent) and Jews in Israel (32 percent) are very similar. The highest rate of college graduates at these prime working ages is among Asian Americans, with more than half holding an academic degree. The American group with the lowest shares of academics is that of the Hispanics, with 13 percent of graduates – an identical percentage to that of the Druze in Israel and one percentage point higher than Muslim Arab Israelis.

At the other end of the educational achievements spectrum are prime working age adults with no more than 11 years of schooling. The rate of such secondary-school dropouts among white Americans (6 percent) is half that of Israeli Jews (12 percent). In fact, the dropout rate among Israeli Jews is identical to that of African-Americans. The share of dropouts among Israeli Druze (43 percent) and Muslim Arabs (49 percent) is higher than that of any major ethnic group in the United States.

Despite the large disparity between the two countries in the share of prime working age high-school dropouts, this gap has been closing over time. Figure 19 shows very large differences between the countries for 45-54-year-olds, 10.8 percent of whom did not finish secondary school in the United States compared to 26.4 percent in Israel. The gap falls considerably among 35 to 44-year-olds, to 11.4 versus 18.1, and is almost eliminated among 25 to 34-year-olds, 11.9 percent versus 13 percent, respectively.

As shown in Appendix Figure 2, the narrowing gaps in dropout rates are reflected in all four main population groups in Israel. The share of dropouts among Muslim Arab Israelis aged 25-34 (36 percent) is similar to that of Hispanic Americans (33.1 percent) in the same age group, while among Israeli Druze the rate (27.6) is lower than both. The situation among Christian Arab Israelis (10.8 percent) is slightly better than that of African-Americans in the United States (11.2 percent), while the gap between Israeli Jews (7.5 percent) and whites in the United States (5.7 percent) of the same age groups is considerably lower.

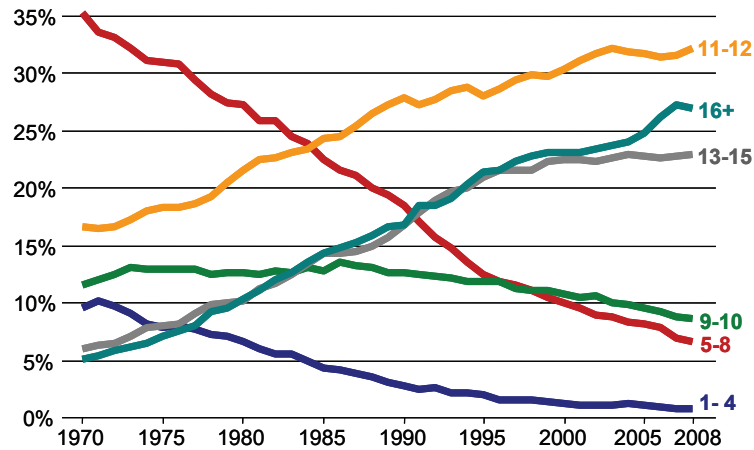
Figure 19
Share of Population with 0-11 Years of Education At Most



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: CBS, U.S. Census Bureau.

Figure 20 shows the large changes that have occurred over the past four decades in educational attainment among 35 to 54-year-olds in Israel. By 2008, the group with 1-4 years of schooling has all but disappeared. The largest group in 1970 was that of individuals with 5-8 years of schooling. Thirty-eight years later, the size of this group was reduced by half, while its share in the population fell from 35 percent to 7 percent. The largest group of 35 to 54-year-olds today is those with 11 to 12 years of schooling. This group grew five fold since 1970 and its share in the population almost doubled, from 17 to 32 percent. The second largest group in 2008 – comprising individuals with 16 or more years of

Figure 20
Population Aged 35-54, by Years of Education, 1970-2008
 each education group as share of total age group



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

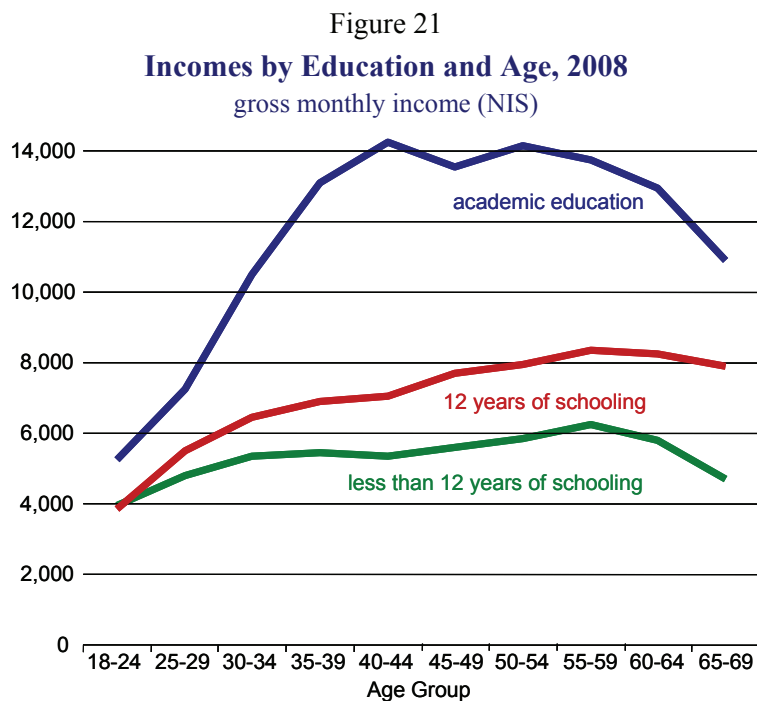
schooling – grew faster than all other groups.¹⁴ More than one-quarter of those aged 35-54 had 16+ years of schooling in 2008, compared to just 5 percent in 1970.

Figure 21 sharpens the picture of the relationship between education and income in Israel. Israel's population is divided into five-year age groups, with the exception of the bottom of the adult age scale. In this youngest group, aged 18-24, no income differences are observed between

¹⁴ Over the years, the Central Bureau of Statistics has changed some of the variables and definitions in its Labor Force Surveys. In contrast to current Surveys, those from many years ago do not include variables indicating whether individuals hold academic degrees. Hence, the second-best option available for gauging changes over the long run is to utilize a different variable – one that has existed over the entire time span – indicating 16+ years of schooling as an approximation for receipt of an academic degree.

those who completed 12 years of schooling and those who did not. As age – and, presumably, work experience – increase, the incomes of both groups rise as well, but with a steadily growing income advantage to those who completed 12 years of schooling. In the ages close to retirement, monthly income begins to decline in both groups.

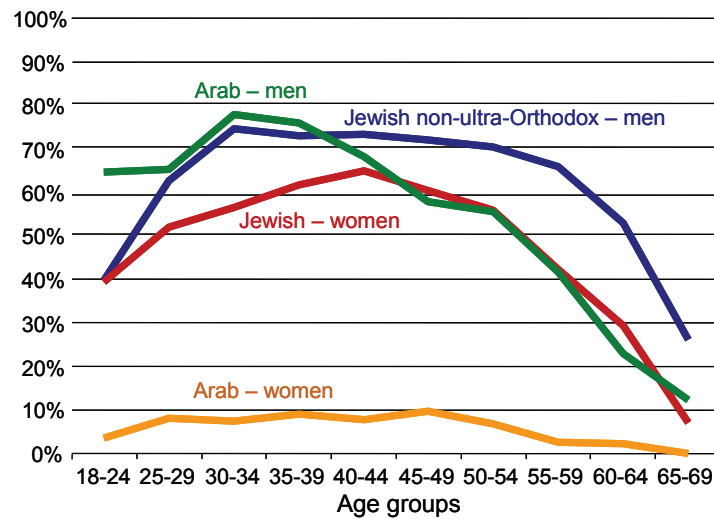
The highest incomes in the figure are in the group with an academic education. While the gap between them and the other two groups is low at younger ages, by the 40 to 44-year-old age bracket, the average monthly income of those with an academic degree reaches NIS 14,235, compared to an average of NIS 7,036 for individuals with 12 years of schooling and NIS 5,339 on average for those who did not complete secondary school.



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

Figure 22 focuses on employment rates among groups of men and women who did not complete more than 11 years of schooling. Arab Israeli women in this group have the lowest employment rates, below 10 percent in all age groups. Among Jewish Israeli women, employment rates begin at 40 percent at the youngest ages, gradually rising to a peak of 65 percent in the 40 to 44-year-old age bracket, after which employment rates decline sharply until retirement age.

Figure 22
Employment Rates
 by groups with 0-11 years of schooling, 2008



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

Employment rates of Arab Israeli men are almost identical to those of non-ultra-Orthodox Jewish men aged 25-39. They then begin a precipitous and continuous decline – unlike the relative stability of employment rates among non-ultra-Orthodox Jewish men until their 50s. The steep decline in Arab Israeli male employment is similar to that of Jewish women from the mid-forties age bracket. It may reflect a combination of (a) physically demanding employment, which reduces the ability to keep working after age 40, and (b) an increased difficulty for people above the age of 40 (men and women, Arabs and Jews) to change jobs.¹⁵

When the focus moves to those with a matriculation certificate, signifying completion of secondary school in Israel, the employment picture improves for all groups (Figure 23). Employment rates among Arab Israeli women rise to 30 percent in most age groups and are much higher than the secondary school dropout rates of employment. Among young people, aged 18-29, there is great similarity of employment rates among the other three groups: Arab Israeli men, non-ultra-Orthodox Jewish men and Jewish women. While the resemblance in employment rates between Arab Israeli and Jewish men continues until ages 40-44, female employment rates stabilize in their late 20s and do not keep rising like the men's. A major reason for this may be that these ages, which are usually of the ages for childbirth and child care, make it difficult for many women to remain in or to re-enter the labor market. Employment

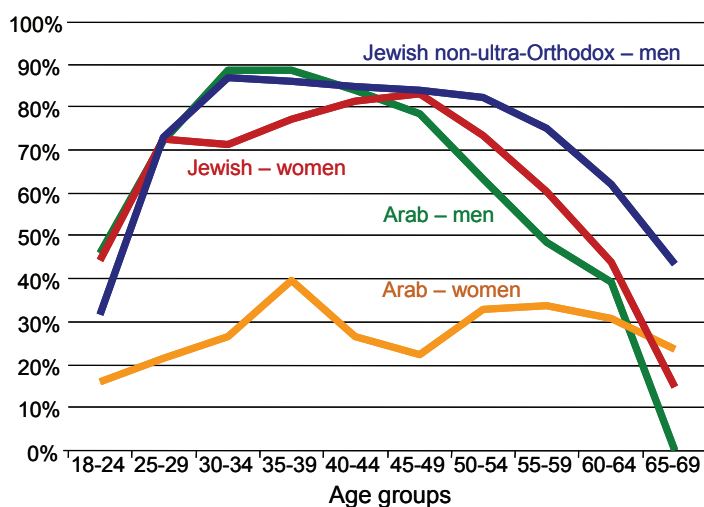
¹⁵ Another explanation for the findings in the figure may relate to the nature of available labor force data in Israel: the existence of annual surveys providing cross-sectional data and the absence of longitudinal surveys following the employment of a person or group over time that would allow construction of time series. As a result of the *de facto* restriction to cross-sectional analysis, there may be cohort effects that reflect differences in behavior and work between age groups that are unrelated to education. Saadi and Lewin-Epstein (2001) examine the phenomenon presented in Figure 22 over time, controlling for cohort effects, and find a picture similar to that in the figure – i.e. a steep decline in the employment of Arab men as they get older, which is not the case among Jewish men. Saadi and Lewin-Epstein find an empirical corroboration to arguments (a) and (b) here.

rates of Jewish women and men once again become similar in their late 40s. From that point onward, employment rates of Jewish women decline more quickly than those of Jewish men, while Arab Israeli men's employment rates decline even faster and are substantially lower among older people than among similarly aged men and women in the Jewish population.

Figure 23

Employment Rates

by groups with a secondary school degree*, 2008



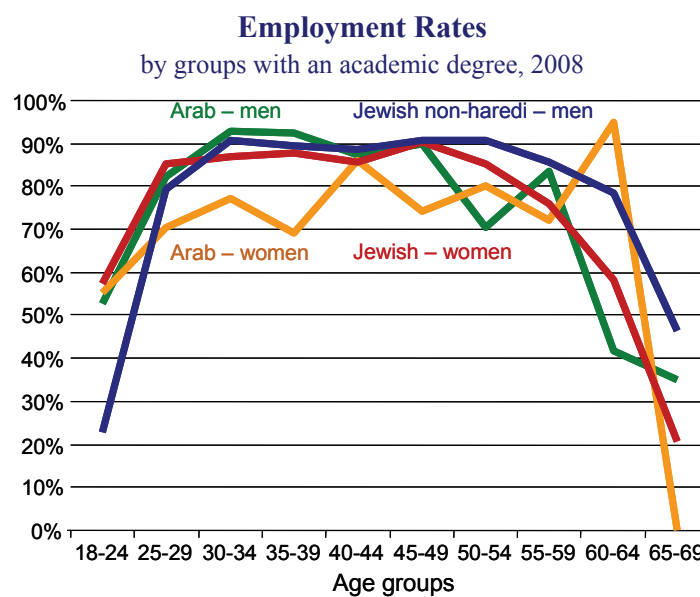
* Completion of matriculation (*Bagrut*) exams.

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

The great equalizer in terms of employment patterns is an academic degree (Figure 24). There is a considerable amount of similarity in rates of employment between men and women and between Jews and Arabs with academic degrees – though it is important to note that this is just an initial comparison that does not consider issues such as wages or full versus part-time employment. Because of the relative scarcity of Arab

Israeli women with academic degrees, the outcomes based on the Labor Force Survey exhibit a considerable degree of variability across age groups, but their employment rates tend to range between 70 and 80 percent. Employment rates among Arab Israeli men are highest between the ages of 30-39, with more than 90 percent of them employed. Close behind are non-ultra-Orthodox Jewish men with employment rates of around 90 percent from their mid-30s to their mid-50s. Israeli Jewish women's employment rates are almost identical, but a little lower in their mid-30s to late 40s.

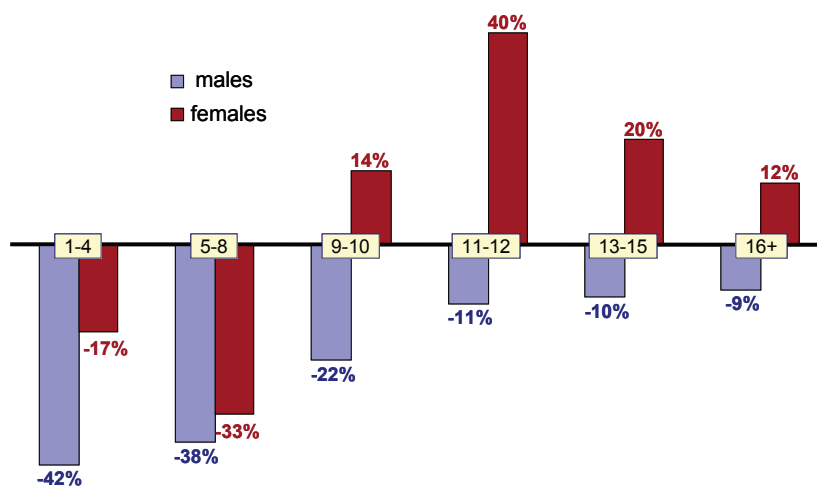
Figure 24



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

The relationship between education levels among 35-54 year-olds and changes in male and female employment since 1970 is portrayed in Figure 25 by means of cumulative percent changes. There was a decline in employment rates among all men in all education groups, with employment rates declining faster the lower the level of education. In other words, while employment rates of men with 16+ years of schooling fell by 9 percent from 1970 to 2008, the drop was 22 percent among those with 9-10 years of schooling, with a decline of 42 percent in the employment rates of men with less than five years of schooling.

Figure 25
Cumulative Changes Since 1970 in Employment Rates, 1970-2008
 ages 35-54, by number of years of education



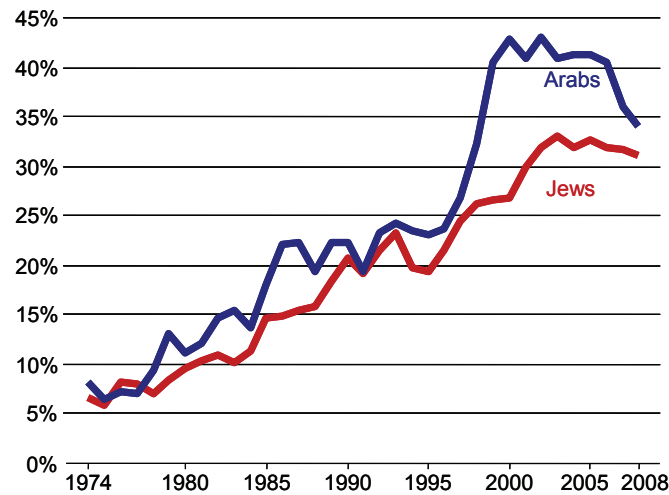
Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: CBS.

The picture is more complex when it comes to changes in the employment pattern of women aged 35-54 over the past four decades. On the one hand, employment rates of women with up to eight years of schooling declined while employment rates among women with nine or more years of schooling increased. On the other hand, there is none of the monotonicity in the rates of change characterizing employment patterns among men. The group with the largest increase in employment rates is that of women with 11-12 years of schooling – an increase of 40 percent. Employment rates of women with 16+ years of schooling increased by 12 percent during the same period.

While non-employment rates are affected by education levels, Figure 26 focuses on the similarities and differences since 1974 between Arab Israeli and Jewish men with no more than ten years of schooling. The structural changes inherent in the economic growth process led to a relative decline in the demand for workers with low education – and the effects of this are evident in Figure 26. There has been a steady rise in non-employment rates among prime working age male Jewish and Arab Israelis during the past three and a half decades. In some of the years between 1974 and 2008, non-employment rates of those aged 35-54 in both groups were very similar, and in other years those of the Arab Israelis were higher.

Differences in rates of non-employment between the two groups are especially noticeable in two periods: during the second half of the 1980s and since the latter half of the 1990s. One possible explanation for the relatively higher non-employment among Arab Israelis during the first period could be that this group may have been more affected by the Israeli government's Economic Stabilization Plan for reducing hyperinflation in 1985. The many cuts in government spending may have negatively impacted less-educated Arab Israelis more than less-educated Jewish men. Another possible reason for the non-employment gaps between the two groups during this period might be the first *intifada*, which may have negatively affected relationships between Jewish employers and Arab Israeli employees.

Figure 26
Non-Employment Rates, 1974-2008
 as share of 35-54 year-old male population with 1-10 years of education



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

The second period in which gaps in non-employment rates widened between Israeli Arabs and Jews began in the mid-1990s. During this period, there was a large increase in the number of unskilled non-Israeli workers, most of them employed as manual laborers. These foreign workers crowded out less-educated Israeli workers – primarily Arab Israelis (see a more direct comparison in the next section), though it is also possible to see an increase in non-employment among Jewish workers, albeit more moderate and delayed. The relative stability in high levels of non-employment among Arab Israeli men during the early 2000s, despite a reduction in the number of non-Israeli workers, may be due to the wave of terrorism emanating from the West Bank and Gaza and from rioting in some Arab Israeli towns and communities within the Green Line. The greater the effect that this may have had on Israeli Jews' willingness to buy from Arab Israelis or to employ them, the greater the impact on employment rates of less-educated Arab Israelis.

7. Foreign Workers

The primary key to raising living standards and reducing poverty is to increase employment and productivity. One of the main channels for doing so in Israel is to improve the country's human capital base. There are, however, additional policy instruments that affect employment.

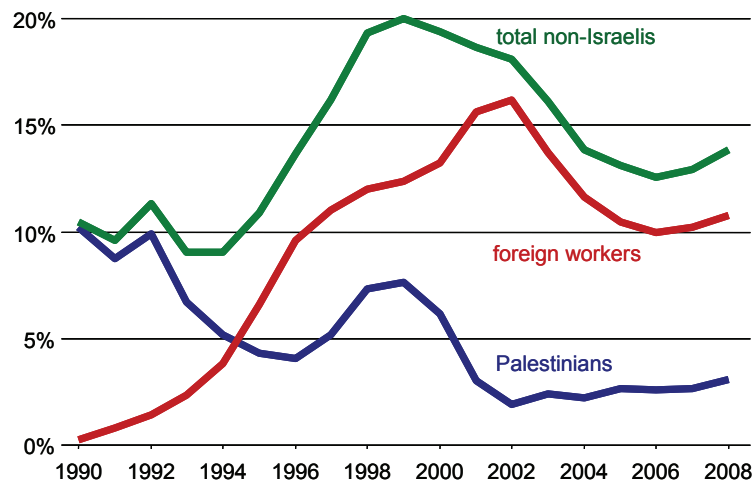
For several years, there has been a dichotomy between supply and demand in Israel's unskilled labor market. Government assistance, providing an important social safety net intended to minimize poverty problems, can sometimes be a disincentive to work. This can be a particularly strong work disincentive for those lacking the necessary skills for coping in a modern economy, whose potential earnings from work are not much greater than what they can receive from the government, whether through formal welfare budgets or through other budgets designated for specific population groups.

At the same time, Israel, which already has an abundance of unskilled citizens, has allowed the import of hundreds of thousands of additional unskilled workers from abroad. Figure 27 shows how this phenomenon developed over the past two decades. In the early 1990s, following the first *intifada*, restrictions were increased on the number of Palestinian workers from the occupied territories allowed into Israel. Data published by the Bank of Israel (2009) indicates that their numbers dropped by 44 percent, from 107,700 in 1990 to 60,087 in 1995.

In their stead, the government allowed employers to import foreign workers. In 1990 there were only 2,500 foreign workers in Israel. Within just five years, their number climbed to 92,525 (estimates on the number of foreign workers include both those who are legally allowed to work in Israel and those who are not). Until then, it could be argued that foreign workers merely replaced the Palestinians so that the share of non-Israelis during the first half of the 1990s did not change much (it ranged from 9 to 11 percent of workers in the business sector).

But in the second half of the 1990s, Palestinian workers began to return to work in Israel and, by 1999, their number (113,600) even exceeded that of 1990. Yet, the number of foreign workers in Israel never fell back to its original 1990 level. In fact, quite the opposite occurred. While the number of Palestinian workers rebounded to earlier levels, the number of foreign workers continued to rise, doubling between 1995 and 1999, and reaching 184,600 by the end of the decade. The total number of non-Israeli workers reached nearly 300,000, or one out of every five workers in the Israel business sector, in 1999.

Figure 27
Non-Israeli Workers, 1990-2008*
 as share of employed in business sector



* Includes legal and illegal workers.

Source: Dan Ben-David, *Economic Quarterly*, 2003 (updated).
Data: Bank of Israel.

In 2000, with the beginning of a major terror wave, the number of Palestinians employed in Israel dropped again while that of foreign workers continued to grow. The foreign worker peak was reached in 2002 with 254,500 foreign workers in Israel (and 30,338 Palestinians). That year, the government decided to adopt and implement a policy to deport foreign workers residing illegally in Israel. This resulted in a decline in their numbers to 180,300 in 2006. Between 2006 and the end of 2008, the trend once again changed direction and an additional 31,000 foreign workers and 13,000 Palestinians were added, with the proportion of non-Israeli workers in the labor force returning to 13.9 percent, i.e., a ratio of one in seven workers in the business sector.

As noted, the economic growth process is one of structural changes in the economy. The productivity improvements underlying the growth process stem from – among other factors – an upgrading of skills in the labor force. In an economy where the demand for skilled workers is constantly growing, public policy should focus on reducing the supply of unskilled workers by converting as many as possible into skilled workers. Workers who upgrade their education and get vocational training fitting the needs of a modern economy will have an increased probability of finding jobs and earning higher incomes. The greater the share of workers who upgrade their education and skills, the greater the likelihood that those who do not undergo such an upgrade will also benefit (in terms of employment and incomes) because they will have to compete with fewer unskilled workers.

The policy of bringing unskilled foreign workers to Israel has precisely the opposite effect. It increases the supply of unskilled workers rather than facilitating its decline. The import of foreign workers adds downward pressure on wages and crowds out unskilled Israeli workers from the labor market whose employment costs are higher.

Figure 28 shows a possible link between the share of non-Israeli workers in the business sector (shown in red along the right vertical axis) and the rate of non-employment among Arab Israeli men aged 35-54 (shown in blue along the left vertical axis). The share of non-Israelis in the business sector was relatively stable between the mid-1980s and the mid-1990s. The rate of non-employment among Arab Israeli men was also steady during those years. From 1995 to 1999, however, the share of non-Israelis increased by 83 percent while non-employment among Arab Israelis increased by 74 percent.

Figure 28

Non-Israeli Workers Versus Non-Employment in Israel, 1985-2008

rates of non-employment among Israelis aged 35-54 with 1-10 years of education
versus the share of non-Israelis* in the business sector



* Includes legal and illegal workers.

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

Data: CBS, Bank of Israel.

The changes in non-employment depicted in Figure 28 did not happen in immediate conjunction with the increase in non-Israeli workers, but occurred with a delay of about a year. If the rise in Arab Israeli non-employment was indeed caused by the increase in non-Israeli workers, then the delay in changes observed in non-employment rates could be due initially to transitions from full-time to part-time jobs, with a subsequent crowding out of part-time workers. It is also possible that the illegal foreign workers may have had an initial impact only on Israelis holding legal positions (i.e., jobs for which wages are paid by law and social benefits are provided by law). Only after some time, might this process of increasing numbers of foreign workers also have begun to crowd out Arab Israelis from the above-ground, legal, economy. Later, in the 2000s, the decline in the share of non-Israeli workers was steeper than the decline in non-employment among Arab Israeli men. As noted, the reason for the delayed fall in Arab Israeli non-employment might also be related to the terror wave.

The most effective way to reduce the number of foreign workers is not by the pursuit and deportation of the illegal workers but by the imposition of a sufficiently high tax that will make the cost of employing foreign workers considerably higher than that of hiring Israelis. The imposition of such high taxes must be accompanied by serious law enforcement efforts targeted at the Israeli employers. As the profitability of employing foreign workers declines, so will demand for them, and most of these workers will leave the country of their own volition if they fail to find employment.

8. Earned Income Tax Credit

In the 1990s the U.S. extensively instituted the Earned Income Tax Credit, also known as the negative income tax. The program was successful as a means of encouraging employment. The main criticism of this policy was that most new jobs were added at very low wages. Therefore, as stated in the recommendations at the end of the chapter “A Macro Perspective of Israel’s Society and Economy,” it is essential that such a program, designed as a core component of the effort to substitute disincentives to work and with work incentives, be linked to a parallel program of upgrading adult education and providing professional training (further details in Ben-David, Ahituv, Lewin-Epstein and Stier, 2004).

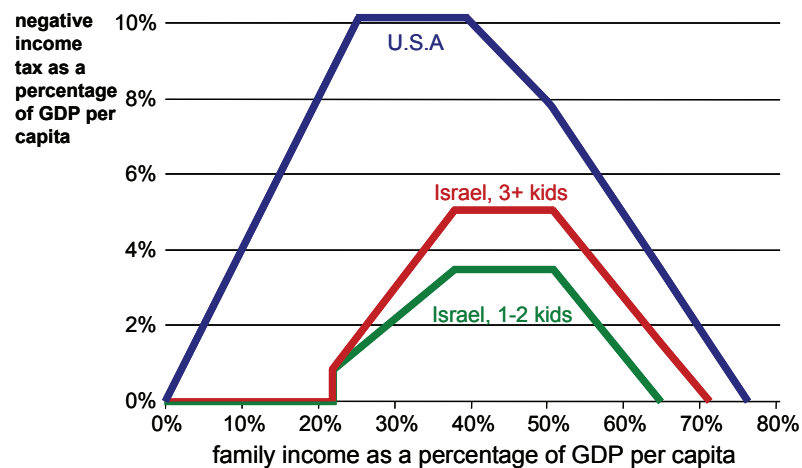
Negative income tax was introduced in Israel in a limited way – only in certain geographic areas – with the goal of being expanded to additional areas and, eventually, throughout the whole country. While the Israeli program has similarities to the American one, the differences are sufficiently large to reduce its effectiveness in achieving its goal of encouraging employment – while at the same time leading to large expenditures from the government budget.

The primary difference between the programs is in the degree of the incentives provided by each. In the United States, a family of two parents and two children is entitled to a negative tax of 40 percent of annual income from \$1 to \$12,500. In other words, a family with an income of \$5,000 receives a check in the amount of \$2,000 from the United States government, while a family with an income of \$12,500 receives \$4,824 from the government so that its total income reaches \$17,324. One of the main advantages of this method is that the financial incentive to work grows with income. When the income yielding the maximum negative tax payments is reached, this amount does not begin to decline immediately as the family income continues to grow, but only when family income

passes the threshold of \$18,750. The benefit is completely eliminated when the family income reaches \$36,355.¹⁶

Comparison of the negative tax programs in the United States and in Israel must take into account differences in living standards. To do so, the size of the payment in each country is depicted in Figure 29 relative to the country's GDP per capita. Similarly, family income is also divided by GDP per capita along the horizontal axis of the figure.

Figure 29
Negative Income Tax, U.S. and Israel, 2008*



* In U.S.: families with 2 parents and 2 children, net negative income tax.

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

Data: Internal Revenue Service, BEA, U.S. Census, Israel's Finance Ministry, CBS.

¹⁶ The numbers provided here reflect the existence of both the EITC and the federal income tax, i.e. these are the net amounts received after both the negative and positive income taxes are accounted for.

As shown in the figure, incomes below 22 percent of GDP per capita in Israel do not qualify for the negative income tax, whereas the same income in the United States entitles its recipients to negative income tax at a rate of 9 percent of GDP per capita. Unlike the American system, Israel distinguishes between families with one or two children and families with three children or more.

The United States government gives the maximum negative tax – 10 percent of GDP per capita – when the family's income reaches 25 percent of GDP per capita. At a similar relative income level, the negative tax in Israel reaches only 1.8 percent of GDP per capita for families with three children or more, and even less (1.4 percent) for families with one to two children. In Israel the maximum amount is paid only when income reaches 40 percent of GDP per capita. Not only does the negative income tax begin much later in Israel, but also the maximum negative tax in Israel is considerably lower – 5.1 percent (half the maximum negative tax in the United States) for families with 3+ children and only 3.5 percent of GDP per capita for families with fewer children.

The differences in approach between the two countries are substantial. The American model gives more at the beginning of the process to encourage entry into the labor market and it reaches the maximum payment much more quickly. In Israel it is possible to reach the maximum negative tax level only at much higher income levels. Even when the maximum negative income tax is reached in both countries, the Israeli model's incentive to work is very small relative to the American incentive.

The absence of a serious negative income tax program in Israel may be more severe than simply money wasted on an effort yielding minimal outcomes. Failure could lead to a decision to cancel the program altogether rather than implementing it properly and yielding the desired results – with all that this entails regarding the loss of an important policy tool for encouraging employment.

9. Summary and Conclusions

The employment rate for working age Israelis (ages 15+) in 2008 was 53.1 percent. This contrasts with an average employment rate of 56.9 percent in OECD countries that year. By how much would Israel's gross domestic product have grown had Israel's employment rate risen to the OECD average? Following Helpman (1999) and assuming that the elasticity of output with regard to labor is 0.68, and making the further – conservative – assumption that the average newly employed person can produce only 75 percent of what the average employed person produced in 2008, then Israel's GDP would have increased by NIS 27 billion.

This increment to GDP is almost equal to Israel's entire education budget, and it would have been attained had the country reached only average OECD employment levels. If Israel's employment rate were to rise to the American rate (62.2 percent), then its GDP would have grown by NIS 64 billion. Israel would have been a different country in many ways, with a higher average standard of living, with an increased capacity to help its needy, and with a different allocation of the budget financing burden. All this would be added to Israel's gross domestic product just from higher rates of employment, even before considering the impact of raising productivity to average G7 levels.

In light of the rapid demographic changes that Israeli society is undergoing, the currently high rates of non-employment already characterizing large parts of the population will be impossible to maintain in the future, when these groups become the majority. If the trends of past decades continue unabated, the State of Israel will find itself in an unsustainable situation.

The key to dealing with these issues is a core treatment of the underlying reasons for the low employment and productivity. The main points of a comprehensive strategy for such core treatment are presented at the end of the chapter "A Macro Perspective of Israel's Society and Economy." One of the primary components of such a strategy is education reform. (General guidelines for a systemic education reform

are outlined at the end of the chapter, “Israel’s Education System – An International Perspective.”) The current level of education in the basic areas of study is insufficient and limits the ability of today’s children to become tomorrow’s well-equipped adults in the global market place. This situation is even more severe with regard to the ultra-Orthodox Jews and Arab Israelis.

Ultra-Orthodox Jewish leaders do not accept the State’s sovereignty with regard to the provision of an education that could provide their children with greater freedom of choice regarding their future lifestyles. Conversely, Arab Israelis are ready to accept a high quality core curriculum, but the government does not provide either the direction or the resources to make it happen. While ultra-Orthodox and Arab Israelis differ in the reasons that their children do not receive a uniform high quality core curriculum as part of their study programs, a country with any long term survival aspirations has very little choice in this regard.

Children who do not receive the necessary educational toolbox today will not have the capabilities for sustaining a modern economy when their population groups collectively become the majority in Israel tomorrow. Furthermore, the country’s future minority – today’s majority – will not have the ability to finance the future majority’s non-work lifestyles, though it will not be possible to abruptly turn off the financing spigot. At that point, substantial parts of those population groups, whose education is inadequate, will have serious problems subsisting.

The current socioeconomic trajectory is rapidly leading to an economic dead-end that will be extremely difficult to extricate the country from, if the necessary policies are not implemented in the very near future. In addition to educational reform, there is a need for major reform in the labor market along the lines of the comprehensive strategy outlined at the end of the macro perspective chapter that opens this book.

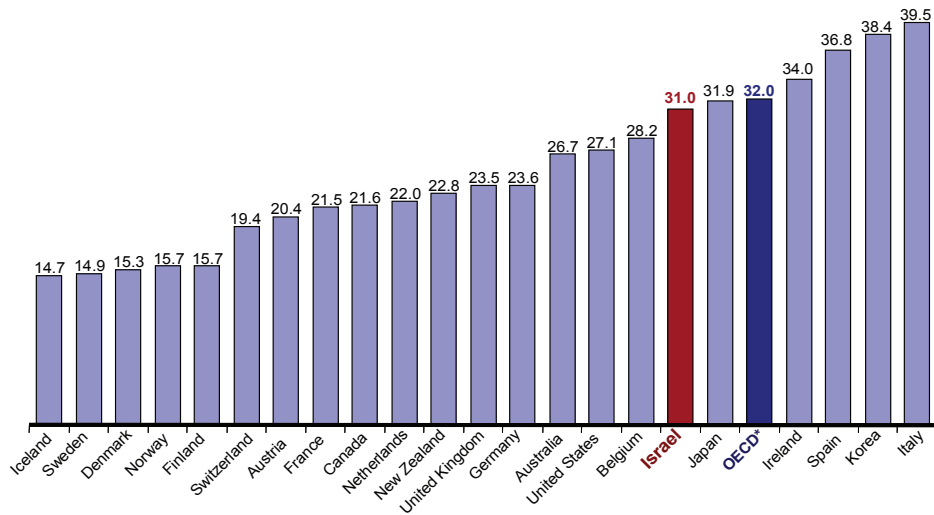
But these are not enough. The issue of law enforcement must be given a much higher place of prominence in Israel’s national priorities. For example, situations such as that described by Eliav, Endewald, Gottlieb and Kachanovski (2009), in which the share of workers whose employees

failed to pay them the required minimum wage reached 14 percent in 2007 – i.e. one out of every seven Israeli workers – are problematic. This is a higher rate than that which prevailed in 1997 (10 percent). The exploitation of uneducated workers is particularly severe: 20 percent of those with 9-12 years of schooling were not paid the minimum wage required by law. That share rises to 29 percent among those with just 0-8 years of schooling. The 2007 Report on Poverty and Social Disparities (National Insurance Institute, 2008) indicates that about 40 percent of all full-time employees living in poor families, and 13 percent of full-time employees in the entire economy, earn less than the minimum wage.

Furthermore, an apparently large amount of economic activity in Israel takes place “under the radar” of the tax authorities. When many people work and get paid, but do not pay taxes as required by law, the result is a problematic discrimination in the shouldering of the tax burden. At the same time, the government fails to receive all of the tax revenues due. For reasons of social fairness and equality before the law and for the objective of increased ability to raise tax revenues without raising tax rates (and possibly even reducing them), it would appear that allocation of resources for a substantial improvement in Israeli law enforcement could be a good investment from an economic perspective and beneficial from a social welfare standpoint.

All of the issues discussed in this chapter are still solvable. But they require implementation of a systemic policy – while still possible – that will enable the State of Israel to change direction in the area of employment.

Appendix Figure 1
Share of Female Non-Employment, 2008
 out of female population ages 35-54

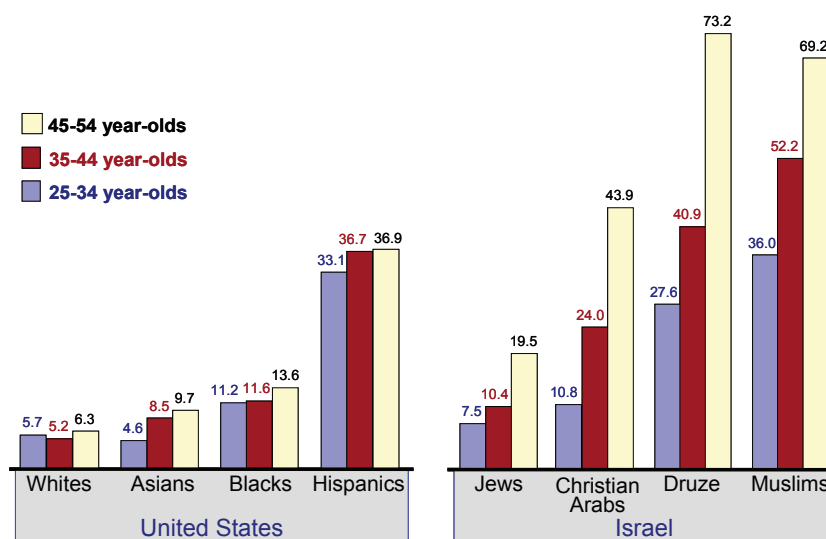


* The OECD average includes countries that do not appear in this figure.

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

Data: CBS, OECD.

Appendix Figure 2
Share of Population with 0-11 Years of Education
in percent



Source: Dan Ben-David, Taub Center and Tel-Aviv University.
Data: US Census, CBS.

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The Social Security System

John Gal*

Abstract

This chapter examines changes in the social security system, the largest component of the social expenditure in Israel in the years 2008-2010. This system focuses on providing allocations to varied population groups. Despite the growth in parts of the system's components in the past years, the overall expenditure is lower than that of OECD countries and in terms of output it is lower than its average level a decade ago. In some areas of social security, changes were made which increased accessibility to allowances and their overall level of support, especially with regard to the elderly and persons with disabilities, and, of late, also for families with children and the unemployed. Conversely, the programs designed for people who live in poverty in Israel provide very limited assistance. The limited assistance by the social security system in various areas seriously restricts its ability to cope effectively with very high levels of disparity and poverty in Israeli society.

Social security is the largest component in the Israeli welfare state. Over the last year, economic and political developments led to the introduction of a number of changes to the social security system. The number of recipients of unemployment benefits and those relying on income support, the social safety net, increased. The rise in unemployment led policy makers to introduce changes to the

* I am grateful to Michal Alfasi of the Hebrew University for her assistance in preparing this article, and special thanks to Yulia Cogan from the Taub Center for her assistance in data processing and preparation of the figures.

unemployment insurance program in order to provide assistance to a larger number of unemployed. The outcome of the elections and the establishment of a new government led to an increased readiness to expand a number of social security programs. In particular, the new government changed course with regard to child allowances, deviating from the policy that had characterized governments of the past decade which prioritized resource allocation to the elderly and to individuals with disabilities and refrained from expanding programs designed for families with children.

The recently adopted changes (or those about to be instituted) in the social security system reflect continuing slow growth in the allocation of resources for that system. This trend, which began during the previous government, is expected to continue in the coming years, with a slight shift in emphasis, as noted, in favor of families with children. It should be pointed out, however, that overall social security expenditure in Israel is still low and assistance granted to most segments of the population is limited. Thus, for example, spending in Israel on transfer payments as a share of Gross Domestic Product (GDP) was 8.8 percent in 2008 compared with 9.2 percent in 2005. In OECD countries the equivalent average in 2005 was 11.6 percent (OECD, 2009). In European welfare states, the equivalent figure exceeded 15 percent of GDP (National Insurance Institute, 2009; OECD, 2009). Spending declined in Israel especially in the case of programs focusing on the unemployed and on families living in poverty, such as income support. Consequently, the system's capacity to bring about any real reduction in poverty and in social gaps is limited. Moreover, the insurance dimension of the social security system is still weak, as can be seen in the extent of coverage and benefit levels for the elderly and the unemployed. Continued public support for the social security system requires strengthening the insurance dimension of this system and enhancing the perception that it provides social protection for all citizens.

The social security system consists of income transfer programs, administered by the National Insurance Institute and a number of other

government ministries (the Ministries of Defense, Finance, Immigrant Absorption and Education), as well as by the free market (e.g., occupational pension plans). The system seeks to provide a safety net for individuals and families lacking adequate sources of income or faced with unforeseen expenses due to a variety of circumstances. The programs focus on the reduction of poverty, assurance of an acceptable standard of living for all citizens, distribution of an individual's income over the life span, participation in additional outlays such as raising children, the reintegration of the unemployed in the labor market, provision of compensation for loss or damage, redistribution of resources in society, and increasing gender equality. In 2008 expenditure on this system amounted to about NIS 45 billion and is expected to grow in coming years.¹

This chapter examines the changes in the social security system over the past year and discusses its core programs. The discussion of old age pensions, unemployment insurance and child allowances relates to changes recently adopted in these programs, while that pertaining to individuals with disabilities focuses on measures to integrate individuals with disabilities into the labor market. This chapter includes a special discussion of income maintenance for the ultra-Orthodox. The chapter also discusses the notion of Conditional Cash Transfers (CCTs) which, in the past year, entered the policy discourse in Israel.

¹ This assessment is based on the Taub Center's estimates of social spending, excluding the outlays for funding long-term care benefits, which is under the auspices of the National Insurance Institute. This expense is part of the outlays for services in-kind (further discussed in the chapter on personal social services). It also excludes the Ministry of Defense's outlays for disabled army veterans and bereaved families.

1. Major Trends in the Social Security System in 2008-2010

In 2008, transfer payments by the social security system (excluding outlays for long-term care insurance as well as for victims of the Nazis) amounted to NIS 44,745 million. This level of expenditure represents an increase from the total spending in 2007 and an overall average annual growth of 2.3 percent for the 2005-2008 period. This trend is expected to intensify over the next two years. According to the Economic Arrangements Law, voted into law by the Knesset in July 2009, expenditure on social security programs should reach NIS 47,407 million in 2009 and NIS 49,572 million in 2010. Relative to the past, expenditure on social security in 2009 in real terms is expected to once again reach the level of 2001, after a number of years in which expenditure levels decreased. This represents an annual growth rate of 5.9 percent. However, social security expenditure as a percentage of the GDP, amounting to 6.2 percent of GDP (excluding long-term care), is still considerably lower than its level a decade ago (7.1 percent in 2000).

Table 1 shows expenditure on programs for the elderly, individuals with disabilities (general disability allowances) and families with children (child allowances). The share of child allowances in the overall expenditure is expected to grow somewhat as of 2010, following the planned increase in the amount of allowances effective mid-2009, and is expected to reach its intended maximum level over the next few years. Expenditure for programs for people of working age who lack income from the labor market (income support and unemployment insurance), still comprises a relatively small part of overall expenditure on social security – about one-tenth of the overall expenditure – and current forecasts do not foresee a significant increase of this share in coming years.

Table 1. **Expenditures in the Main Social Security Programs, 1990-2010** (NIS million, set prices)*

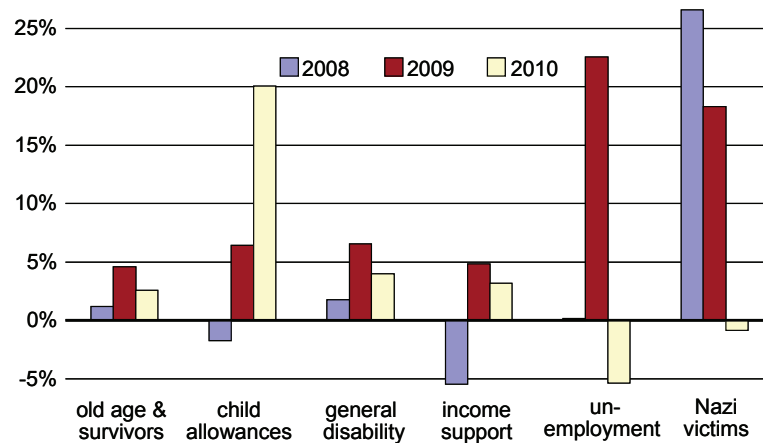
	Total	Old age and survivors	General disability	Child allowances	Income support	Unemployment allowances
1990	20,696	9,240	2,336	4,588	687	1,513
2000	41,945	15,713	5,782	8,090	3,350	3,448
2007	43,834	18,212	9,168	5,200	2,530	1,838
2008	44,745	18,425	9,329	5,109	2,392	1,840
2009	47,407	19,271	9,940	5,437	2,570	2,255
2010	49,572	19,768	10,333	6,528	2,587	2,134
<i>Distribution in Percent</i>						
1990	100	44.6	11.3	22.2	3.3	7.3
2000	100	37.5	13.8	19.3	8.0	8.2
2007	100	41.5	20.9	11.9	5.8	4.2
2008	100	41.2	20.8	11.4	5.3	4.1
2009	100	40.8	21.0	11.5	5.3	4.8
2010	100	39.9	20.8	13.2	5.2	4.3

* Data for 2009 and 2010 are estimates. The data refer to selected programs and therefore the data distribution does not amount to 100.

Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute, various years.

Figure 1 provides a more focused look at anticipated changes in the various social security programs in the coming years, 2008-2010. Such changes result either from increased generosity or greater access to programs or – alternatively or simultaneously – changes in the size of the target population, affected primarily by the economic situation.

Figure 1
Expenditure on Main Social Security Programs*
 annual change in percents, 2008-2010



* The data for the years 2009 and 2010 are estimates. Data refer to selected programs and therefore the data distribution does not amount to 100.

Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute.

As can be seen in Figure 1, expenditure on two programs – child allowances and income support – decreased in 2008. In the former, the decrease is presumably due to changes in allowance levels for newborn children, decided upon during the first half of this decade and voted into law in the Economic Arrangements Law. The decrease in the income support program, on the other hand, is due to a decline in the number of individuals eligible for the allowance, as a result both of the implementation of the welfare-to-work Wisconsin Plan and improvement in the rate of participation in the labor market and the concomitant decline in unemployment until the end of 2008. The marked growth in payments to victims of the Nazis is the result of an increase in the generosity and accessibility to this program approved this year. The most notable change in 2009 is in the unemployment insurance program: a sharp increase in unemployment levels due to the economic crisis with simultaneous improvements in access to this program and changes in the duration of the program resulted in a rise in the number of those eligible for unemployment benefits. A similar phenomenon, albeit on a much smaller scale, is also evident in the income support program.

2. Social Security for the Elderly

Social security programs for the elderly constitute the lion's share of the Israeli social security system. Nevertheless, the scale of spending for this population in Israel is smaller than its equivalent in other welfare states, due to the relatively low percentage of the elderly in Israel's population. Thus, while the average expenditure for public assistance to the elderly in OECD countries was 7.2 percent of GDP in 2005, the equivalent expenditure in Israel for the same year was 4.7 percent (National Insurance Institute, 2009; OECD, 2009²).

² The OECD published the latest comparative data in 2009, relating to 2005. They include the same components, including some of the core components of assistance for the elderly (see: OECD, 2009).

A comparative calculation of the average level of assistance for the elderly as a share of GDP in Israel and OECD countries indicates that they are similar – approximately half a percent of GDP. In this context it is important to reiterate that, in comparison to other welfare states, the percentage of the elderly population in Israel is particularly low: the elderly (65+) in Israel represent roughly 10 percent, compared to an average of nearly 14 percent in OECD nations and to the European average of close to 17 percent.

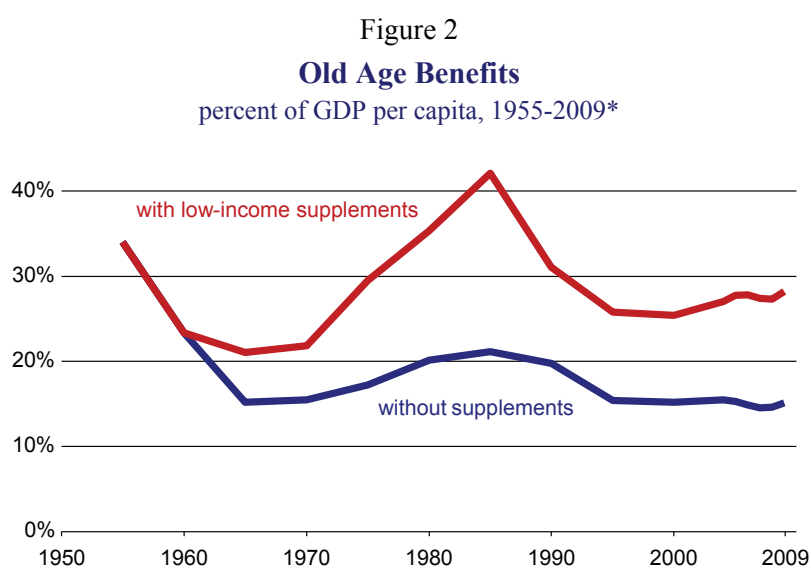
Social security for the elderly in Israel is comprised of four tiers: universal old age pensions for all the elderly; an income supplement, which is a selective benefit for the elderly lacking additional sources of income; occupational pensions; and savings arrangements for old age. This structure achieves several goals: The combination of the first, third and fourth tiers is intended to maintain the standard of living for individuals after retirement from the labor market and to facilitate a distribution of income over their life spans. In cases of those who have not accrued retirement benefits or savings, the system seeks to alleviate poverty due to a lack of income by combining the first and second tiers.

Universal old age pensions are provided to all the elderly (age 65 for men and 70 for women) and their survivors. At the beginning of 2009, an average of 746,000 elderly people per month received elderly and survivor pensions: 86 percent were old age pension recipients, and the remainder received survivor benefits. One-tenth of these recipients, primarily immigrants who had arrived in Israel after the age of 60, had not accrued rights under the National Insurance Law.

The second tier of social security for the elderly is an income supplement, paid out to elderly for whom old age pensions constitute their main source of income and who, in most cases, are not recipients of an occupational pension. One quarter of old age pension recipients also receive an income supplement.

Over the past five years, there has been a gradual improvement in the level of universal old age pensions, and even more so in the level of the income supplement. These increases relied on political support, mainly

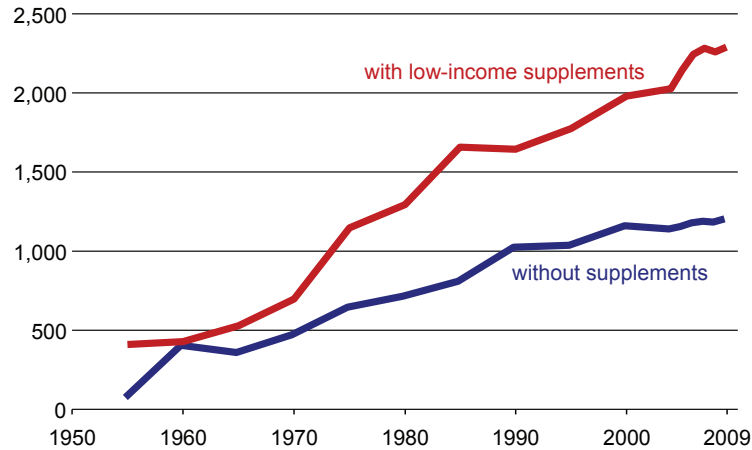
through the Pensioners Party, which was in the government until early 2009. The latest step in this process took place during the budget formulation for the years 2009-2010, when, after the most recent government's coalition agreements, it was agreed to increase old age allowances gradually. Figure 2 shows the changes in old age pensions as a percent of GDP over a 5 decade period per capita from the mid-1950's. Figure 3 shows the development of the benefits in real terms for the same year.



* June 2009.

Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute.

Figure 3
Old Age Benefits, 1955-2009*
 NIS, 2008 prices



* June 2009.

Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute.

The third tier, occupational pensions, is designed to provide the elderly with an income after retirement from the labor market. Since in the past there was no mandatory pension law and most employees were not party to collective agreements that included membership in a pension fund, many employees were not covered by occupational pensions. This is reflected in the large proportion of employees and retirees without pension coverage, as well as the prevalence of poverty among the elderly. An extension order effective January 2008, based on an agreement between the *Histadrut* (General Federation of Labor) and the Coordinating Bureau of Economic Organizations, is intended to change this situation. This order requires all employers to insure their employees through a pension fund. At this point, data regarding the extent of pension coverage indicate only partial success in enforcing this order.

The fourth tier of social security for the elderly is that of savings for old age, which includes primarily provident funds of different types. This is a savings instrument based on joint funding by employees and employers, supported by the government through tax discounts. This tier plays a central role particularly in income maintenance for the self-employed and salaried employees who had not previously joined pension funds.

A final component, providing a significant contribution to the income maintenance of a portion of the elderly in Israel, is funds for Holocaust survivors. In recent years, the programs designed to alleviate the suffering of Holocaust survivors have attracted a great deal of interest following widespread public protest. Changes in the level of benefits and services for Holocaust survivors, as well as moves designed to increase accessibility to these programs, contributed to the expansion of public expenditure for Holocaust survivors in 2008-2010 and to improvements in the living standard of this population.

3. Social Security for Individuals with Disabilities

Individuals with disabilities constitute the second largest focus of the social security system in Israel. There are various programs for coping with the social security of individuals with disabilities through transfer payments as well as by encouraging the reintegration of this population into the labor market. In recent years there has been a significant increase in the number of individuals with disabilities receiving assistance through these programs, especially under the general disability insurance program of the National Insurance Institute. The reasons for this increase have not yet been thoroughly investigated and the potential size of the population in need of assistance is unclear.

There are various estimates regarding the size of the population with disabilities in Israel. The difficulty in reaching a single estimate stems from failure to agree on a uniform definition for determining disabilities, as well as methodological impediments to conducting valid research.

Estimates in Israel and abroad maintain that about 14 percent of the overall working age population are people with physical, mental or emotional disabilities (OECD, 2003). In Israel, the number of individuals with disabilities in 2006 was estimated at 1.4 million, representing slightly over one-fifth of the total population (Ministry of Justice, Office of the Spokesperson, 2007).

The data indicates that 477,000 adults (age 20+) suffer from a severe disability (of whom more than half, 270,000, are of working age, 20-64) and another 700,000 suffer from mild disabilities (Ministry of Justice, Office of the Spokesperson, 2008). The proportion of people with severe disabilities has been stable in recent years – around 10 percent of the adult population – whereas the share of those with mild disabilities has been about 16 percent of the adult population. These levels are higher than the average in the OECD but they are within the acceptable range in those countries (Ministry of Justice, Office of the Spokesperson, 2008).

Regarding the child population, the number of children requiring on-going medical care is estimated at 190,000 (8 percent of children) and another 120,000 children are diagnosed as having a disability that does not require on-going medical care (5 percent of children) (Ministry of Justice, Office of the Spokesperson, 2008).

There are various programs for dealing with the needs of individuals with disabilities from specific target groups and there is much variance in basic principles, accessibility conditions, benefit levels, and the range of services provided for them. Two main programs are administered by the National Insurance Institute: general disability insurance and work accident insurance. A third program is intended for disabled military veterans and is administered by the Rehabilitation Department at the Ministry of Defense.

3.A. General Disability Insurance

The General Disability Insurance Act is intended to respond to the needs of all individuals with disabilities not covered by other social security programs. The law includes four allowances: a disability pension,

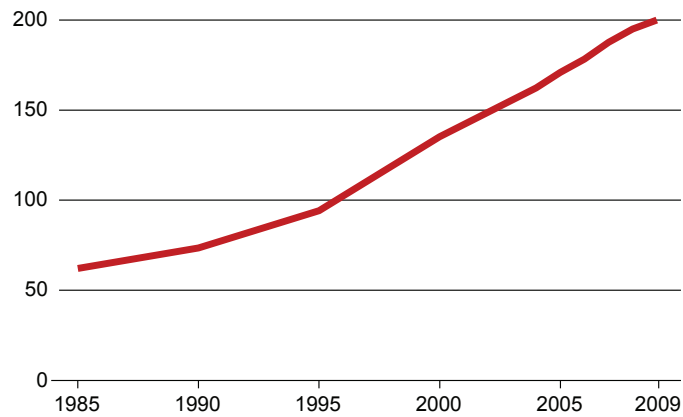
designed to ensure a minimum subsistence level income; an attendant's allowance, designed to assist the disabled that require the assistance of others to perform everyday functions; a disabled child benefit that seeks to enable the family to care for their disabled children; and a mobility allowance, designed to help disabled persons to be mobile outside their home. In addition to these allowances, the law confers eligibility for rehabilitation to disabled persons with rehabilitation potential, in order to help them integrate in the work force.

In early 2009, 198,000 individuals with disabilities received a disability pension. As shown in Figure 4, over the past decade there was a constant increase in the number of recipients of this allowance. Figure 5 shows an increase relative to a rise in the working age population. The factors that caused the continuous growth are not sufficiently clear, and it would be useful to examine those factors in depth. It is reasonable to assume that the changes in pension allowance levels early this decade and changes in eligibility criteria for benefits designed to ensure the subsistence of people of working age (income maintenance and unemployment insurance) have had an impact on this growth.

Only one-third of working age people with a severe disability have income from work, one-fifth of them also receive a monthly pension from the National Insurance Institute. About 40 percent more receive only a monthly pension from the National Insurance Institute and the balance, close to one quarter (about 70,000 persons) have no income source whatsoever other than that of family members.

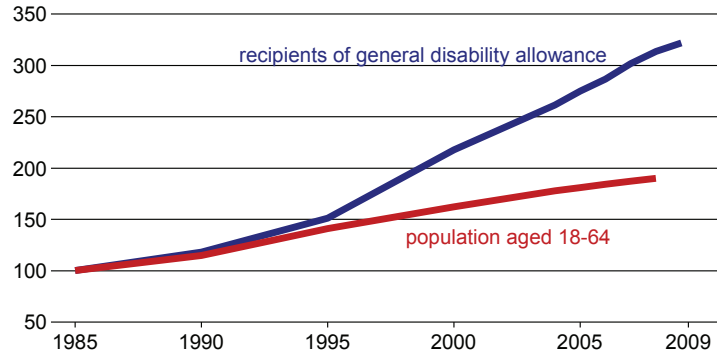
Regarding working age people with a mild disability, 53 percent of them have income from work, one-tenth of them also receive an allowance from the National Insurance Institute. Twenty-three percent receive only an allowance from the National Insurance Institute and the remaining quarter or so depends on family members' income.

Figure 4
Recipients of General Disability Allowance
 thousands, 1985-2009*



* June 2009.

Figure 5
Recipients of General Disability Allowance
and the Population*, 1985-2009**
 index 1985 = 100



* Ages 18-64, women to age 60. ** June 2009.

Source for Figures 4 and 5: Taub Center for Social Policy Studies in Israel.
 Data: National Insurance Institute.

Disbursements of general disability pensions and other allowances within general disability insurance added up to about NIS 9.4 billion for 2008. The average monthly pension is currently NIS 2,570 (current prices, June 2009) and it is equivalent to 32 per cent of the average monthly wage in Israel. Over time there has been a continuous increase in the pension level relative to the average income, from 26.6 percent of the average wages in 1990 to 29.4 percent in 2000, and this trend has continued in recent years.

Policy towards employment of individuals with disabilities in Israel is based on the recommendations of the *Laron Committee*, a public committee headed by the late Justice Ephraim Laron and established in the wake of the 2002 strike by disabled persons (Israel, 2005). A central objective of the Committee was to recommend incentives for the disabled to integrate into the labor market. The Committee formulated a number of major recommendations in this area:

Reform in the disbursement of allowances

The Committee found that the linkage between eligibility and the level of disability allowance and the disabled persons' income from work was a major obstacle to integration of individuals with disabilities into the labor market. At that time, an increase in the earnings from work of a person with disabilities led in most cases to a decrease in overall income (income from the pension and work), which inevitably created a disincentive to work. The committee recommended that there be a gradual decrease in the allowance as income from work increased so as to ensure that overall income did not decline. Implementation of this recommendation began with the approval in July 2008 of an amendment to the National Insurance Law to encourage the integration of individuals with disabilities into the labor market.³ The law went into effect in August 2009.

³ The "National Insurance Law (Amendment No. 101) (Advancement of the Integration of People with a Disability in the Labor Market), 5767-2007" is a

Facilitating the integration of individuals with disabilities into the labor market

The committee recommended that employers facilitate the integration of individuals with disabilities into the labor market by ensuring fair representation of individuals with disabilities in the workplace and making the workplace accessible to the disabled. The committee supported the adoption of an adjusted minimum wage for individuals with disabilities with limited working ability. As of November 2006, the regulations are being implemented by the Ministry of Industry, Trade and Commerce. These regulations are seen as an incentive for employers to hire individuals with disabilities by offering employers the option of paying workers lower than minimum wage depending on the level of output.⁴

Encouraging sustained employment

The committee recommended the expansion and deepening of the sustained employment model, in light of findings from other countries that show that this tool has great potential for success. The committee specified a program for the integration of 8,500 disabled persons over five years in this employment track and recommended the launch of this program immediately, allocating NIS 25 million for its implementation.

3.B. Victims of Work Injury

The Work Injury Insurance program provides allocations and rehabilitation services to those disabled as a result of an accident or illness, during or caused by work. The program includes a temporary allowance payable during the first period after injury and a permanent allowance (the work disability benefit). This program is designed to

government bill of law made public following the *Laron Committee* recommendations.

⁴ Task Force for the Integration of Individuals with disabilities into the Labor Market, Ministry of Industry, Trade and Commerce.
<http://www.moital.gov.il/NR/exeres/252E154E-5D0D-4F6A-BBB7-4DAAD2BF43D3.htm>

maintain the injured party's standard of living and therefore the allowance is calculated as 75 percent of previous income relative to the degree of disability.

The number of victims of work accidents receiving permanent disability benefits payments has been growing steadily and in the middle of 2009 reached 30,776. The level of disability benefits for people who had been self-employed is higher than that of those injured as salaried employees – 42 percent versus 39 percent of the average monthly wages, respectively – the difference reflecting the gaps in average income level between self-employed and employees.

3.C. Disabled Military (IDF) Veterans

The program designated for disabled IDF veterans is administered by the Ministry of Defense Rehabilitation Department and compensates those injured or taken ill during their military service (or service in other branches of the security system) or as a result of it. Allowances are calculated by the degree of medical disability in accordance with a mid-level civil service wage. Besides the basic allowance, disabled IDF veterans are entitled to numerous additional allowances and other services. The number of recipients of disability allowances in 2008 was 55,459 and the total amount of disbursements reached NIS 3.8 billion (including the amount paid to bereaved families), comprising 0.53 percent of GDP.

In recent years, a public and professional debate regarding the extent of disbursements made to disabled IDF veterans, the definition of eligibility for benefits, and the gaps between generous allowances paid to them and the wider group of individuals with disabilities has taken place. Ministry of Defense data indicate that the vast majority of casualties in recent years are not victims of direct military or security-related operations, but are people who became disabled as a result of illness, accidents or non-combat accidents (Ministry of Defense, 2009). In light of the high operational costs of funding the Rehabilitation Department, a

report by the Committee to Assess the Defense Budget (the *Brodet Committee*) suggested possible changes in the department's policies, namely a distinction between classes of injuries (*Report of the Committee to Assess the Defense Budget*, 2007). There seems to be willingness within the Ministry of Defense to implement a policy of this sort in the coming years.

4. Allowances for People of Working Age

The economic crisis and growing unemployment have shifted public and professional attention to the social security of working age people who do not participate in the labor market for various reasons or whose labor market income is insufficient for a minimal subsistence. Two major programs in the Israeli social security system are designed to ensure the social security of members of this segment of the population – unemployment insurance and income support.

4.A. Unemployment Insurance

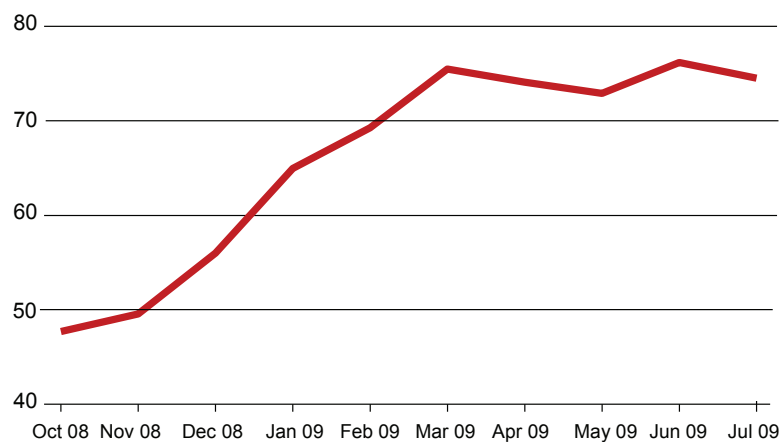
Unemployment insurance provides a wage replacement for a limited period for those involuntarily unemployed thus enabling them to seek suitable employment. In 2003-2008 there was a continuous decline in the number of recipients of unemployment benefits, resulting from improvements in the labor market and a tightening of criteria that limited eligibility and benefit levels of this program. Entitlement to unemployment benefits is conditional on individuals being dismissed from their job, their willingness to accept a suitable job offer, as well as their having completed a qualification period (payment of social security contributions) of 12 of the 18 months prior to dismissal. The duration of the entitlement to unemployment benefits ranges from between 50-175 days, depending on the age and the number of dependents of the unemployed. Unemployment benefits are calculated according to the salary of the employee in the period preceding unemployment. The

average unemployment benefit was 54.2 percent of the average monthly wage in April 2009, slightly higher than the level in recent years.

The downward trend in the number of recipients of unemployment benefits was reversed in 2008, and rose further in 2009, due to the economic crisis and a reversal of policy regarding this program. This trend is evident in the data presented in Figure 6, which reflects the number of recipients of unemployment benefits in the first half of 2009.

In light of the increase in the number of unemployed and the low percentage of those who are eligible for unemployment benefits (less than a quarter of the unemployed), an agreement was signed in early 2009 between the National Insurance Institute and the government, according to which unemployed people over age 25, who completed at least nine months of contributions, can receive unemployment benefits that are not greater than 50 percent of the entitlement. This agreement was implemented in June 2009, when the level of unemployment in the economy crossed the threshold of 7.5 percent of the civilian workforce.

Figure 6
Recipients of Unemployment Insurance, 2008-2009
thousands



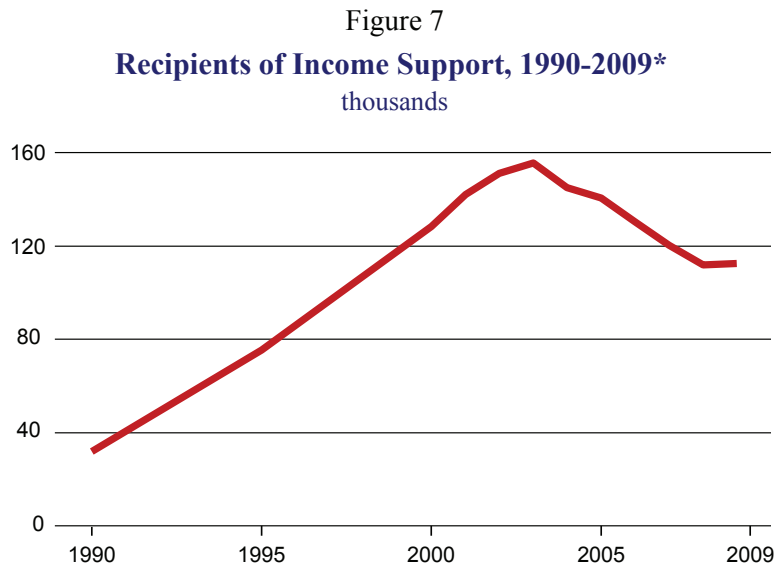
Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute.

Despite the temporary change which shortened the qualifying period for unemployment benefits, unemployment insurance still provides only a partial solution for the predicament of the unemployed in Israel. The program's shortcomings are particularly obvious during a period of severe crisis in employment. The long qualification time and the short eligibility period of the Israeli program are exceptional compared with the standards of most welfare states. The typical qualification time in welfare states ranges from six to 12 months, whereas the maximum eligibility period exceeds six months, and in many states it is even longer than one year (OECD, 2007). The Israeli combination of a long contribution period and the exceptionally short period of receiving unemployment benefits results in excluding many from eligibility for unemployment benefits and denies them benefits even if they fail to reintegrate into the labor market due to lack of suitable employment opportunities. The Taub Center, like many other professional organizations in Israel, has underscored the need to review the components of this program and adapt its characteristics to its original objectives.

4.B. Income Support

The Income Support Program is a safety net for families and individuals who are unable to maintain a minimal standard of living by themselves. It is intended for people of working age who are not employed or whose overall income is lower than the threshold established by the law. People who are part of this population do not receive assistance under any other social security program aside from child allowances. The program is selective and eligibility for the allowance is conditional on a means test, limiting access to the benefits only to those whose income is lower than the threshold set by law, and an employment test, making it conditional on the recipient having made every effort to enter the labor market. The employment test requires the applicant to report to an employment service office or to employment centers of the Wisconsin Plan

("Employment Lights") and to accept any job offered, with exemptions for those who are determined as unable to work for health reasons or because they are designated as caregivers. In 2008 the number of recipients of income support was 112,000. The changes made in the program early this decade which tightened the program's eligibility criteria and benefit level, as well as the experimental implementation of the Wisconsin Plan (for a more comprehensive discussion of this program see *Israel's Social Services 2008*, pp. 222-223) and the improvement in employment have all contributed to a decline in the number of recipients of this benefit. Figure 7 shows the sharp drop in the number of recipients of income support over the decade, from its peak of 155,000 in 2003. In March 2009 the deterioration in employment and wages led to an increase in the number of income support recipients to 112,512.

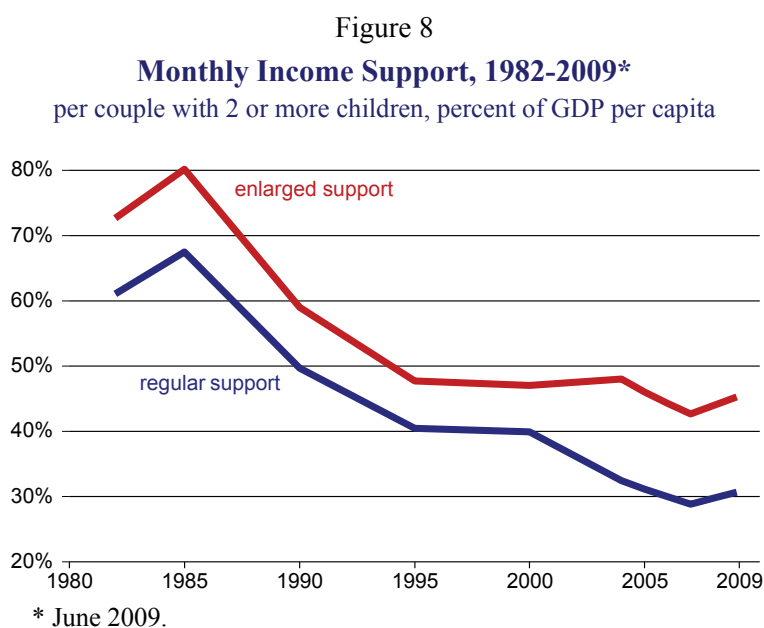


* June 2009.

Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute.

Income support is intended to guarantee a minimum standard of living for allowance recipients and their family members, and at the same time it is not intended to serve as a disincentive to work. Even in its early days, this allocation was low and it is doubtful that it had ever achieved the goal of guaranteeing a minimum standard of living. After a slight increase in the amount of the allocation during the nineties (especially for those who remained in the system for a long time and for single mothers), it was cut again in the years 2002-2003.

The average benefit in 2008 for a couple with two children or more was NIS 2,269 per month, equivalent to 28.6 percent of the average monthly wage (Figure 8). By comparison, in 2001 the average benefit equaled 38.1 percent of the average monthly wage (National Insurance Institute, 2009a). Comparisons with other countries show that after the cuts early this decade, the benefit in Israel (particularly that for families with children) is lower than what is typical in other welfare states. It is very doubtful that a family would be able to subsist on such income.



Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute.

The Taub Center recommends raising the income support benefit and in particular, providing a supplement for those whose are in this system long term. The assumption is that those who stay for a short time in the program can delay large expenditures to the period after their return to the labor market at which time their income level improves. However, the situation of those who are not able to return to the job market for a long time is unbearable due to the low level of allowances.

4.C. Negative Income Tax

A negative income tax program was implemented in Israel in October 2008 on a limited basis in areas where the Wisconsin Plan is in place for the purpose of increasing the income of low income working families. The program provides these families with an additional income of up to NIS 400 per month, depending on the family's size and income level. Participation in the program requires filling out forms and signing a statement at a local post office verifying income level and eligibility.

Monitoring the take-up levels of the grant at the end of its first implementation phase (the end of 2008) indicated that only 38.5 percent of 67,000 potential recipients took advantage of their right to receive the grant during this period. The cost of the approved grant (pertaining to 2007 income) totaled NIS 64.3 million. In view of these findings, a special effort was made by the Israel Tax Authority, which administers the program, and advocacy organizations such as *Yedid*, to raise public awareness of the program. To our knowledge, despite public criticism about the difficulties in applying for the grant, the way the program is run has not been re-examined. Although the original plan was to expand the Negative Income Tax program to the entire country during 2010, this proposal was not included in the Economic Arrangements Law confirmed in July 2009, and therefore it is not clear whether, and when, this program might be expanded. In its recommendations for social policy, the Taub Center expressed support for expanding the Negative Income Tax Program by raising the negative tax rate, raising the maximum ceiling and easing eligibility to the program.

Spotlight: Income Maintenance for the Ultra-Orthodox

Like policy makers in other welfare states, the designers of the income support program in Israel viewed employment as a major source of livelihood. Consequently, they made receipt of the benefit conditional on the claimant having made every effort to join the labor market. The “employment test” applied in this program requires that the recipient of the allowance appear regularly at the employment service offices and be willing to accept any suitable job. When the Wisconsin Plan began to be implemented, appearing at the program’s employment centers was required as part of this “employment test.”

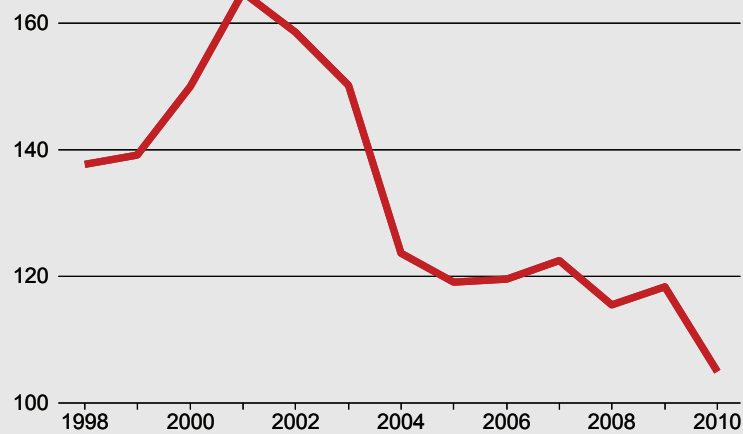
The income support program provides a safety net to anyone of working age who lacks sufficient resources for a minimum dignified subsistence. However, with its implementation in 1982 it was decided that the safety net designed for one segment of the population would operate independently and with different eligibility criteria. This pertains to individuals who study in Jewish religious institutes of higher learning (*Yeshivas*) who are not expected to engage in gainful employment.

The safety net program for full-time *Yeshiva* students, which was based on previous arrangements introduced in the seventies, was assigned to the Ministry of Religious Affairs and offered a benefit similar to the National Insurance Institute’s income support benefit. Benefits were given to low income *Yeshiva* students without requiring them to pass the employment test.

This program provides a monthly allowance to full-time *Yeshiva* students at an institution recognized by the Ministry of Education who have at least three children. *Yeshiva* students are required to undergo an income test – their monthly income cannot be over NIS 1,200 in addition to the grant they receive from the *Yeshiva* and child allowances. The monthly allowance paid to qualifying *Yeshiva* students amounts to NIS 1,040 per month.

Not all those who study in *Torah* institutions receive allowances in the framework of the program for *Yeshiva* students' income maintenance. The proportion of those who do so is not very high: Of a total of 63,000 *Yeshiva* students, only 10,851 receive an allowance. The budgetary cost of this program in 2008 was NIS 110 million. Figure 9 indicates stability in the expenditure for this program over the past five years after a decline in 2003-2004 due to cuts in all social security programs.

Figure 9
Income Support for *Yeshiva* Students
NIS million, 2008 prices



Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute.

5. *Family Support*

The social security system includes several programs for families with different procedural principles and goals. While some programs seek to cope with problems of distress and poverty among families, others seek to alleviate the burden of child rearing costs, provide social security during the initial period after the birth of a baby, or encourage gender equality through more equitable division of labor within the family.

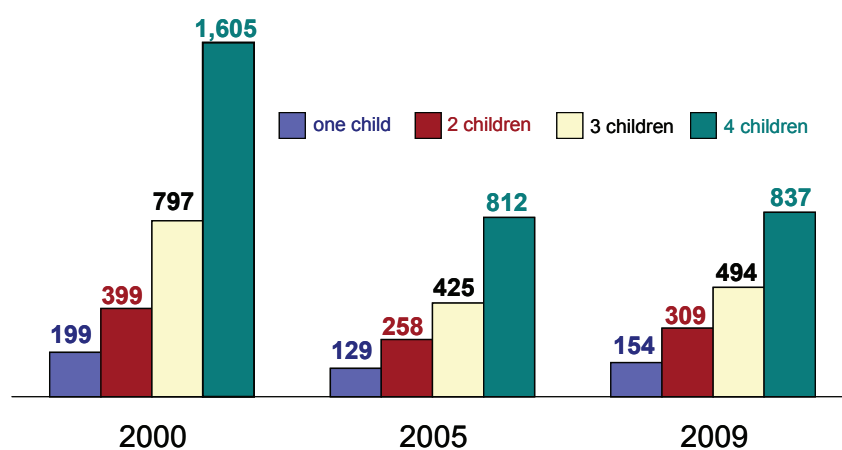
5.A. *Child Allowances*

Just over a million families received child allowances in Israel in early 2009, and the number of children for whom allowances were paid was 2.4 million. The Child Allowance Program is a universal program, granting allowances to all families in Israel with children under age 18. Child allowances exist in all welfare states except the United States and Japan (where support for childcare is through the tax system), and are designed to subsidize the costs of raising children and contribute to the reduction of poverty and gaps among large families. In the past, child allowances were also intended to encourage childbirth, but research shows that they do not make a significant contribution towards this goal (for a more comprehensive discussion of this issue see *Israel's Social Services 2008*, pp. 216-219).

Child allowances were first introduced in Israel in 1959, but the program became universal and comprehensive only in 1975. A sharp change of policy trend regarding child allowances occurred in 2002, when the allowance was cut sharply and a decision was made to switch to uniform (and low) allowances for all children regardless of family size. As a result, the program offered significantly lower benefits also compared to other welfare states. These changes had a clear influence on the ability of child allowances to make a significant impact on helping large families cope with poverty.

Public and political pressure, as well as professional recommendations (including by the Taub Center), caused a policy shift this year. The government coalition agreements included the provision of a gradual increase in child allowances, focusing first on families with three or four children, and as of next year (2010) also on families with two children. The change process is shown in Figure 10.

Figure 10
Family Income from Child Allowances
by family size, NIS, 2008 prices



Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute.

The intended increase is expected to result in a rise of NIS 1.3 billion in expenditures for child allowances over the years 2009-2010. The figure indicates a sharp drop in the income of families with children after the changes in child allocations earlier this decade. The situation of families with children born after June 2003 was particularly difficult. Following the recently introduced changes, the allowance payable for the third child in the family increased by NIS 60 per month and for the fourth child by an additional NIS 93. In July 2010 the allowance is expected to increase by NIS 36 per month for the second child and by an additional NIS 93 for the third and fourth child. While the level of allowances is still far from that of the beginning of the decade, the anticipated changes are expected to have a positive impact on the well-being of families living in poverty.

Are conditional transfer payments effective? Despite the difficulty in assessing such programs, evaluation studies indicate rather impressive achievements in terms of coping with the immediate economic hardship of poor families, increasing the consumption of these families, improving the health and nutrition of children in the different countries and a substantial increase in their participation in the education system (Hall, 2006; Rawlings, 2006). Furthermore, data is available indicating that the programs contribute, to some extent, to the narrowing of the deep social gaps in Latin American countries (Soares et al., 2007). Still, implementation of the programs is not without problems (Álvarez, Devoto & Winters, 2008). A widespread conclusion among researchers is that the success of these programs largely depends on their structure and on the way by which they seek to change the behavior of their target populations (Bastagli, 2008). In any case, it is fairly obvious that such programs cannot bring about real change in the social gaps and prevalence of poverty in those countries without other significant changes in the social structure and on the macro-economic plain.

Spotlight: Conditional Cash Transfers

Conditional Cash Transfers (CCTs) provide allowances to families living in poverty, whereby receipt of the allowance is contingent upon the family's doing a specified activity that is intended to improve the child's welfare. These might include ensuring the children's school attendance, regular visits to infant care facilities, or agreeing to use food supplements. CCT programs began to develop in the late 1990s and now exist in most Latin American countries. These programs have received substantial assistance from European countries and international organizations, including the World Bank. The largest and best known CCTs have been in operation since 1997 in Mexico, *Oportunidades*, and in Brazil, *Bolsa Família* (Rawlings, 2006; Molyneux, 2006).

The main purpose of the programs is coping with poverty in the short term through allowances that raise the income level of families suffering severe economic distress. But alongside this goal, the programs also seek to combat longer term poverty by improving the human capital of the children in these families. These programs are based on the premise that the behavior of families can be changed through the social security system. For example, the goal of some programs is to attain improvement in children's health, and therefore receipt of the allowance depends on regular visits to a clinic by mothers with small children. Other programs are intended to cope with problems of child employment or lack of education and therefore the allowance depends on the child's school attendance.

The idea of using welfare payments to influence the behavior of different target populations was first adopted in Israel in 1954, with the introduction of maternity grants, making the grant formally conditional on funding the initial purchases for the baby. In reality, the purpose of the grant was to encourage giving birth in hospitals. Last year this idea seems to have aroused renewed interest among policy makers in Israel. This is reflected in one of the changes recently made in the child allowances program. As part of the Economic Arrangements Law, passed by the Knesset in July 2009, it has been decided to make the receipt of increased child allowances conditional on vaccinating the children. It remains to be seen how the decision to make allocations conditional on vaccinations would be implemented.

5.B. *Maternity Insurance*

The Maternity Insurance Program consists of three components: a maternity grant, a maternity allowance and a hospital grant.

- The maternity grant was originally intended to encourage giving birth in hospital and it is paid to every mother giving birth in a hospital and not to those who choose to do so at home. The underlying assumption behind this grant is that hospital births are safer for both the mother and the child and therefore should be encouraged. The grant does not include an insurance component and eligibility is not conditional on being in the labor market. In recent years the grant had been cut and doubts have surfaced regarding the need to encourage births in hospitals and whether preference should be given to women who give birth at a hospital over those who do so at home or in other settings. Some 152,000 maternity grants were awarded in 2008, totaling NIS 151 million. In early 2009 the grant amount was NIS 1,556 for the birth of a first child, NIS 700 for a second child, and NIS 467 for each additional child.
- Maternity allowances are paid by the National Insurance Institute to working mothers during their maternity leave as a wage replacement. The allowance is currently equal to the full salary of the mother and it is paid for a period of 14 weeks after birth. Although it is possible to split the allowance between the mother and father, the number of men actually receiving maternity allowances is still very small and no real effort is being made to encourage this trend. In 2007 only 0.2 percent of allowance recipients were men.
- The third element of the Maternity Insurance is a hospital grant which is intended to fund the expenses of giving birth and the mother's hospitalization after birth. This grant is paid directly to the hospitals by the National Insurance Institute, and is now part of the integrated health basket. The number of hospital grants in 2008 was 152,000.

5.C. *Single-Parent Families*

A number of programs in the social security system are designed specifically for families in which there is one parent. The Alimony Law (Assurance of Payment) guarantees support for women following the failure of the husband to pay the required alimony. This follows a court judgment in response to a petition for collection through the National Insurance Institute or the Support Collections Unit. Alimony payments are funded by income from creditors and by money from the Treasury. Entitlement to alimony payment is conditional on criteria similar to those of income maintenance and includes a means test. There is a continuing trend towards a decline in the number of women who receive alimony payment through the National Insurance Institute. The number of those who received alimony payments in March of 2009 totaled 20,300 women. The average allowance paid to them during this period was about NIS 1,550 per month, which is about 20 percent of the average monthly wages.

Additionally, following the 1992 Single Parent Families Law, single parent families are eligible for a studies grant for their children aged 6-14. This grant is paid once a year and is meant to help finance the expenditures for school supplies for children aged 6-14. The amount of this grant is NIS 1,364 for children aged 6-11 and NIS 758 for children aged 12-14. Altogether, 56,285 single families received the grant in 2008.

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Personal Social Services

John Gal*

Abstract

This chapter deals with personal social services in Israel – institutional services and communal services designed for marginalized populations. The expenditure for personal social services provided by the Ministry of Social Affairs and Social Services and many non-governmental entities is lower compared to other components of the welfare state in Israel, representing six percent of the social expenditure. After a period of stagnation during the mid-2000s (2002-2006), there was a growth in the budget directed to these services in the past three years; at the same time changes took place in the Ministry of Social Affairs and Social Services' policy, as reflected in expanding the privatization trend beyond services that can be provided in the community. Furthermore, as of late, a reform committee completed its deliberations and recommended substantial changes in the array of personal social services, including legislating a Social Services Law.

Personal social services provide assistance to a range of deprived population groups. Services are provided both within the community by local social welfare departments, and institutionally, by and under the supervision of the Ministry of Social Affairs and Social Services. Overall,

* Special thanks to Yulia Cogan from the Taub Center for her assistance in data analysis and for preparation of the figures in the chapter.

personal social services are a relatively small fraction of the total expenditures on social services in Israel.

Recent decades have seen marked changes in the provision of personal social services in Israel. These include a severe lack of adequate resources (particularly during the first half of this decade), an accelerated privatization process, increasing involvement of the third sector (non-profit) and for-profit firms as service providers, and changing employment patterns of social workers in local social welfare departments from direct to indirect employment.

The past three years saw signs of a shift in policy toward the personal social services. While privatization of services has continued unabated, there was a significant increase in funding after a period of stagnation in the mid-2000s (2002-2006), and a committee for reform in the social services established by the Ministry of Social Affairs and Social Services, recommended significant changes in personal social services as well as the legislation of a Social Services Law.¹

Personal social services provide assistance for a wide range of population segments including the weakest and most vulnerable elements in the Israeli society: at-risk children, teens and youth; isolated and dependent elderly; families in distress or in crisis, including single-parent and immigrant families; persons with intellectual, developmental and/or physical disabilities; people with issues of substance abuse; and the homeless.

Administrative responsibility for these services and for their funding lies with the Ministry of Social Affairs and Social Services as well as local authorities (social services departments). Increasingly, delivery is being delegated to non-governmental organizations (non-profit and for-profit) with state and local government engaging in regulation.

This chapter reviews changes in expenditure for the personal social services system and its various service areas, as well as the reform

¹ This is a recommendation made repeatedly by the Taub Center over the past ten years.

committee recommendations (State of Israel, 2009). The chapter also presents recently published findings about characteristics of personal social service users and the perspectives of those employed in the system – social workers – regarding various aspects of its activities.

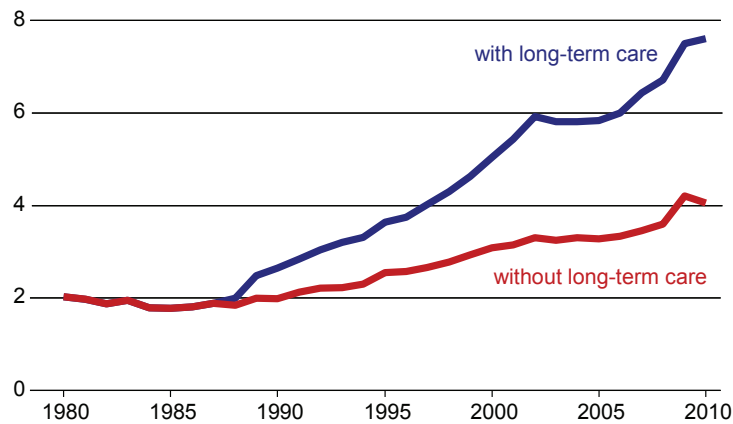
1. Personal Social Service Expenditures: Major Trends and Allocations

2008 state expenditure on personal social services totaled NIS 6.8 billion (in constant 2008 prices) and is still on an upward trajectory. The government budget for the years 2009-2010, foresees continued growth in planned expenditure to the level of about NIS 7.5 billion in constant prices. This growth is also reflected in a rise of the share in total expenditure from 4.6 percent in 2000 to about 6 percent of overall government social spending.

Expenditure on personal social services in Israel represents a relatively small part of the overall social expenditure. This expenditure funds services provided both by the local social welfare departments and through various institutions operating under the auspices of the Ministry of Social Affairs and Social Services. It also includes long term care services, provided in keeping with the National Insurance Institute's Long Term Care Insurance Law. The share of those services has been rising steadily since the law was first enacted in early 1988, as can be seen in Figure 1.

The rise in the share of the expenditure on personal social services of overall social spending, as well as the real increase of the resources channeled to the various service areas (and changes in the spending patterns on other components of the overall social expenditures) was especially notable in the second half of the decade. The flat pattern of the expenditures in 2002-2006 changed into a growth pattern in 2007. The government budget for the coming two years, 2009-2010, predicts a continued growth trend in those expenditures.

Figure 1
Expenditure on Personal Social Services, 1980-2010
 NIS billion, 2008 prices

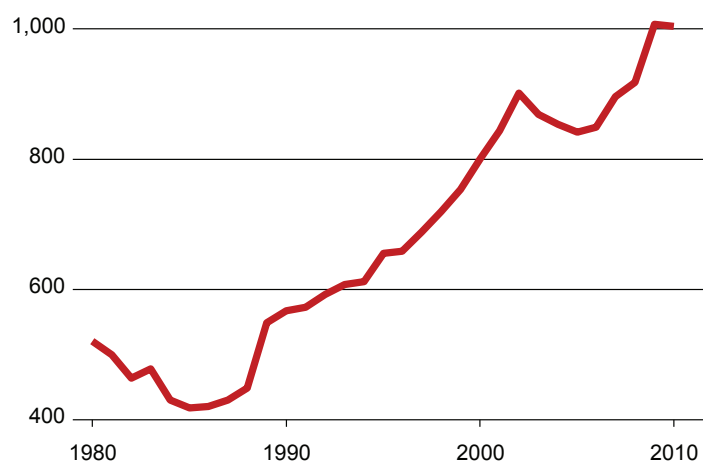


* The Long Term Care Insurance law was passed in 1988.

Source: Taub Center for Social Policy Studies in Israel.
Data: Ministry of Finance.

It is interesting to compare the growth of expenditures on social services to other dimensions: first to population growth and second, to growth in GDP. As can be seen in Figure 2, spending on the personal social services increased at a higher rate than population growth. The average per capita expenditure for personal social services (including long term care) was NIS 700 in 2000 and rose to NIS 896 in 2007, representing a 12 percent growth in less than a decade. If the budget is implemented as planned, this expenditure is expected to reach an average of about NIS 1,000 per capita in 2010. In a longer historical perspective, per capita personal social services grew by 76 percent since 1980.

Figure 2
Per Capita Expenditure on Personal Social Services, 1980-2010
NIS, 2008 prices

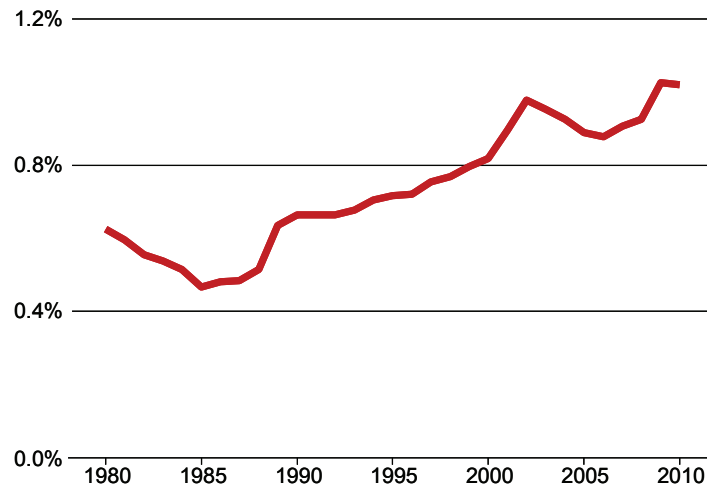


Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Finance, Central Bureau of Statistics (CBS).

When compared to changes in GDP, a similar trend emerges. In 2000 this expenditure represented 0.82 percent of GDP, in 2004-2007 it fluctuated between 0.88 and 0.93 percent, and in 2009 it was projected to top one percent of the GDP (see Figure 3).

Figure 3
Personal Social Services, 1980-2010
 as a percent of GDP



Source: Taub Center for Social Policy Studies in Israel.
Data: Ministry of Finance, CBS.

2. Principal Areas of Expenditures

Personal social services are provided for a wide range of target populations, of which some are especially prominent. The largest share of this expenditure is intended, as mentioned, to fund services for the elderly, mainly long term care services, but also other locally provided services. Another share is devoted to rehabilitation and various assistance services for special needs populations – people with intellectual, developmental or physical disabilities, and delinquent youth and young adults. Additional services, designed to provide care for a variety of population segments – individuals, families, children and communities – are under the responsibility of local authorities' social welfare

departments and take various forms and can be found in diverse community settings.

Spotlight: Data on Service Users

Recently published data (Sabah, Eaglestein, Cohen-Feldman and Zadka 2000a; 2000b) provide an initial, albeit partial, view of users of the personal services. The published data cover 270,455 families registered as beneficiaries of services provided by the social welfare departments in 2006. The data indicate a number of attributes of social services users:

- Wages: the average monthly wage of clients of the personal social services is half the average monthly wage in the economy, i.e. close to minimum wage.
- Age: over half (53.7 percent) of those registered in the social welfare departments are of working age.
- Elderly: About one-fifth (19 percent) of those who apply to social welfare departments are elderly, whereas they comprise only 10 percent of the general population.
- Arabs: nearly one-fourth (23 percent) of applicants registered in social welfare departments are from the Arab sector, more than their share in the general population – 19.7 percent.
- New Immigrants: the share of new immigrants registered in social welfare departments is 40.0 percent, while their share in the general population is only 31.6 percent.
- Grounds for Application: 24.2 percent of applications to social services departments relate to a disability; 16.3 percent present poverty and income problems; and 1.9 percent due to poor social and emotional functioning.
- Socioeconomic Differences of Localities: the volume of applications to social services departments is much higher in poorer localities – 239.1 per thousand persons in the poorest localities in Israel versus 123.4 per thousand in and 82.1 per thousand in the most affluent localities.

2.A. Personal Services for the Elderly

Elderly services constitute a central component of personal social services, especially since a significant portion of the service is provided as part of the long term care services – in-kind services provided under the Long Term Care Insurance Law and implemented under the auspices of the National Insurance Institute. The delivery method of these services, as well as the continual rise in their utilization rates, transformed them into an important element in the overall personal services expenditures (see Figure 1 at the beginning of chapter).

Long Term Care Services

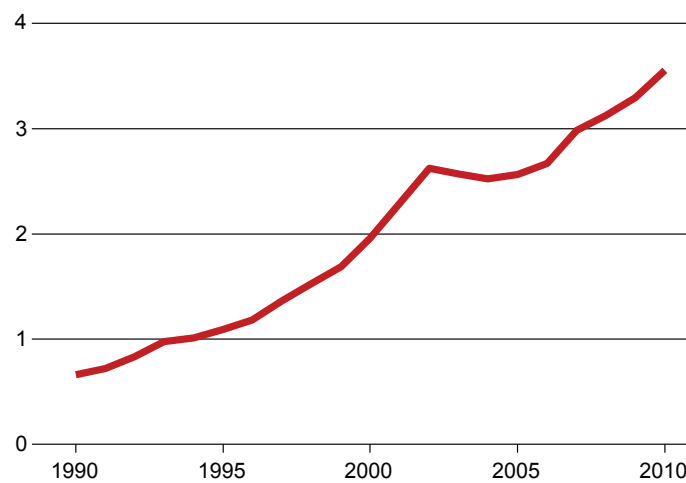
Long term care services are intended for those elderly whose everyday functioning is limited, and who continue to reside in their own homes. These take the form of in-kind services, and are operated as an insurance-based, National Insurance Institute program, in keeping with legislation enacted in 1986. The benefit varies according to the degree of dependence of the elderly on others in performing everyday functions. The benefit covers approximately 10 to 18 care-hours per week.

Assistance given to the elderly under the Long Term Care Insurance Law is provided by private companies as well as non-profit organizations. In many cases the Law funds part of the cost of care, which translates into more hours of care by foreign care givers (due to their lower wages). To encourage engaging more Israeli employees under the Long Term Care Insurance Law, the National Insurance Institute recently began paying an additional three to four care-hours per eligible person who hires an Israeli care giver.

More than 131,000 elderly received assistance under the Long Term Care Insurance Law in 2008, and this number rose to 135,000 by the middle of 2009. This represents 15 percent of the elderly in the overall population. The number of elderly receiving care under the Long Term Care Insurance Law has increased continually ever since the law was enacted. In 1988 services were provided to only 21,000 elderly people, while one decade later their numbers reached 85,000 (Katan &

Lowenstein, 1999). In the early 2000s the number of elderly receiving care topped 100,000 and in 2005 it was approximately 115,000. Figure 4 below traces the evolution of expenditures on long term care for the elderly, which was over NIS 3 billion in 2008 and is expected to grow to NIS 3.5 billion in 2010. It is worth noting that this expenditure represents almost half (47 percent) of the overall expenditure on personal social services.

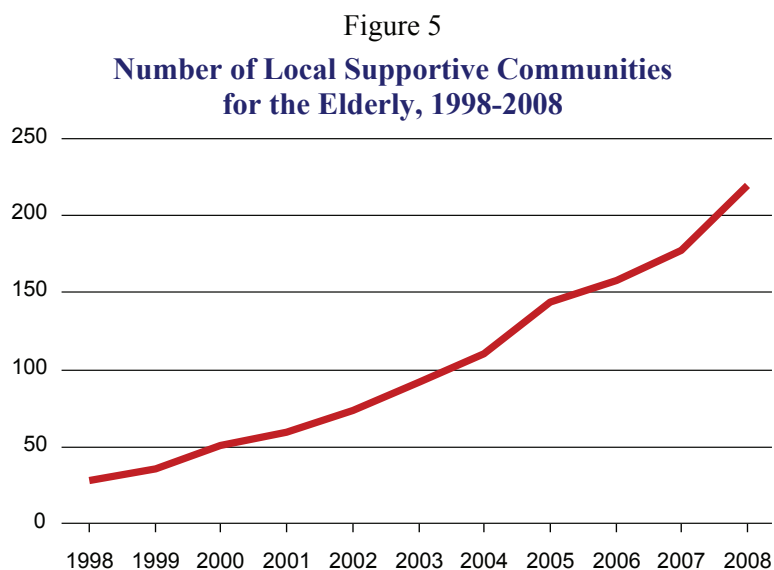
Figure 4
Expenditure on Long Term Care Insurance
NIS billion, 2008 prices



Source: Taub Center for Social Policy Studies in Israel.
Data: National Insurance Institute.

Services Provided by the Ministry of Social Affairs and Social Services' "Elderly Services" Program

The "Elderly Services" program is responsible for providing care in nursing homes currently housing 9,000 elderly people, as well as various care activities within the community. The expenditure for operating the service in 2008 amounted to NIS 245 million which has remained level in recent years is expected to maintain this course over the next two years (in 2010 the expenditure is expected to reach NIS 254 million). Elderly Services oversee the elderly care provided in nursing homes and participates in the funding for approximately one-third of the elderly in these nursing facilities. Expenditures for the elderly in nursing homes amount to about two-thirds of the overall expenditure in this area. Nevertheless the largest population of elderly receiving this service is made up of those who utilize the variety of services offered within the community. These include day care centers, clubs and supportive communities, some of which receive financial subsidies from the Ministry and are subject to its supervision. The development of supportive communities located in areas with a high proportion of elderly in the population has become of special interest in the field of elderly services in the past decade. Elderly people who live within such communities receive distress buttons, assistance from a communal janitor, emergency medical care when necessary, and participation in social activities. Such communities were developed as an initiative of *Eshel* (JDC) during the years 1995-1996 (Tien, 2004) and they are operated with help from the Ministry of Social Affairs and Social Services. As shown in Figure 5, the number of these communities grew rapidly over the past decade, from just 28 in 1998 to 220 in 2008. While 6,400 elderly households were part of the supportive communities at the beginning of the decade, the number reached approximately 30,000 towards the end of this decade.



Source: Taub Center for Social Policy Studies in Israel.
Data: Eshel, "*The Aged in Israel*."

2.B. Services for Special Needs Populations: People with Intellectual, Developmental or Physical Disabilities and Correctional Services

The second largest expenditure on personal social services is designed for special needs populations and is under the responsibility of the Ministry of Social Affairs and Social Services. Most of these resources are directed to persons with intellectual and developmental disabilities. The expenditure for this segment of the population has grown consistently in recent years and is expected to continue growing over the next two years. A major part of activities in this area is devoted to care in residential facilities, mostly private, such as sheltered housing units, hostels etc. Currently this population encompasses more than 10,000 residents (10,020) in all institutions combined, compared with 9,200 in 2004 (Ministry of Finance, 2009).

Regarding services provided to persons with intellectual and developmental disabilities, in recent years there is a dual trend. One trend is to privatize the services by reducing government involvement in operating institutions in this area and handing their funding and oversight to private entities. The other trend is to transfer more residents to hostels and other residential facilities functioning within the community. The reduction of governmental involvement in providing care for this population is clearly visible in Table 1 below, indicating a significant decrease in the number of residents in government-run residential facilities, from 2,107 in 1996 to 1,838 in 2008. At the same time there was an increase in the number of residents in for-profit facilities (from 2,900 in 1996 to 5,110 in 2008) as well as in non-profit facilities (from 1,550 in 1996 to 2,700 in 2008). Another expression of this trend can be seen in the fact that currently there are 2,400 residents in housing units in the community compared to only 1,300 in 2003 (Ministry of Finance, 2003).

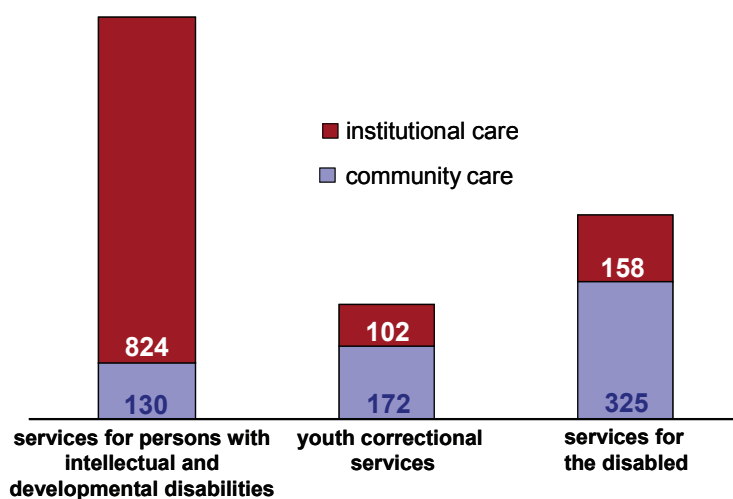
Table 1. **Residents in Homes for Persons with Intellectual and Developmental Disabilities. 1996 and 2008, by ownership.**

	1996	2008
Government homes	2,107	1,838
Public homes	1,550	2,700
Private homes	2,900	5,110

Source: Ministry of Finance, Budget Proposal for 2004 and 2009-2010.

Unlike other areas of caring for special needs populations, services for persons with intellectual and developmental disabilities are still provided predominantly in institutions, as is shown in Figure 6.

Figure 6
Services for Special Needs Populations, 2008
 institutional and community care, NIS million



Source: Taub Center for Social Policy Studies in Israel.
Data: Ministry of Finance.

Most of the resources of the Rehabilitation Department are allocated for operations within the community – professional diagnosis, vocational training and the operation of various rehabilitation systems. Here, too, the privatization trend is very prominent, both in the area of vocational training in the community and in the operation of residences for people with disabilities. Only a small minority of residents are in government-run facilities, whose operations are also intended to be transferred to non-governmental organizations.

The third area of special services is that of correction services, which deal with treatment, supervision, rehabilitation, and prevention among those who violated the law (usually after the intervention of the judicial system). Expenditures for this area have gradually increased in recent

years to NIS 273 million in 2008. About half of the expenditure is dedicated to funding residential facilities for compulsory treatment of youth sent to delinquent shelters, but most of the correctional services target population is being treated within the community.

The Juvenile Probation Service handles juvenile delinquents and provides evaluations as well as treatment. The number of young people who go through this service declined somewhat over the past decade and in 2008 they totaled 20,291. The service for adult criminals provides reviews for the courts and implements probation orders and community service orders.

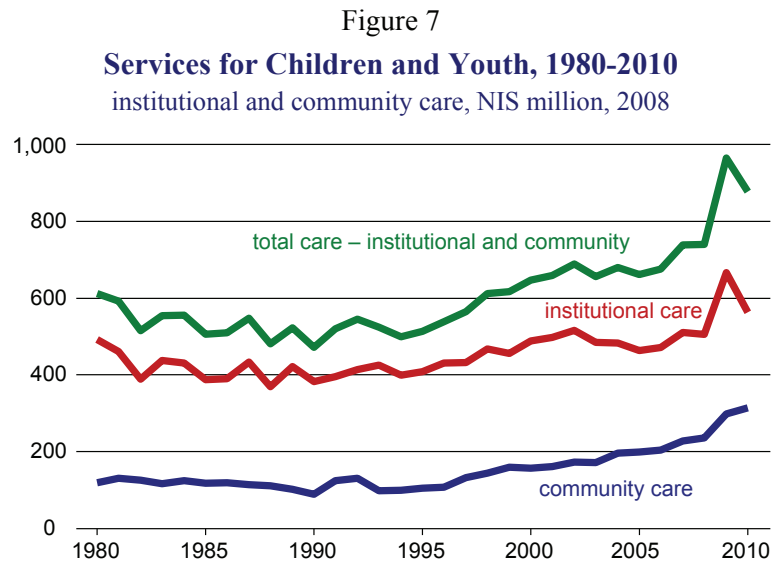
Over the years the correctional system has also been responsible for day rehabilitation facilities for youth (*Miftan*). Over the last decade, however, there seems to be a tendency to reduce the number of such facilities: whereas in 2002, 2,450 young people were treated in 31 facilities across the country, in 2008, 2,600 young people were treated in only 23 facilities (Ministry of Finance, 2002).

2.C. Child and Youth Care

The Ministry of Social Affairs and Social Services provides care for children and youth through the Child and Youth Service, a unit of the Personal and Social Services Department. At-risk children are at the center of this service which is operated mostly by social workers and includes an array of residential services in boarding schools and foster care, as well as services within the community, and diagnostic and treatment services in different settings.

The budget for at-risk children and youth services in 2008 amounted to NIS 761 million and is expected to grow to about NIS 1 billion in 2009 (representing approximately 23 percent of overall personal social services). The planned increase for the next two years is related to some extent to the government's decision to adopt the recommendations of the public committee to examine the situation of at-risk children and youths, which was headed by Prof. Hillel Schmid (State of Israel, 2006). The

majority of the budget for children and teens is still dedicated to the funding of residential facilities for them. In recent years, however, the process of shifting the emphasis to activities within the community (“with the face to the community”) has been accelerated. The shift consists essentially of transferring some of the children currently in residential settings to the community and refraining from sending any more children to residential institutions, while prioritizing community-centered services for their care. Concurrently, various settings are being developed within the community, designed to diversify and expand the care given to at-risk children and youths. These include *mishpahtonim* (day care in family settings), day care centers, non-residential (outpatient) care centers, day foster-care, multi-purpose care centers, club houses and parents-children centers. For example, 14,500 children are in day care centers and family care centers provided by the At-Risk Toddlers Law. Figure 7 shows the shift in budgetary preferences and the transition to care-giving within the community. The figure illustrates the gradual decline in spending for institutional care compared with the funding of services within the community. The share of expenditures directed to institutional care, which in 2000 was 71.6 percent, declined to 66.3 percent in 2008 and is expected to drop as low as 60.1 percent in 2010. Concurrently, the expenditures on services in the community rose from 23.1 percent in 2000 to 33.8 percent in 2010.



Source: Taub Center for Social Policy Studies in Israel.
Data: Ministry of Finance.

2.D. Care for Families

Funding for services specifically intended for at-risk or in-crisis individuals and families constitutes a relatively small part of the overall expenditure on personal social services. The expenditure for this area in 2008 was NIS 84 million and is expected to grow slightly in real terms and reach a level of approximately NIS 100 million over the next two years.

The level of expenditure for family care in 2010 is expected to be greater than over the past decade. Services for individuals and families are provided primarily in the community and include individual and family care, provided by social workers for both individuals and families experiencing a crisis or danger within the family, and treatment of traumatic events (risk of suicide or bereavement), other intra-family processes (such as violence and incest), and the like. The service also

operates domestic violence prevention and treatment centers, treatment centers for the homeless, family and marriage counseling centers, and provides welfare agents in compliance with the Youth Law.

2.E. Personnel in Social Services Departments

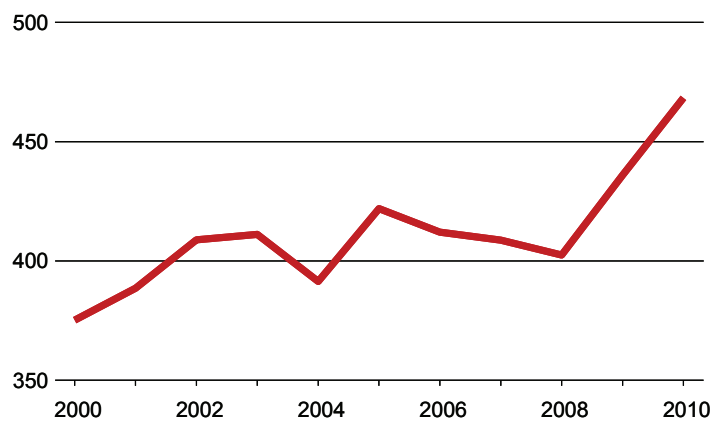
Social workers and other professionals working within social welfare departments in local authorities constitute the foundation that sustains personal social services in Israel. The burden of funding the social worker positions in social services departments falls primarily (75 percent of the cost of funding) on the Ministry of Social Affairs and Social Services, with the balance resting with the local authorities.

For many years, the prevailing mood among social workers, service recipients and other professionals has been troubled (see detailed discussion in Katan, 2009: *Resource Allocation to the Social Services 2008*, pp. 182-186). The general sentiment is that the number of available personnel working in social welfare departments is insufficient for the size of the in-need population and the various tasks imposed on them under the relevant laws. The frustration of workers in social services departments concerning the overload they experience and their inability to provide adequate responses to applicants was exposed during the long social workers strike in 2008. This frustration was also articulated in views expressed by social workers and directors of social services departments in a survey conducted by Ofek (2009), some conclusions from which are presented below.

The long strike led to readiness by the Ministry of Social Affairs and Social Services as well as the Ministry of Finance to increase the number of social work positions in social welfare departments. It also brought about the establishment of a committee to make recommendations for reform of social services departments (for discussion of the committee's interim conclusions, see section 3).

Data pertaining to the funding of positions in social services departments validates the sense of insufficient personnel. The growth rate of positions funded by the Ministry was 16 percent between the years 2000-2008, during which time the number of families supported by these departments rose by 28 percent, and the number of individuals registered by the departments rose by 29 percent. The estimate of the committee to reform social services departments is, therefore, that 500 additional positions are required merely to bridge the gap created since 2000 and to bring the service back to that level (Israel, 2009). Figure 8 indicates a moderate (but not uniform) increase over time in funding for personnel. It also shows that spending is expected to grow more significantly over the next two years (by about 6 percent per year). The increase is expected to result in 221 additional positions in social service departments (Finance Ministry, 2009), but, as stated, this addition is less than half of the number required to return to the accepted level of service from the beginning of the decade.

Figure 8
**Expenditure on Manpower in
 Local Welfare Departments, 2000-2010**
 NIS million, 2008 prices



Source: Taub Center for Social Policy Studies in Israel.
Data: Ministry of Finance.

What do social workers think about the personal social services?

A research report presented in early 2009 to the Ministry of Social Affairs and Social Services by Prof. Avraham Ofek (Ofek, 2009) sheds light on the mind-set of social workers and department directors in 48 social services departments across the country. It is based on interviews conducted with the social workers and department directors in social welfare departments. The report examined issues relating to the day-to-day performance of departments and their employees and it presents an interesting perspective on the functioning of the personal social services system from the vantage point of those working in it. Here are some of the research findings:

- Reports of personnel shortage: 69 percent of the directors of social welfare departments and 71 percent of their social workers reported considerable or serious shortage of positions in their departments. The most severe reports of personnel shortage were from the Arab and Haredi (ultra-Orthodox) sectors.
- Target populations coverage of social welfare departments: one-third (32 percent) of the departments surveyed reported full coverage of their target populations, while some two-thirds (68 percent) reported that they do not provide adequate response to their target populations.
- 42 percent of personnel reported that due to their heavy work load, they engage greatly or very greatly in "putting out fires."
- 67 percent of the social workers and 82 percent of the social welfare department directors described their professional self-image as high or very high.
- In 30 of the 48 social welfare departments sampled (62 percent of the sample) privatization processes were being carried out in various areas.
- Impact on policy: 92 percent of study participants defined the level of participation of department directors in shaping the Ministry's policy as moderate or less.
- Handling poverty: 68 percent of social welfare departments reported an absence of policy and programs to cope with the phenomenon of poverty.
- Handling the unemployed: 76 percent of departments in the Jewish sector and 89 percent of departments in the Arab sector reported a mediocre level of handling the problems of unemployment and the unemployed.

3. The Reform Committee

Following the social workers strike in the first half of 2008, a public committee was established on behalf of the Minister of Social Affairs and Social Services, headed by Yekutiel Sabah. The public committee was asked to recommend a reform of personal social services.

The committee's recommendations refer to a long list of difficulties and obstacles typical of this system (State of Israel, 2009). Among the key problems of the social services system, are:

- The ongoing lack of resources, which translates into providing only a partial response to the needs of the target populations of social welfare departments.
- Inequality in the scope and level of services provided to target populations between localities particularly manifest in the comparison between Jewish and Arab communities.
- Outdated and deficient legal foundations: since the Social Services Law was enacted in 1958, the statutory basis for social welfare departments has become obsolete (Yanay, 2006).
- A lack of empirical knowledge and evidence-based practice.
- An over-emphasis on specialization rather than higher level generic training.
- Inefficient service environment and complex relationships between clients and social services departments due to their partial privatization and the multiplicity of providers (Katan, 2007).
- Insufficient participation of service users and civil society organizations in shaping the policy of social welfare departments.
- Limited involvement of social welfare departments in major social problems such as poverty and unemployment – the main sources of their clients' distress (Katan, Gal & Weiss-Gal, 2009).

The conclusions submitted by the committee to the Minister of Social Affairs and Social Services cover: (1) the legal structure of the departments' functioning; (2) resource allocation for their operation; (3) goals for the departments' functioning and their target populations; and (4) a variety of organizational aspects regarding the performance of the departments and their professionals.

The committee recommended maintaining the existing division of responsibilities and distribution of funding between the Ministry of Social Affairs and Social Services and local social welfare departments. It also called attention to the need for sufficient funding for this system. The committee supported the adoption of a Social Services Law to replace the existing law and provide a suitable statutory structure for the departments. It suggested focusing the departments' operations on their main target populations as well as those to which they have legal commitments. The committee advocated strengthening the family as a unit and putting it at the center of the departments' activities. It urged strengthening the efforts to reduce poverty and unemployment and enhancing social workers involvement in the process of social policy design.

The committee also recommended limiting the departments' role in providing material resources and endorsed the idea of "managed care." It urged them to collaborate with other parties, private and public, in promoting common objectives, and supported greater autonomy and discretion for the departments in managing their internal budgets, as well as involving the general public in the policy design process.

The committee's recommendations to reform the social services system constitute a comprehensive attempt to assess the personal social services system, its diverse characteristics and limitations, while outlining a new and coordinated policy for the coming years. While the interim conclusions do call attention to many of the system's shortcomings, what is visibly absent is a timetable for implementation of its recommendations and the allocation of budgets and resources. The question of what role these conclusions will play in helping the welfare system cope with its

myriad problems depends on outlining a clear course for their implementation.

Another element missing from the committee's interim conclusions is its recognition of probable negative implications of the on-going process of partial privatization within local social services. While noting the difficulty of monitoring operations of combined public and private providers and increasing financial and operational dependence of some local authorities on non-governmental organizations, the committee did not suggest an explicit policy on this matter, nor has it recommended any limitations.

Insufficient discussion was devoted to the controversial and difficult issue of funding local social services operations and their relationship with the Ministry of Social Affairs and Social Services. This is a particularly challenging problem, raising issues of disparities between different communities, notably between Arab and Jewish communities and between the center of the country and the periphery. Though service recipients are concentrated in poorer communities, no suitable budget structure was found to provide affirmative action for localities with limited resources. In this situation, the gaps between Jews and Arabs are becoming steadily wider.

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The Healthcare System

Dov Chernichovsky*

Abstract

The key characteristics of Israel's healthcare system are the continued increase in the share of private funding in the overall funding of healthcare and provision of care. Private funding currently represents about 43 percent of the overall funding, the highest beyond the United States among the developed countries, and the highest among countries in which universal health insurance is legally guaranteed for all residents via National Health Insurance.

The "Americanization" of the Israeli healthcare system is reflected at this stage in growing gaps in access to care and loss of income protection as well as efficiency, which can be measured by the developing inflation in the system. This reality is not reflected as yet in public health indicators. The growing gaps between the United States and the 22 high income OECD countries in favor of the latter may be signaling what can be expected in Israel in terms of its achievements in the health of its population. Against this backdrop, the efforts by the large healthcare service providers to deepen their focused activities in closing the gaps stand out.

The trends characterizing the Israeli healthcare system for the past decade continue: an improvement in the health status of the population and of the Arab minority in particular, a declining percentage of public financing in healthcare spending, rising prices of care, and yet a

* Special thanks to Kyrill Shraberman of the Taub Center for assistance in data analysis and for preparation of the figures in this chapter.

stable share of healthcare expenditure in the gross domestic product (GDP) – the overall value of goods and services produced by the economy over a year.

In this chapter these trends and their underpinnings are examined in detail and a comparison is made with long term developments in the countries of the Organization for Economic Cooperation and Development (OECD) of which Israel has recently become a member. The analysis aims to examine the system's performance in terms of the health of the population while considering the system's efficiency and equity. The long term comparison with the 22 high income OECD countries, excluding the U.S., on the one hand, and the U.S., on the other,¹ is of special significance. This comparison is an indicator of things to come in the Israeli system if efforts are not undertaken to counter the current situation.

The health of the Israeli population, as reflected in infant mortality and life expectancy indicators, is presented in the first section of the chapter, which highlights continued, albeit narrowing, discrepancies between the Israeli Arab and Jewish populations. The thrust of the second section is the changing composition of funding of the system, which makes the challenge of narrowing these and other disparities even greater. Regardless, there will always remain a "social periphery," relatively weak population groups requiring concentrated attention and efforts. This topic is treated in the third section, which discusses investment made in this periphery by the two largest sick funds (HMO type entities) *Clalit Health Services* and *Maccabi Health Services* that between them insure about

¹ In most cases, comparisons were done with the OECD countries excluding the United States and a separate analysis was done against the United States. Countries included in the comparisons were: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, South Korea, Luxembourg, Holland, New Zealand, Norway, Spain, Sweden, and United Kingdom (OECD-22 hereafter). Not included in the comparison were the following countries – Turkey, Mexico, Czech Republic, Slovakia, Hungary and Poland – which are not considered comparable to Israel in terms of medical technology.

80% of the Israeli population. In this section a short review of the special activity of the Southern District of the Ministry of Health in the area of prevention services aimed at the Bedouin population in the Negev is also highlighted.

1. Life Expectancy and Infant Mortality Trends*

Life expectancy in Israel rose since 1980 compared to the OECD-22² average and compared to the United States. Whereas in 1980 the gap between Israel (73.9), the United States (73.7) and the OECD-22 average (74.0) was negligible, the gap between Israel and the United States kept widening, in Israel's favor. In 2006 the figures were 80.3 in Israel compared to an OECD-22 average, excluding the United States, of 79.9, and with 77.8 in the United States.³

However, the life expectancy of the Jews in Israel has been consistently higher than that of Israeli Arabs.⁴ Currently there is a gap of slightly less than four years between the life expectancy of Israeli Jews (81.6) and Arabs (77.8)⁵ (Central Bureau of Statistics (CBS), 2009: data for 2008). The difference can be seen in Figure 1, indicating the size of gaps.

* This section was written in collaboration with Nadav Davidovitch of Ben-Gurion University and Kyrill Shraberman of the Taub Center. The English version was modified by Ilana Belmaker.

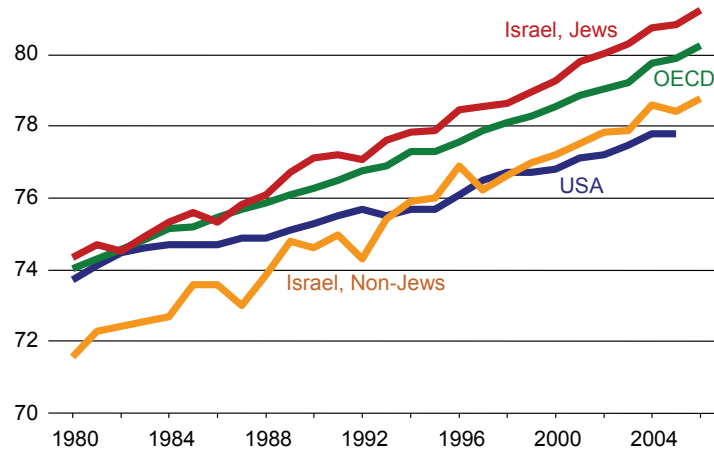
² See footnote 1.

³ These Israel statistics present the overall average.

⁴ The non-Jewish population in Israel includes a large majority of Arab Muslims and in addition Arab Christians, Druze, Bedouin, Circassian and a very small number whose religion is not specified. The term *Arabs* or the *Arab population* allows a general reference in the chapter as was done in previous chapters in this book and avoids the negative terminology of non-Jews for this population. In certain cases there is a reference to specific groups within the Arab population, as in the case of Bedouin in the Negev, and others.

⁵ Life expectancy statistics are usually published separately for men and women. Current data (CBS), 2009: data for 2008) show a gap of four years between Jewish men (79.9) and Arab men (75.9) and smaller differences, of less than four years, between Jewish women (83.3) and Arab women (79.7).

Figure 1
Life Expectancy
 Israel, OECD-22* and USA, 1980-2006

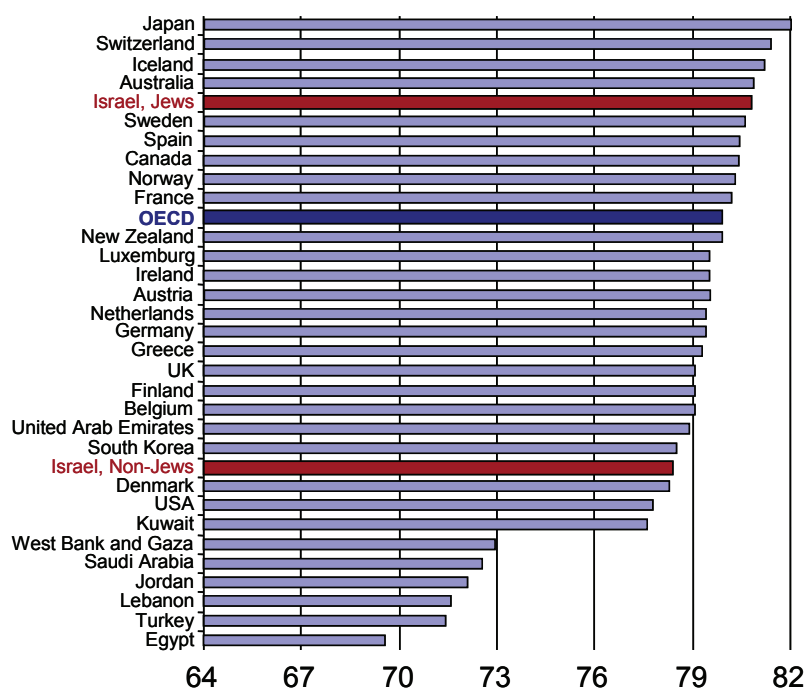


* OECD average excluding USA.

Source: Taub Center for Social Policy Studies in Israel.
Data: Central Bureau of Statistics (CBS); OECD.

From 1999 onward Israel's life expectancy has been considerably higher than the OECD average. Furthermore, the life expectancy of Jews alone puts Israel on par with the nations with the highest life expectancy. The rank of non-Jews in Israel is higher than the neighboring Arab countries (except the United Arab Emirates) and even than the United States (see Figure 2 for comparative data for 2005).

Figure 2
Life Expectancy, 2005

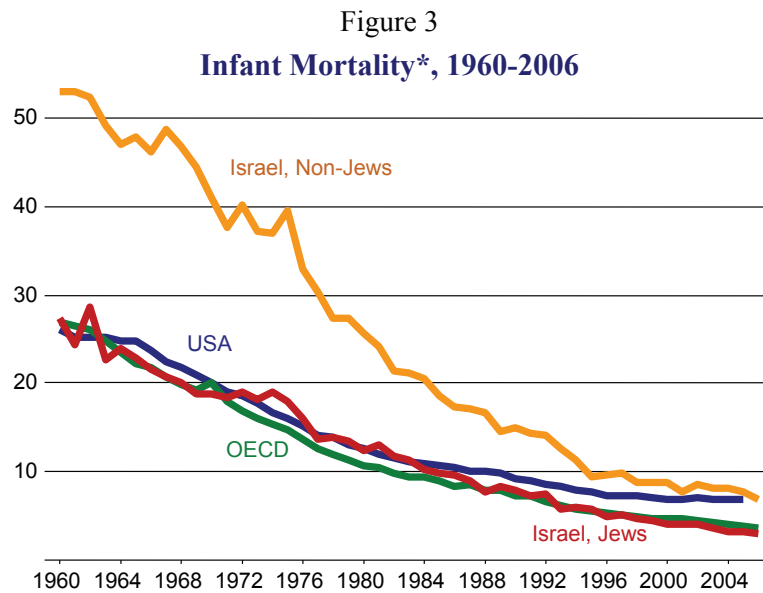


* OECD average excluding USA.

Source: Taub Center for Social Policy Studies in Israel.

Data: CBS, OECD.

The differences between population groups reflected in Israeli public health indicators are indeed particularly striking between Israeli Arabs and Jews, and above all in infant mortality. In 2005, infant mortality in Israel was relatively high (4.4 per 1,000 live births) versus the OECD-22 average of 3.9 per 1,000 live births for the same year. Infant mortality was lower than in Israel in 14 countries that year, including Austria, Ireland and Germany (4.2, 3.9 and 4.0 per 1,000 live births, respectively).



* Infant mortality, deaths per 1,000 live births; OECD average excluding USA.

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

Infant mortality rate in Israel's Jewish population (3.1 per 1,000 live births in 2005) is among the lowest in comparison with Europe and the OECD. This rate is similar to that of countries like Norway, Finland and Japan (3.1, 2.8 and 3.0 per 1,000 live births, respectively), and lower than the OECD average (3.9 per 1,000 live births).

At the same time, infant mortality in the Israeli Arab population (8.0 per 1,000 live births in 2005) is significantly higher than country-wide infant mortality rates in all European and OECD countries as well as the United States (6.9 per 1,000 live births). A similar rate of infant mortality is found in other Middle East countries: the United Arab Emirates and Kuwait (7.8 and 9.7 per 1,000 live births, respectively).

An examination of the trend from 1960 until 2007 shows that infant mortality in the Israeli Arab population is on a course of significant decline, currently nearing the rate of infant mortality in the United States (6.9 per 1,000 live births in 2007). In 1960, infant mortality in the Israeli Arab population was more than twice that of the United States: 52.9 per 1,000 live births versus 26.0. Compared to other Middle Eastern countries the rate of infant mortality of Israeli Arabs is low.

An adequate policy for narrowing the existing gaps in Israel should take into account the fact that the Israeli Arab population is not homogeneous and that significant differences exist among different groups. Thus, for example, in 2003, when infant mortality in the Israeli Arab population as a whole was 8.2 per 1,000 live births, the following disparities were found: among the Muslims, infant mortality was 8.6 per 1,000; among the Christians, 3.2 per 1,000; and among the Druze, 7.1 per 1,000. Again, this is compared to 3.6 in the Israeli Jewish population (Ministry of Health, National Center for Monitoring Diseases, 2005).

Between the years 1970 and 2003 infant mortality rates underwent an accelerated decline in all Israeli Arab subgroups. Among the Muslims it dropped by 78.6 percent, among the Christians by 89.2 percent, and among the Druze by 79.0 percent. At the same time the decline continued also in Israel's Jewish population, by 80.7 percent.

The main cause for infant mortality in the Israeli Arab population is birth defects (34.6 percent of deaths) and premature births (31.4 percent). In 2004-2006, 42.7 percent of deaths among Bedouins were caused by birth defects and hereditary diseases, and 22 percent by premature birth. The rate of infant mortality from birth defects in 2003 was 2.9 times higher among the Israeli Arab population than among Israeli Jews. Since 2004 there has been a decline in Bedouin infant mortality rates due to those two causes.

The Bedouin in the Negev, the southern region of Israel, need particular attention. The infant mortality rate in this group was 11.9 per 1,000 live births in 2006 compared with 7.3 per 1,000 live births in the overall Muslim population in Israel and 4.0 per 1,000 live births in the

overall population. This rate was 1.6 times that of the overall Muslim population in Israel and 3.0 times that of the overall population in Israel (CBS, 2009: Yearbook No. 60). Between 2001 and 2007, infant mortality declined among the Negev Bedouins, but the gap between them and the overall Muslim population in Israel and the Jewish population remains high.

*2. Funding the Healthcare System**

In general, a rise in life expectancy especially in developed nations is an indicator of the system's ability to cope with health disparities between its various population groups. This can be seen in Israel's long term rising life expectancy rates in all populations groups and the narrowing of health gaps.

The developments described earlier – especially the declining **relative** life expectancy in the United States – provide the backdrop for the discussion of the “Americanization” of funding of the healthcare system in Israel throughout this chapter. The changes indicated by the funding data below might test the continued positive relative trend in Israel as well as the trend of narrowing health gaps among different populations.

Much was written in recent years about the decline in the share of public expenditure in the overall funding of the healthcare system (Bin Nun, 2008; Chernichovsky, 2007; 2008). The decrease is directly reflected in reduced access to services and lower protection of household budgets from mostly necessary medical spending. Although this decline has continued for 10 years already, it is not yet likely to have a visible impact on public health indicators such as infant mortality and life expectancy. With the exception of dramatic events, the impact on those indicators of reduced access to services or increased vulnerability of

* This section was written in collaboration with Guy Navon from the Bank of Israel, and Dr. Ronni Gamzu who has since been appointed Director General of the Israeli Ministry of Health.

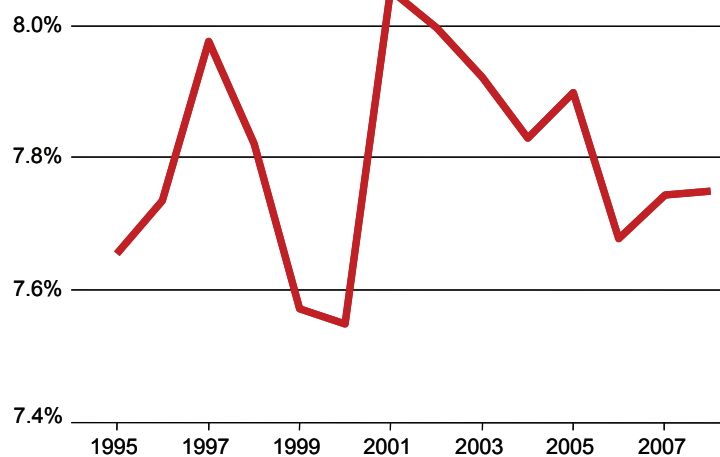
household budgets to high medical expenses is slow and only detected after a long time, as might be suggested by the widening relative differences seen between the United States and other developed countries including Israel. At the same time, related indicators of system efficiency and equity can be detected faster. These can be precursors to eventual impact on health.

The comparison of Israel with the OECD-22 (excluding the United States) on the one hand, and with the United States on the other hand, is of particular interest considering the inferior performance of the American system compared to those of the other countries, by any indicator (Davis et al., 2007; Schoen et al., 2006; 2007) – despite the United States' technological superiority and the greater resources invested there in the healthcare.

2.A. National Expenditure for Healthcare

The national expenditure for healthcare services in Israel in 2008 was 7.7 percent of the GDP (Figure 4). On the whole, since the introduction of the National Health Insurance Law (NHIL) in Israel, healthcare expenditure to GDP remained relatively stable in a long term perspective. The 2001 “peak” was apparently a decline in economic output without a parallel decline in the national expenditure for healthcare services.

Figure 4
National Expenditure on Health
 as percent of GDP, 1995-2008



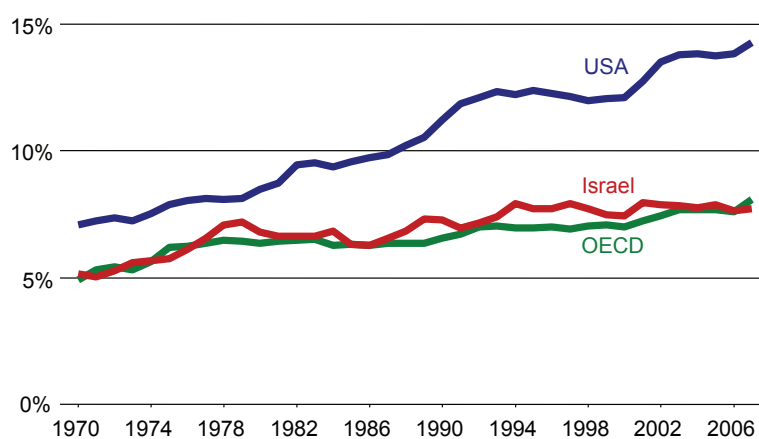
Source: Taub Center for Social Policy Studies in Israel.
Data: CBS.

Adjusting all data to Israel's age distribution for over 40 years, Israel's share of healthcare expenditure in the GDP followed that of the OECD's 22 industrialized countries. During most of the period, the ratio in Israel was even higher than the OECD-22 average (Figure 5), especially since the introduction of the National Health Insurance Law in 1995. In 2007 Israel's ratio was equal to the OECD average, and there are initial signs this year of a decline. This, however, does not necessarily indicate a turning point or a trend change.

For a long time, therefore, the share of the national product dedicated to healthcare services in Israel has been close to that of the other developed countries that provide national health insurance. Both in Israel and the OECD-22 the shares have been lower than that of the United

State. The growing divergence of this ratio, from the 1980s, between the United States and the other industrialized countries, including Israel, is particularly sharp.⁶

Figure 5
National Expenditure on Health*
1970-2007



* Adjusted for standardized population, as percent of GDP per capita.

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

⁶ With reference to the relatively high expenditure of the U.S. on healthcare, its separation from the full list of OECD countries and concentration on countries with universal healthcare (including Israel, even before the implementation of the National Health Insurance Law) improves the relative standing of Israel.

2.B. *Average Per Capita National Expenditure for Healthcare*

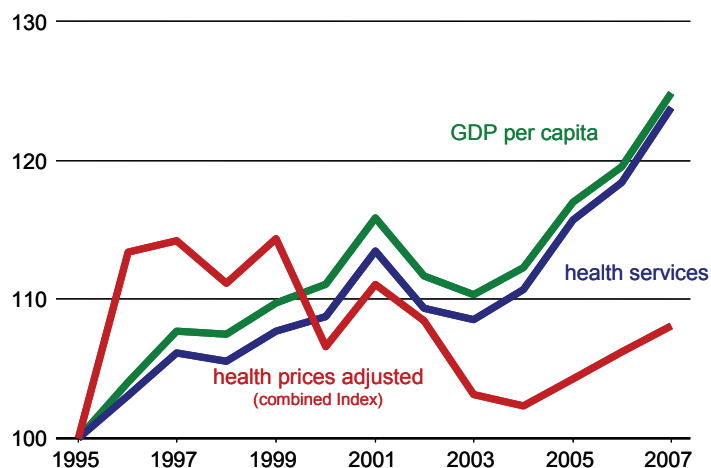
At least since 1995 there is a correlation, before adjusting for relative inflation in healthcare prices, between changes in Israel per capita GDP and changes in the national expenditure for healthcare per capita – and even per standard person,⁷ adjusting for the aging population (upper lines in Figure 6). This finding is in line with the international comparison, which shows Israel's relative consistent share of healthcare expenditure in the GDP, which is similar to that of the OECD-22. That is, the expenditure for healthcare services, even per age-adjusted person, normally rises at the same rate as the GDP.

However, as of 2001, relative inflation in the healthcare system had an increasing impact on the cost of healthcare services compared with product prices (see box). Adjustment to relative inflation indicates that the real expenditure per age-adjusted person was at best constant as of 1999 (Chernichovsky, Navon, 2010). Inflation since then has neutralized the effect of the rise in real expenditure (adjusted for average prices) per age-adjusted person, and reflects first and foremost rising labor costs in a labor intensive industry, and declining efficiency.⁸

⁷ The term “standard person” gives a differential weight per person by age in the population according to healthcare services usage, and builds an appropriate scale that is age adjusted. For instance, the elderly, those aged 65+ and the youngest members of the population aged 0-4, are given more weight reflecting their higher needs for healthcare services. The capitation formula that is used for resource allocation from the State to the service providers is based on age adjusted formulas.

⁸ It is reasonable to assume that higher prices reflect also quality of care and different services, including shorter waiting periods. There is no reason to assume, though, that relative inflation expresses this because there is no reason to assume that changes in technology are greater in the medical area than in other areas and that their influence is dominant in a labor intensive sector.

Figure 6
Health Expenditures*, 1995-2007
 constant prices, base year 1995=100



* Adjusted for standardized population.

Source: Taub Center for Social Policy Studies in Israel.

Data: CBS.

Relative Inflation

Inflation is a process of price increases per a standard product unit. A price increase can reflect a change of quality but it can also happen without change in quality. In such a case it indicates a loss of efficiency, since it reflects a higher production cost for the same product and lower purchasing power for a given income. Also, inflation harms equity, being a "tax" that does not differentiate among income groups.

A relative price change reflects a change in the price of one good or service, or basket of goods and services, such as medical care, relative to the price change of a different basket or even income. When there is relative inflation, one can buy less of the same product or basket due to the increased price, unless the buyer diverts income from other consumption in favor of the purchase of the same quantity of that product or basket.

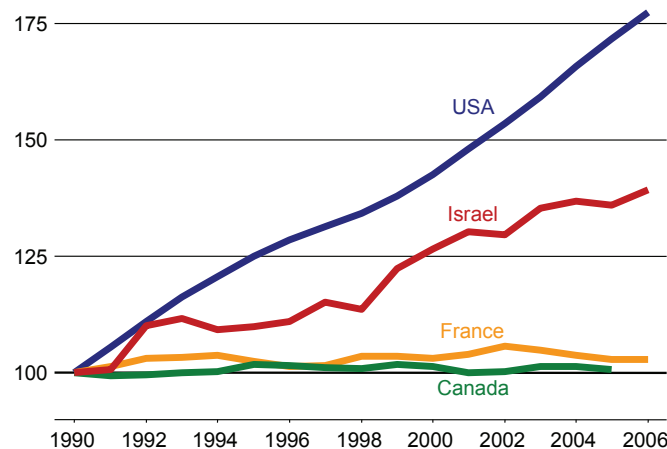
The development of Israel's real healthcare expenditure per standard person can be divided into four periods: 1995-1997, during which time a "surge" took place in this indicator following the introduction of the National Health Insurance Law (NHIL); 1997-1999, which were years of relative stability; 1999-2004, when the beginning of a downward trend was observed; and 2004-2007, when there were moderate increases. For the most part, the last decade is characterized by a trend of decline in the real expenditure on healthcare services, or in the quantity of healthcare products and services per age-adjusted person, due to the relative inflation in the prices of the service.

Organized and comparable data for relative healthcare services price increases in the relevant OECD countries are not available, except for France and Canada, which are not necessarily representative (see Figure 7). Nonetheless, it is hard to ignore the clear difference between France and Canada on the one hand, and Israel on the other hand, with the process of "Americanization" of Israel's healthcare services price trend, especially over the past decade.

Figure 7

Health Prices

relative price indices, 1990-2006



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

2.C. Funding Sources and Sharing the Funding Burden

Examination of healthcare funding sources and the division of the healthcare funding burden touches on the public/private mix, the composition of public funding, and the composition of private funding.

The Public/Private Mix

Private funding in Israel includes supplemental insurance which has “public” characteristics in that sick funds are obligated to accept any applicant without a waiting period, the premium is uniform for an age group and services are provided in-kind (Chernichovsky, 2008). Even so, complementary insurance is considered in this discussion as a private expense.

According to the Central Bureau of Statistics’ new series (2009), the share of public funding of healthcare services declined from 68.7 percent of the overall healthcare expenditure at its peak, to 55.8 percent in 2008 (Figure 8). Although the new series still shows the upward trend in the share of private funding, the series is more correct in ranking Israel lower than the OECD countries than the previous series.

Although in 1995-2007 the share of public funding in Israel’s healthcare system was lower than the OECD average (excluding the United States), the difference narrowed in 1995-1996, after the introduction of the NHIL, at which time Israel joined the developed countries that guarantee universal coverage. Since then, however, Israel has been shifting increasingly from the OECD (excluding the United States) average of the public share in funding to the United States public/private mix model of funding the healthcare system. That is, as of 1997, the rise in per capita healthcare expenditure in terms of product prices was funded by increasing the private expenditure, while the public per capita healthcare expenditure in product prices remained constant (Figure 9).

Figure 8

Public Share in Health Expenditure
as a percent of national expenditure, 1995-2007

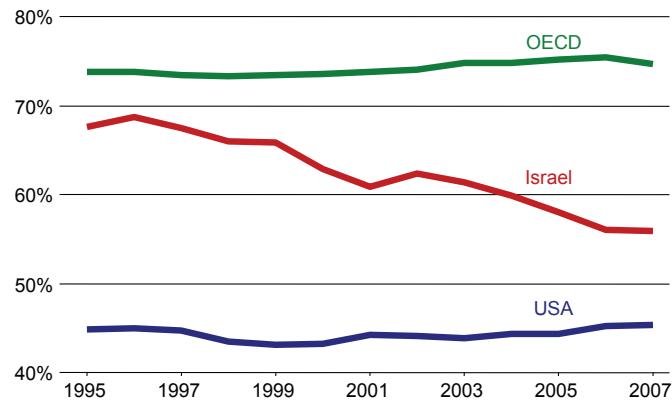
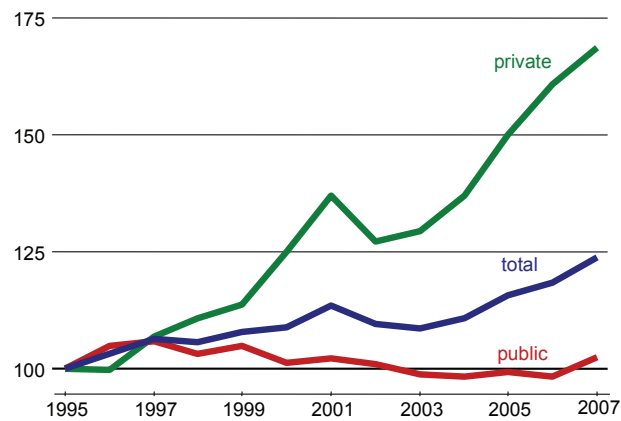


Figure 9

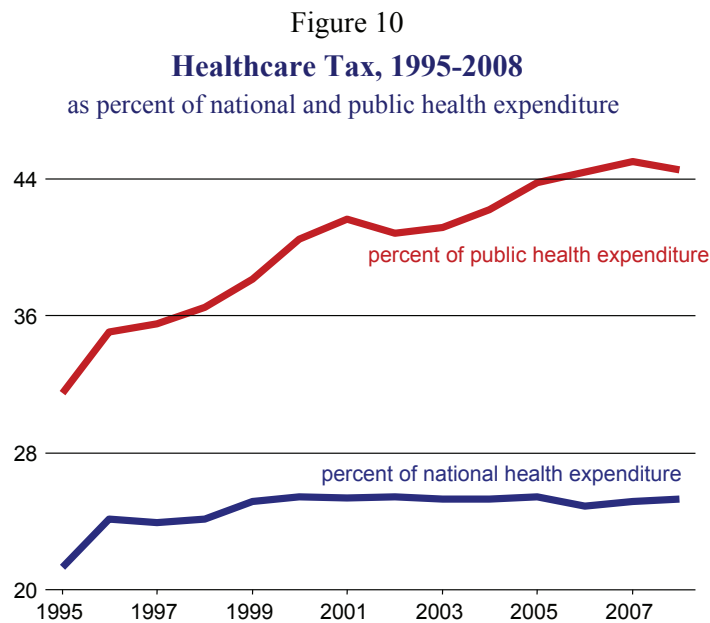
Health Expenditure Per Standard Person
constant prices, base year 1995=100



Source for Figures 8 and 9: Taub Center for Social Policy Studies in Israel.
Data: CBS, OECD.

Composition of the Public Funding

The public funding of healthcare is composed of an appropriation from the State budget and proceeds of the “healthcare tax” collected by the National Insurance Institute. Over the years the share of the “healthcare tax” in the overall public healthcare expenditure increased (Figure 10) from 31.5 percent of the overall public expenditure in 1995 (when the national healthcare insurance was introduced) to 44.6 percent in 2008.



Source: Taub Center for Social Policy Studies in Israel.

Data: CBS.

Composition of the private funding

Between 1997 and 2007, households' private funding of healthcare services increased by 103 percent nominally (7.6 percent on average annually), while their expenditure for consumption rose, for the same period, by 43 percent (3.6 percent on average annually) (CBS, Survey of

Household Expenditures, for 1997-2007). The relative increase in healthcare expenditure increased the share of private expenditure on healthcare as a percentage of the overall expenditure on consumption – from 3.8 percent in 1997 to 5.3 percent in 2007.

The increase in the nominal private expenditure on healthcare services was not uniform over the period. Table 1 shows the change in private expenditure for healthcare services and the components of this expenditure in 2007 compared to 1997. During that period the spending on healthcare insurance rose substantially and the number of people insured increased. This has been reflected in an average annual increase of 16.4 percent of the healthcare coverage and in 2007, private funding reached 26 percent of the overall households' private expenditure for healthcare services. A more moderate increase occurred in spending for other private healthcare services, primarily medications.

The increase in private expenditure for healthcare services for the decade 1997-2007 stems primarily from the price increases in the healthcare system. Over that period there was an average annual quantitative increase of 3.2 percent⁹ and a 4 percent price increase (in terms of the CBS Healthcare Price Index, which pertains to private expenditure). The increase in healthcare prices over that period was higher than that of the Consumer Price Index, which rose by an annual average of 2.3 percent. The sharp increase in spending on healthcare insurance, for instance, primarily reflects a rise of 11.2 percent in the amount along with a 4.7 percent in price increases. This is only slightly higher than the overall healthcare price increase (four percent on average).

⁹ The difference in amount, in price and in total expenditure is calculated on the basis of the geometric multi-year average for 1997-2007.

Table 1. **Change in Private Expenditure for Healthcare and Its Components Per Standard Person**
by the Capitation Formula, 2007 versus 1997 –
annual geometric average (percent)

	Total health services	Health insurance	Dental health	Medical services*	Other health expenditures**
Weight in 2007	100.0	26.0	28.0	13.0	33.0
Weight in 1977	100.0	11.0	38.0	17.0	34.0
Overall change (amount times price) ***	7.1	16.4	4.1	4.6	6.8
Increase in amount	3.0	11.2	0.4	0.6	3.3
Increase in prices	4.0	4.7	3.7	4.0	3.4
Relative increase in prices	1.8	2.4	1.4	1.7	1.1

* Primarily expenditures on surgery, psychological and psychiatric treatment as well as child development care.

** Primarily expenditures on medicines (the terminology is that of the CBS).

*** Overall change is the result of the change in prices multiplied by the change in the amount.

Source: CBS, *Household Expenditure Survey*, various years. (The change in prices was calculated on the basis of the Health Price Index and price indices for expenditures in the survey.)

Undoubtedly, a price increase also represents technological change or improvements in treatment quality. In this context it should be emphasized that price changes are relative to the consumer price index. That is, assuming that technological and qualitative improvements are the same across all sectors, products and services, it can be assumed that relative price changes in the private healthcare expenditure reflects a loss of efficiency in healthcare services.

Overall Changes in Funding Composition

The overall changes in the composition of funding for the healthcare system in Israel from 1997 to 2007 are shown in Table 2. Considering the relative decline of public funding sources for healthcare services, especially their share of the overall budget, there is an increase in private funding of healthcare services by households, primarily through complementary insurance or semi-public funding.

Table 2. **Changes in the Composition of the Healthcare System in Israel, 1997 and 2007 (percent)**

	1997	2008
Total	100.0	100.0
State budget	38.1	29.6
Health tax	26.2	25.9
Household expenditures	33.1	42.2
Donations	2.6	2.3

Source: CBS, 2009. *Statistical Abstract of Israel*, Number 60, Table 6.3.

2.D. Impact of Changes in Funding Composition on Medical Fields

Given the healthcare system's political economy – the link between sources and types of funding and the system's organizational structure – changes in funding sources affect spending on specific healthcare items.

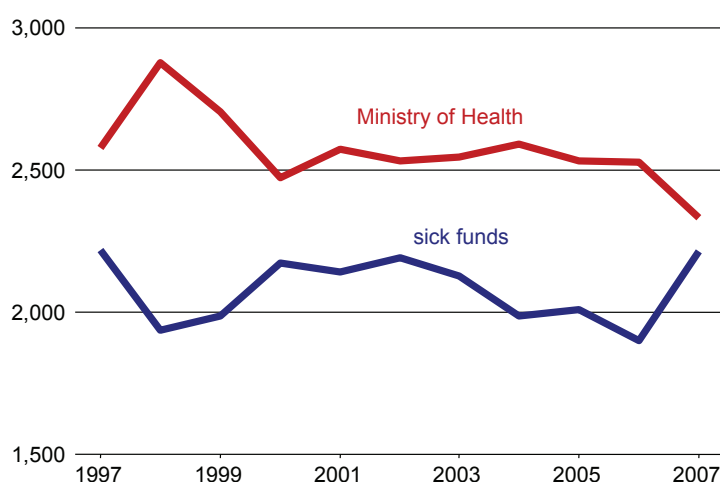
The “Ministry of Health Basket” versus the “Sick Fund Basket”

The growth of healthcare expenditure was the result of voluntary supplemental insurance replacing public funding. The latter does show a relative increase of funding from the healthcare tax earmarked for the basic basket. The complementary healthcare insurance, like the healthcare tax, pertains primarily to the basic basket of services provided by the sick funds. Conversely, the “Ministry of Health's basket” (for preventive medicine, behavioral medicine, and chronic diseases) comes

exclusively from the general budget. Consequently, it is important to analyze the hypothesis that the share of the Ministry of Health's basket in the general budget is more exposed to decline in the funding of the system, at least in relative terms.

Beginning in 1998, after the introduction of the first Economic Arrangements Law, which accelerated the growth in complementary insurance, expenditure for the "sick funds basket" rose until 2000-2002 while expenditure for the Ministry of Health basket declined (Figure 11).¹⁰

Figure 11
Public Health Expenditure Per Standard Person*
1995-2007



* Adjusted for 2007 health inputs prices.

Source: Taub Center for Social Policy Studies in Israel.
Data: CBS, Ministry of Health.

¹⁰ The decline in the State funding per standard person in the basic sick fund basket against the stability in funding per standard person that the Ministry of Health allows, most certainly, came through cutbacks or State subsidies in general hospitalization, including a reduction in investment in infrastructure.

Later on expenditure for the Ministry of Health basket stabilized while expenditure for the sick funds basket showed a downward trend until 2006. As of 2006, the downward trend of the Ministry of Health basket accelerated, while the trend of the sick funds basket improved. Since this expenditure is made in labor intensive areas, relative decline in Ministry of Health per capita expenditure implies the lack of growth in investments in preventive and mental health care with ensuing damage to the healthcare infrastructure as a whole.

Dental Care and Other Private Medicine

Despite the sharp increase in 1997-2007 in the share of complementary healthcare insurance in households' expenditure, expenditure on dental care is still the main item in this expenditure (Table 3). Dental care, which is almost entirely funded by private expenditure, is the most vulnerable to changes in the private expenditure in favor of other expenditure items.

Table 3. **Per Capita Expenditure, Capitation Standardized, by Components**, as percentage of the expenditure for healthcare services, 1997 and 2007 (percent)

	Health insurance	Dental health services	Private health services	Other services	Thereof: medicines
1997	10	35	15	31	16
2007	26	28	13	33	20

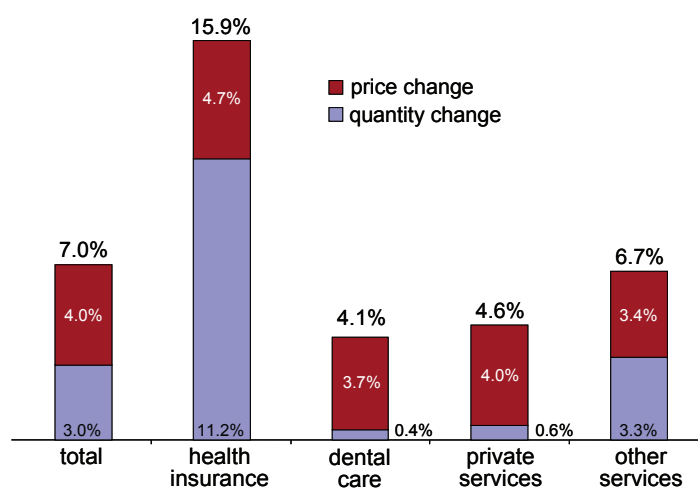
Source: Data analysis of CBS, *Family Expenditure Survey*, 1997-2007, p. 19.

According to the data, part of the growth in complementary insurance may have come at the expense of dental care, the share of which in the overall spending declined from 35 percent to 28 percent. This leads to the question whether the changes in funding composition is further damaging for healthcare components (like dental health care) which are already weak (Horev and Mann, 2007). The data supporting the hypothesis that the relative increase in voluntary insurance might be damaging the

relative increase in dental care is further corroborated by the inflation data in dental care (Table 1 and Figure 12).

There are two more important points in this context: One is that only 6.9 percent of households report that they have dental care insurance (according to family expenditure surveys). The other is that most of the expenditure on complementary insurance goes to the items “choice of physician” and “medicines” (Ministry of Health, 2007).

Figure 12
Changes in Private Expenditure on Health*
 by components, 2007 compared to 1997



* Per standard person.

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

2.E. Conclusion – Efficiency and Equality Erosion and Possible Damage to Public Health

While expenditure for healthcare services per standard resident in Israel grew over the past decade, the resident does not necessarily receive more services, other than those incorporated in technological advances. Clearly, there is a loss of efficiency and welfare in higher expenditure that does not reflect a real increase (and possibly even a decrease) in the level of service. In addition, as in any inflation, other efficiency components are also damaged, such as equality and economic growth.

Equity: From the perspective of the funding, or the vertical equity, inflation is a regressive tax, since it applies to all social strata without distinction. This has a negative impact, which is further compounded by the more regressive funding of the system implicit in the growing private funding component in the overall funding of the healthcare system. These regressive impacts are somewhat mitigated by the rise in the share of complementary insurance which has the semi-public feature. Such substitution for public funding is not sufficient to counteract significantly the increasingly regressive funding of the system. The funding of the healthcare system in Israel over the past decade exacerbates the distribution of income and consumption in the economy, without providing much (or any) additional per capita services. Furthermore, private expenditure for healthcare services, including voluntary insurance, increases the proliferation of households joining the poverty circle (Chernichovsky, 2008).

As for access to services or horizontal equity, the relative inflation in the prices of healthcare services, especially private services, is causing a decrease in access to services, which is already damaged by the decrease in public funding.

Efficiency: As stated, the inflation in healthcare services implies first and foremost a loss of efficiency in the production of medical services. The changes in funding bring additional potential negative impact on efficiency in the production of health. Increased expenditure for

healthcare services causes households, especially those of the elderly and families with limited resources, to avoid consumption even of health promoting items such as food.

The rise in the share of private funding and the less progressive public funding are coupled, therefore, with a decrease in the system's potential for equity, and with possible damage to the health of the population. Furthermore, given the institutional structure of funding healthcare services, changing the composition of funding sources might have a potential negative impact on the system's infrastructure, preventive medicine, as well as mental health and dental care.

3. Investment in the "Social Periphery" for Closing Gaps in the Area of Healthcare¹¹

"Social periphery" is a multi-dimensional term representing a number of population features: limited access to services (including healthcare services); remoteness from centers of economic activity; remoteness from sources of political power and influence; high burden of morbidity and unique morbidity patterns; low socioeconomic status compared to the general population or the region; and a low level of social-communal cohesion, which is reflected in the scarcity of communal support networks and lack of communal leadership. There may be some overlap in the features of geographic and social peripheries.

The large sick funds (HMOs) continually monitor the features of their member populations, and findings on those indicators were used to design and implement their strategies for reducing healthcare disparities.

Clalit Health Services initiated a gap-closing program which began by identifying intervention centers within the fund's population, continued by defining the targets for gap closing, and was completed with the

¹¹ This section is based on a paper prepared by the two largest sick funds, "*Clalit Health Services*" and "*Maccabi Health Services*" – see what follows. For the term "social periphery," the paper by *Maccabi Health Services* was used.

design of a strategy on the various levels of management during 2007. Strategy design was based on the existing infrastructure of the sick fund's database, health promotion teams in primary clinics in the community, as well as a widespread system of quality measurements. The program presented in Section 3.A. was launched in 2009.

Maccabi Healthcare Services initiated in 2008 a process of measurement and analysis in a number of areas of the connection between characteristics of the insured and clinical service received. The analysis was first presented as a report on equity in healthcare (June 2008), on the basis of which the fund designed a healthcare gap-closing strategy among members (see Section 3.B.)

3.A. *Clalit Health Services**

Clalit is the largest healthcare provider and insurer in Israel, covering 53% of the Israeli population. In 2007 *Clalit* Health Services put into practice a multi-year strategic plan for closing gaps in health and healthcare provision. The plan was designed to continue responding to unique needs of different population groups, and provide a comprehensive and universal response to the issue of healthcare disparities. The plan relies on the benefits of the existing infrastructure, which include an exclusive electronic data-warehouse, health promotion teams active in primary community clinics, and a wide range of quality benchmarks, based on a unified management computerized systems with

* This section was prepared by Dr. Ran Belicer, Director of Planning and Health Policy, and Dr. Orit Jacobson, Deputy Director-General and Director of Community Health Division in the *Clalit* Health Services. The authors are grateful to Dr. Efrat Shadmi for her help in preparing the conclusion, to the staff of the planning department and the medical and long term care departments in the community health division for their help in planning and implementation of the program, and to the teams for their untiring work in narrowing health gaps in the framework of this program.

full coverage of a single type of electronic medical record in the community.

The strategy has a number of stages: identifying and quantifying the gaps, conducted during 2007; setting up an organizational steering committee; identifying key areas of disparity and creating awareness of them on all levels of the organization; quantifying the gaps and setting clear targets for closing them; collaboration between headquarters and community teams for creating incentives. All of this was done while ensuring the management's involvement, including a continuous involvement of the CEO.

Socioeconomic Portrayal of Clalit Health Services Members

Among those insured by *Clalit* Health Services, there is a particularly high representation of socioeconomically deprived population groups, including Israeli Arabs, Bedouins, periphery residents, elderly and disabled persons (Horev and Kop, 2008). The social and economic situations of these deprived groups comprise the major determinants of their health status and extend beyond the scope of the health care realm. Nonetheless, *Clalit* has undertaken many focused efforts to improve the health situation in underprivileged populations, including better access to services, health education, health promotion, and focused initiatives among special populations (Maislos, Weisman, & Scharf, 2002). In this phase of the strategic process, a detailed report on various aspects of disparities in health and healthcare services was generated and brought to the attention of the organizations top management.

Disparity Reduction Efforts – Planning and Implementation Processes

- ***Background – Identification of Gaps in Quality Indicators:*** The indicators used in this initiative were chosen from about 70 qualitative markers frequently used by the sick funds. The chosen indicators had to reflect differences between clinics serving low and high socioeconomic populations.

- ***The Chosen Indicators:*** Seven indicators were selected, including outcomes of disease control – diabetes, hypertension, hyperlipidemia, and infant anemia prevention; and performance measures – flu vaccines, mammography, and occult fecal blood tests. A summary index was constructed representing a weighted score of attainment on the selected indicators. Targets were set for closing disparities between selected clinics which were rated low on the 7-indicator summary score and all other clinics in each district.
- The goal was defined as achieving full (100%) elimination of the gap in the index score between the targeted clinics (55 clinics serving about 10% of *Clalit's* population) and all other clinics within three years.
- ***Implementation of Intervention in the Field:*** Several types of interventions were implemented by the clinics involving the following aspects: (1) Improvement of management and leadership skills; (2) Improvement of access to services, including preventive medicine; (3) Proactive initiatives for identifying and summoning patients in need of preventive treatments and follow-up; (4) Training aimed at improving cultural competence and community involvement, including the use of interpreters and bridge-builders, and involving religious and community leaders to adjust and market health promotion programs to specific populations.
- ***Outcome and Conclusion:*** A clear trend towards narrowing the gaps between target clinics and all other clinics was detected, as well as general improvement in quality indicators since the project was launched in 2009. In the second and third quarters of 2009, the targeted low-performing clinics improved at a pace nearly double that of the same period a year earlier, at the same time that non-targeted clinics improved at a constant pace. While the original goal was to close 25 percent of the gap within six months (so as to close it completely within 24 months), over the first six months of the project the gap between the 55 targeted clinics and the rest of the medium-to-large sick funds clinics dropped further. This change, above and

beyond the original goal, was achieved without affecting the non-targeted clinics' regular and ongoing improvement of the quality score.

It is important to point out that quality indicators that were not included in this project's combined index were not marginalized. Overall quality assessment of change in total quality (i.e., examination of the 70 quality indicators and not merely the 7 under focus) showed that multi-dimensional quality improvement occurred in the 55 target clinics at a twice as high rate on average, compared to all other clinics in each district. This quality gap minimization trend was observed together with an overall trend of improvement in quality in all clinics, indicating that minimizing the gap occurred at no expense to the continuous overall improvement in performance of the more than 500 *Clalit* medium and large clinics. As rapid quality improvement in clinical aspects of care was taking place in the 55 clinics serving underprivileged populations, and *Clalit's* enrollees were noticing and appreciating these intense improvement efforts – patient satisfaction surveys showed that in districts serving the periphery, in which the greatest gap-closing took place, satisfaction levels among the intervention clinics improved significantly.

A detailed summary of this strategy, its implementation and detailed assessment of its outcomes in various aspects of health and healthcare measures are currently in the publication process, and thus were not further detailed here.

3.B. *Maccabi Healthcare Services**

In 2008, *Maccabi* management decided to design a comprehensive, multi-year organizational plan to promote equality in the healthcare services it provides for its members, as well as the health outcomes they obtain. In the first stage, associations between *Maccabi* members' socio-demographic characteristics and their healthcare outcomes were studied. The purpose was to identify disparities, characterize the populations at risk for inequality and recommend an action plan.

The basis for mapping the disparities consisted of *Maccabi* Health Services' information system data, updated for year-end 2008, which includes all of *Maccabi* Health Services' adult members. The member population was classified and ranked socioeconomically, based on the 1995 census, by statistical geographic region on a scale of 1 to 20. The health indicators used reflect chronic morbidity and quality of care.

Socioeconomic Portrayal of Maccabi Health Services Members

Among *Maccabi*'s five Districts, the Northern and Southern Districts – Israel's peripheral regions – stand out with a relatively high percentage of members belonging to the lower socioeconomic clusters and a greater share of new immigrants from the former Soviet Union (who arrived from 1989 onward). The Northern District, as in Israel's demographic distribution, is characterized by a high percentage of Israeli Arab population, whereas the Southern District is characterized by a high percentage of people living in poverty: one-quarter of Southern District members belong to the lowest socioeconomic cluster, and only seven

* This section was prepared by Dr. Rachel Wilf-Miron, Orna Shem-Tov and Dr. Einat Yaari, of the Quality Management Department; Prof. Avi Porath, CMO; and, Prof. Ehud Kokia, CEO of the *Maccabi* Health Services. It is based on the *Maccabi* Report (2009): *Toward Equity in Healthcare, Report No. 1 – Gaps in Health – A Picture of the Situation and Directions for Action*, that was prepared by Wilf-Miron, Shem-Tov and Yaari with the contribution of Irena Levinhoff, Anna Viner and Malka Avitzur.

percent of members in the Southern District belong to the highest socioeconomic cluster.

Overall, 13 percent of *Maccabi* members do not purchase complementary health insurance; 15 percent are new immigrants; nine percent belong to the lowest socioeconomic cluster (levels 1–5), and 26 percent belong to the highest cluster (levels 16–20). Most *Maccabi* members are concentrated in the two middle levels of the cluster ranking. The Israeli Arab member population included in the *Maccabi* Equity Report (2009) is about 40,000-strong and is relatively young. Most of this population (95 percent) is in the lowest 10 socioeconomic levels, and a high percentage has no complementary insurance.

Disparities in Health Indicators among Maccabi Members

The following population characteristics partially correlated to some or most of the health outcomes.

Socioeconomic Ranking: Sick fund members in the lower socioeconomic cluster (levels 1-5) showed greater prevalence of chronic diseases (diabetes and cardiovascular disease) as well as higher frequency of poor diabetes control and low rates of early testing for detection of colon cancer than members in the higher cluster (levels 16-20). Similar gaps – albeit less pronounced – were seen in adequate diabetes control and early detection of breast cancer. Thus, for example, the prevalence of diabetics in the lower ranks is 1.4 times greater among men and 2.1 times greater among women than in the higher ranks; the prevalence of heart diseases in the lower ranks is 1.2 times greater among men and 1.6 times greater among women. Poor diabetes control is twice as prevalent among lower cluster women compared to women in the higher clusters. The percentage of men in the low clusters undergoing colorectal cancer screening is nearly half (57 percent) that of men in the higher clusters. For women the gap in colorectal screening is narrower. The percentage of women undergoing mammography for early detection of breast cancer in the lower ranks is 88 percent that of women in the higher ranks.

In about half of the health indicators examined (such as follow-up examinations or control of cholesterol levels) no gaps were found to the detriment of low-ranking members. In three process indicators (performing tests) members of the lowest ranks performed higher than members from the highest ranks (see Table 4).

Table 4. **Rate Ratios of Low to High Socioeconomically Ranked Groups** – clinical performance measures, by gender and socioeconomic ranking, adjusted for age

Domain	Men	Women
Diabetes prevalence	1.40	2.10
Diabetes follow-up *	1.03	1.15
Adequate diabetes control – glycosylated hemoglobin < 7	0.90	0.90
Poor diabetes control – glycosylated hemoglobin > 9	1.70	2.00
LDL < 100 for diabetics	0.97	1.02
Cardiovascular disease (CVD) prevalence	1.20	1.60
Follow-up for CVD**	1.15	1.20
LDL < 100 for CVD patients	1.11	0.89
Pneumovax vaccination	0.95	0.93
Colorectal cancer screening	0.57	0.69
Mammography screening		0.88

* Diabetics who within the last year checked glycosylated hemoglobin, cholesterol, blood pressure, height, weight, protein/creatinine ratio, eyes, and feet.

** Patients with CVD who within the last year checked blood pressure, height, weight, and cholesterol.

Ethnicity: Considerable gaps to the detriment of the Israeli Arab population were observed in the prevalence of diabetes and heart diseases and in health outcomes, especially those pertaining to adequate and poor diabetes control. Thus, for example, the prevalence of diabetes among Israeli Arab men is 1.5 times greater than among Israeli Jewish men; the percentage of Israeli Arab women with poor diabetes control is 2.2 times

greater than that of Israeli Jewish women. The percentage of overweight or obesity among Israeli Arab women is 1.5 times greater than that of Israeli Jewish women. Those gaps have shrunk but remained significant even after controlling for socioeconomic ranking. Thus, for example, the percentage of Israeli Arab women in the low ranked groups with poor diabetes control was 1.5 greater than that of Israeli Jewish women of the same ranked groups. These findings are in line with reports from Israel and abroad according to which gaps to the detriment of ethnic or racial minorities remain even after controlling for socioeconomic attributes. In some process indicators, such as testing for glycosylated hemoglobin or blood lipids, no gaps were found between the Israeli Arab and Jewish populations (see Table 5). The gaps to the detriment of the Israeli Arab population in *Maccabi*, especially those that are unexplained by the socioeconomic situation, deserve a more thorough investigation.

Length of Residency: In the majority of health measures, no gaps were found to the detriment of new immigrants from the former Soviet Union when the immigration factor was controlled by socioeconomic and geographic factors. It should be noted that immigrants from Ethiopia or other countries were not included in this analysis.

Complementary Health Insurance (CHI): The percentage of members without CHI is more than five times greater in the low socioeconomically ranked group than in the higher ranked ones, significantly greater in the Israeli Arab population compared to the Israeli Jewish population, and higher in the Northern and Southern Districts than the overall *Maccabi* membership. Lack of CHI was correlated to disparities in most health indicators. It can be presumed that purchasing CHI is a **marker** for a variety of population features correlated with achieving better health outcomes, but this was not examined in the present report. Thus, for example, undergoing a mammography is 2.2 times more prevalent among women with complementary insurance than without, even though this is a relatively simple test for the patient, which should be done every two years, and is offered free to all women in the target population.

Table 5. Rate Ratios for Arab Versus Jewish Populations*
Clinical performance measures, by gender and socioeconomic ranking, adjusted for age

	Total Population		SES 1-8	
	Men	Women	Men	Women
Diabetes prevalence	1.52	1.79	1.20	1.27
CVD prevalence	1.16	1.37	1.47	1.11
<i>Diabetes</i>				
Follow-up examinations	0.90	0.93	0.80	0.83
Good diabetes control – glycosylated hemoglobin < 7	0.74	0.75	0.81	0.78
Poor diabetes control – glycosylated hemoglobin >9	1.79	2.22	1.37	1.49
LDL < 100	0.85	1.02	0.87	0.73
<i>Prevention and early detection</i>				
LDL examination in healthy members	0.94	0.98	0.98	1.00
BMI recording	1.01	1.06	0.99	0.99
BMI > 25	1.14	1.54	1.08	1.19
Colorectal cancer screening	0.64	0.78	0.83	0.94
Mammography screening		0.88		0.93

* Since over 90% of Arab *Maccabi* members belong to the lowest socioeconomic cluster, health indicators for this population are presented in comparison to the overall population of Arabs and non-Arabs as well as compared to both populations in the lowest socioeconomic clusters 1-8 (91.8% of the Arab population and 19.1% of the Jewish population are in these clusters).

Organizational Decision for Fostering Equality

Ongoing Action for Assessing Equality: *Maccabi* has decided to embed in the organizational workflow an ongoing assessment of the equality dimension from a few perspectives: 1) Continued investment in developing a concept and methodology for assessing equality in healthcare services, with attention to the following dimensions: inputs, needs, service utilization and health outcomes, and correlation analysis of

these dimensions; 2) Expansion of the investigation of populations detected in the first report as being susceptible to inequality and investigation of other populations known in the literature as subject to healthcare inequality, such as women, children, or people with disabilities; 3) Evaluating the economic implications of the decision to engage in promoting equality in health, given that this decision has not yet been backed by government resource allocations; 4) Improving the data infrastructure for detecting populations vulnerable to inequalities that would allow for more accurately identifying vulnerable populations on the individual level, using data on education, length of residency, or religious practice. It would be advantageous to promote a national action that would permit transferring data about ethnicity to the sick funds.

Cultural Competency in Intervention Centers: A central component of promoting equality is the cultural competency of healthcare services. *Maccabi* has resolved to provide healthcare services that are adapted to the different social, ethnic, and cultural characteristics of its members. This decision was based, among others, on local success stories that enhanced the understanding that people in the field could considerably help narrow gaps thanks to their familiarity with local obstacles and ways to overcome them. Learning from the field was very helpful in designing the strategy. For example, much was learned from a local success story in 2004-2005, when the rates of mammography testing for early detection of breast cancer were raised among Israeli Arab women members of the sick fund branches of the Arab Triangle (Tira, Taybeh, and Kalansawah) (see the following “*Spotlight*”).

In line with the resolution to strengthen cultural competency, the following steps were decided upon:

- Adequate representation in healthcare personnel and administrators will be sought from within ethnic-cultural populations, such as the Israeli Arab population or immigrants from Ethiopia, in order to increase the organizational awareness of the unique needs and features of these groups and thus refine the design of services for them.

Locating and recruiting healthcare personnel from these populations are already taking place;

- Healthcare professionals, administrators, and employees will receive cultural competency training. *Maccabi* has already undergone a successful process in collaboration with Ben-Gurion University, during 2008, of training caregivers and employees to provide services with cultural competency for the Bedouin population in the Negev. A decision was made that by the end of 2012, **all** of *Maccabi*'s employees will have been trained for cultural competency;
- Existing activities of improving the linguistic and cultural accessibility of *Maccabi*'s educational materials and informational messages to its members will be expanded. (A telephone medical interpreting center has been in place since November 2009 as a pilot program including several Northern District branches. This center was designed to improve communications between patients and caregivers who speak different languages.) Cultural intermediaries are already being used in various areas to produce a supportive infrastructure for caregivers, patients, and employees, and the intention is to expand this activity. Also, resources will be invested in developing care-giving and administrative leadership, representing the populations at risk for inequality. The idea is to promote the representation of the population's needs and the impact of its representatives on the organizational discourse. More operations will be initiated for encouraging health-promoting behaviors within populations vulnerable to inequality.

Spotlight: Increasing the Rate of Mammography for Early Detection of Breast Cancer among Israeli Arab Women in Maccabi Health Services

Increasing the rate of mammography for early detection of breast cancer among Israeli Arab women is an example of a *Maccabi* success story. Mammography rates among Israeli Arab women in *Maccabi* (2004) were very low compared to those of Jewish women. A local team in the Arab Triangle branches (*Tira*, *Taybeh* and *Kalansawah*) studied the phenomenon of low demand for the test, which is provided at no charge. Among the reasons found were lack of mastery of Hebrew, the language of the order to perform the test; difficulty mailing the notice because women in the same locality often bear the same names; physical distance (the mammography system is located about 30 km from the Triangle, with no convenient transportation lines); difficulty leaving the locality with an accompanying family member when men are at work; lack of self-care tradition in this age group; prejudice and religious/social stigma related to testing; and, women's reluctance to be examined by a male physician.

The people in the field formed a "solution package" adapted to the detected barriers. Among others, a local nurse approached the local religious leaders and enlisted their support for the test so as to reduce labeling and prejudice; the women were recruited by a nurse who went door-to-door inviting them to a meeting at which she explained the importance of the test; the women were tested by a physician in the presence of the nurse, and if the woman still objected the team skipped the physician examination; the branch staff set the time at the mammography system for a few women at a time, so that one chaperon could accompany a number of women, thus reducing the loss of work days among the men. Within 15 months, the rate of testing in all three branches rose significantly. Thus, for example, in the *Kalansawa* branch, the rate rose from 35 to 60 percent. The lessons were applied to all other branches serving the Israeli Arab population, and helped to increase significantly the rate of testing in those branches between 2004 and 2005 – a relative improvement of 73 percent (from 27 to 46 percent testing), compared with a 29 percent improvement among all female *Maccabi* members for the same period.

Preferential Allocation of Resources to the Social Periphery: *Maccabi* has adopted a policy of preference for the populations that were found to belong to the social periphery and vulnerable to inequality, especially Israeli Arabs, new immigrants, and populations in poverty. Preference for them is reflected in resources and organizational attention. All *Maccabi*'s organizational units were instructed to include in their annual work plans equality-enhancing programs. For 2010, NIS 10 million were allocated as a dedicated amount for initiating new and comprehensive initiatives and programs to promote social equality in the social periphery of each of the districts.

Improving Accessibility to Quality Services for the Geographic Periphery: As of 2009, tele-health is expanding into new areas, such as connecting remote clinics by real-time video communication centers of expertise, to enable consultation by the primary care physician and the patient – located in a remote locality – with a specialist in another community. Likewise, advanced equipment is being made portable to shorten the distances between the center of the country and the periphery. In addition, an incentive is being offered to senior physicians to open expert clinics in remote places to improve the quality of care in the periphery.

Reducing Economic Barriers to Achieving Optimal Health Outcomes: *Maccabi* is in the process of studying, in collaboration with the Ministry of Health, ways to reduce co-payment for medications for chronically ill patients receiving income support and for populations with special needs, such as persons with disabilities. *Maccabi* is making efforts to encourage eligible populations to make full utilization of their rights through: dissemination of information about member rights in different languages and media; invitations to patients to see social workers who can help them use their benefits; introduction of an automatic treatment approval process of approving and tagging chronic disease to provide rights and eligibilities to chronically ill patients.

***Spotlight: Intervention Program for Child Immunization
Among the Negev Bedouins***^{*}

The Negev Bedouins have the lowest socioeconomic ranking in Israel, similar to that of Third World populations. About half of them reside outside of permanent settlements in unrecognized villages. Procreation is important in their culture and their fertility rate is exceptionally high. In addition, marriages between first-degree relatives are frequent (40 percent) and polygamy is common. These characteristics have great influence on the health of the population.

In the winter of 1990-91 a measles epidemic erupted in Israel, with a morbidity rate of 415.6 per 100,000 and a hospitalization rate of 50.9 percent among the Bedouin. The same year seven Bedouin children died as a direct result of complications of the disease. At that time about 40 percent of the Bedouins had no medical insurance and they received medical treatment on the basis of payment for services in local clinics, from private physicians and in a university medical center serving the region. Only 76 percent of Bedouin children were seen at Mother and Child Health (MCH) Clinics (a.k.a. *Tipat Halav* or "drop of milk") at least once, and only 53 percent of children born in 1988, who were two years old in 1990 when the epidemic erupted, were immunized against measles (Ministry of Health figures).

Consequently a national committee was set up which recommended an intervention plan. Most of the committee's recommendations were included in the implementation of the plan. An Israeli Arab interviewer personally discussed with each Bedouin mother, while she was hospitalized after the birth of her infant, the importance of early registration of the newborn at a MCH clinic. Two mobile vaccination teams were established as well as a computerized database to track children's immunization. This system facilitated home visits by the mobile units to immunize Bedouin children who had not been immunized on time. At the same time, a community education program was introduced to raise the awareness of the Bedouin population of the importance of receiving immunizations on time. In addition, seven MCH clinics were established since 1997 in unrecognized villages as well as one

^{*} This *Spotlight* is based on an extensive article by Belmaker et al., in *The Lancet*.

mobile clinic. The Ministry of Health's Department of Nursing has developed a special program to train Bedouin women as registered nurses, in collaboration with Schools of Nursing in the region (Barzilai Medical Center and subsequently with the Recanati School of Nursing of Ben-Gurion University).

Two recommendations of the committee were not implemented: no funding was provided for hiring additional doctors and nurses to provide the preventive services at the MCH clinics, and incentives were not approved to encourage public health nurses to work with the Bedouin population. (Incentive pay for nurses was approved and funded only in 2010.)

Implementation of the intervention plan led to an increase in immunization coverage against measles from 53 percent among two-year-olds born in 1988 to 90 percent among two-year-olds born in 2001. At the same time, an impressive drop was registered in infectious diseases that are preventable through immunization, except for whooping cough (pertussis). Between 1990 and 2003 there were no reports of morbidity from diphtheria, tetanus, congenital rubella and polio among Bedouin children under five. Since the 1990-1991 measles epidemic only 13 cases of measles among Negev Bedouin children have been reported. After the introduction of immunizations against *Haemophilus influenzae* b in 1994, and against viral hepatitis A in 1999, only isolated cases of these diseases have been diagnosed among Negev Bedouin children under five years of age.

Appendix: Price Indices

The system uses three price indices as follows:

Health Services Price Index of the Central Bureau of Statistics (CBS) refers to private spending and consists mainly of the prices of medical services, dentistry and the prices of medications (see the chapter “Israel’s Education System: A Domestic Perspective”, in this report). The index is published in the chapter “Prices” of the CBS statistical annuals for the years 1995-2007 (CBS, Israel Statistic Annual various years).

The **Health Cost Index** is used to update the basket; its composition is as follows:

Component	Until 2004	from Jan. 2005
	Weight (percent)	
Consumer price index	23.00	40.00
Wholesale price index for medicines	17.00	-
Building input index	2.00	2.00
Wage index for the public sector	22.04	22.04
Wage index for the health sector	35.96	35.69
Total	100.00	100.00

Source: Bin Nun and Kaidar (2007).

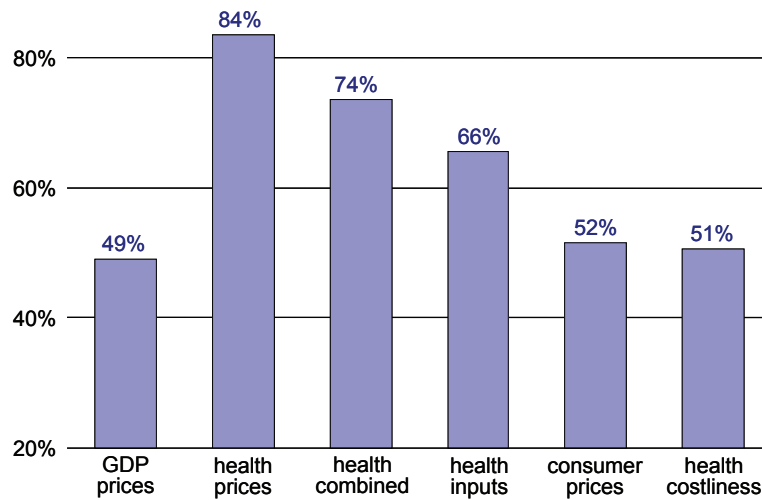
The **Health Input Index** consists of the price of one hospitalization day (50 percent), the healthcare sector wage index (30 percent) and the consumer price index (20 percent). This index refers primarily to the sick funds’ basket of services. In fact, the indices are very close, and the second is included in the third with the hospitalization component in the latter. Hence, the two indices are also linked in their development over time.

In this paper the CBS index is used to adjust private expenditures, whereas the inputs index is used to adjust public expenditure. Accordingly, the **combined index** is used to adjust the national expenditure and it does so using both indices, according to their relative share of the expenditure. The three indices, in addition to the combined index, are shown in Appendix Figure 1. Appendix Figure 2, shows the

harsher damage caused by inflation to privately funded healthcare compared to publicly funded healthcare.

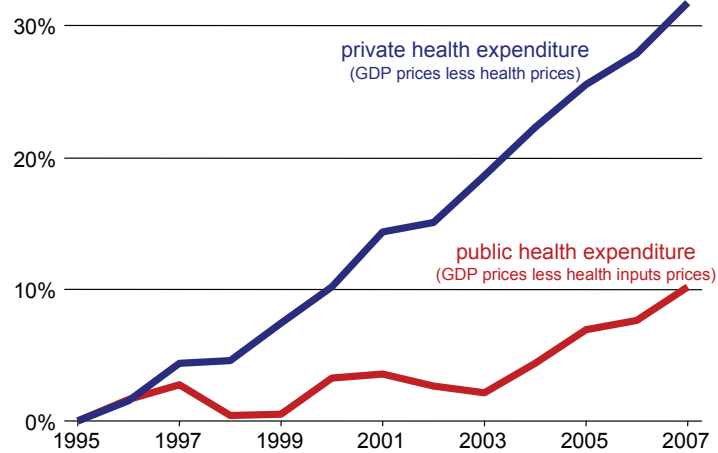
This reality underscores one of the fundamental reasons for the State's involvement in funding the healthcare system and in the satisfaction of most of the demand within it. The State offsets the monoposonistic power of service providers to dictate prices. Therefore, over time, one dollar buys more through public spending than through private spending.

Appendix Figure 1
Change in Various Price Indices
1995 compared to 2007



Source: Taub Center for Social Policy Studies in Israel.
Data: CBS, Ministry of Health.

Appendix Figure 2
Impact of Different Price Indices
in calculating health expenditures*, 1995-2007 (percent)



* Per standard person.

Source: Taub Center for Social Policy Studies in Israel.
Data: CBS, Ministry of Health.

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The 2009 Social Survey

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Abstract

The Taub Center Social Survey and the Taub Index of Social Confidence provide a complementary dimension for the picture of the social situation presented in the Taub Center report. The survey's outcomes reveal a society in which the level of satisfaction from developments in the social areas over the past year is lower than during the previous year. The public is aware of the widening socioeconomic gaps and believes that the government, despite the public's expectations, is not helping to close the gaps but rather is widening them further. The public believes that the economic prosperity benefited primarily the established population and less the weak population. In recent years the public's social confidence declined also due to the rise in the sense of vulnerability to violence.

The Taub Center's annual *Social Survey* gauges the Israeli public's sense of well-being and social confidence, as well as its attitudes toward a variety of social issues. In the early years of the survey, the expectation was that it would provide another dimension to the different aspects of the social perspective presented in the Center's annual report. Over time, it emerged that the survey has a unique contribution for the

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“reading” of changes taking place in the way society feels and reacts to economic and social developments.¹

This year the main survey was conducted in September and was preceded in March by an abridged survey.² As in previous years, special effort was made to include in the survey several questions identically phrased to those of previous years to allow an assessment of trends or changes. Six questions reflecting directly 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 responses to single questions.³ This year the survey included several new questions in areas that lie at the heart of recent Israeli public discourse with an emphasis on social gaps and solidarity, education, as well as the sense of escalating violence in society and ways to deal with it.

Overall, the survey portrays a society whose level of satisfaction with developments in social issues over the past year is lower than in previous years (56.6 points on the Taub Index in 2009, versus 58.2 in 2008, and 60.3 in 2007); a society convinced that the socioeconomic disparities are widening (71 percent), with a government, contrary to expectations, that is not effective in narrowing the disparities and is, in fact, contributing to their widening (55 percent). The public believes that economic prosperity has benefited the well-off segments of society more than the weaker ones – which may have not benefited from it at all (84 percent). Responses regarding the expected standard of living at old age are especially alarming, because more than 40 percent of respondents expressed the

¹ The Taub Center Social Survey has been conducted in a similar way for a decade. Data collection for processing the survey results was done by *Smith Consulting – Data for Decision Makers Ltd.*

² The full survey is conducted among 1,000 people, as a representative sample of the population, with sampling error of 3.1 percent. [The abridged survey (in March) includes only 500 people with a higher sampling error – 4.5 percent.]

³ 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 – op.cit. p. 11).

belief that they were “not really” or “absolutely not” guaranteed an adequate standard of living in their old age.

Public social confidence declined in recent years partly due to an increased sense of exposure to violence (only 29 percent responded this year that they had no exposure to violence, compared with 40 percent last year). The perception of violence as a central and disturbing problem was also reflected in responses to a question designed to identify the main problems of the education system: 41 percent of respondents identified violence as the central problem currently challenging the educational system. In this context, 36 percent of the public believe that education towards tolerance is the way to reduce violence, while a similar share believed imposing stricter penalties (37 percent) is necessary. A certain increase in public dissatisfaction with the education and health systems was detected, as well as criticism about the handling of major problems in each of them.

The survey shows that an individual's income level greatly affects the differences in social confidence – differences reflected in more and more areas of social life. The effect of income level is prominent in the Taub Index, which shows “parallel” trend lines at different income levels (the index is currently at 73 for the population group that defines itself as “far above average” in terms of income versus 48 for the “far below average” income group). The survey in general also indicates the effect of respondents' education level on responses, but the weight of education in most cases is much lower than that of income disparities in predicting social confidence. In this year's survey, as in other years, certain groups in Israeli society stand out in a consistent and systematic manner, in their responses to a significant number of questions, compared to the overall average response. This is particularly evident for the former Soviet Union (FSU) immigrants, Arab and ultra-Orthodox populations. A significant part of the survey report is devoted to the presentation of findings divided by distinct population groups.

The first section of the chapter presents the development of the Taub Index of Social Confidence for the Israeli society as a whole and for

specific population groups within it. The second section offers an assessment of the standard of living and changes in it. Some questions about the standard of living are included in the Taub Index calculation and weighting. The third section presents answers to a set of questions with an emphasis on socioeconomic disparities and inequalities. This section presents the feelings of respondents on a macro-social level in the same areas that were examined on a micro level. It is followed by a reference to the sense of exposure to violence, which constitutes a significant element in social confidence (section 4). The connection between the issue of exposure to violence and education, which is presented in the following section (section 5), was dictated by these very findings, since a majority of respondents indicated violence as the main problem facing the educational system. Consequently, the last two sections of the chapter are devoted to the two key areas of social services, education and health. A brief summary is provided at the end of the report, linking, *inter alia*, the findings of the Taub Center survey to findings of other surveys in similar areas.

1. The Taub Index of Social Confidence

The Taub Index for 2009 fell to 56.6 points, indicating in the most general sense a decline of social confidence in Israel's population. The Index, developed by the Taub Center, uses a scale of 0-100 with 100 indicating the highest levels of social confidence and 0 indicating a total lack of social confidence. The numeric score allows a measure of the degree of social confidence experienced by the Israeli public as a whole, and by specific groups within the population over time, above and beyond the picture provided by responses to individual survey questions. The Index provides an aggregate score for a set of recurring questions that address basic components of social well-being. The responses to these questions enable an assessment of public perceptions of changes in

standard of living, exposure to criminal violence, basic economic security, and fear of unemployment.

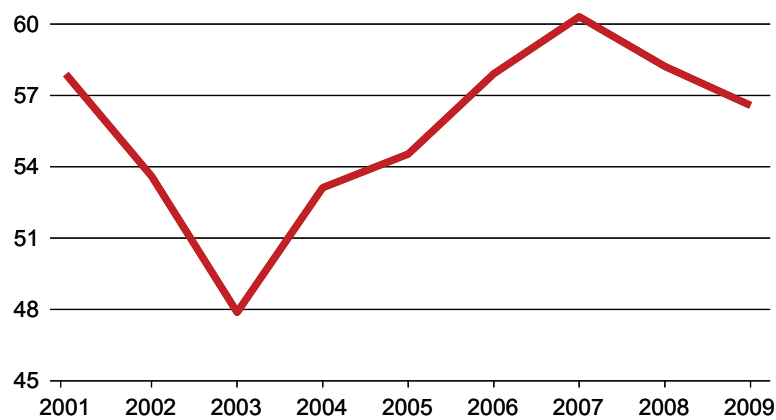
The 2009 Taub Index was calculated at two points in time, March and September. The March 2009 Taub Index indicates a very slight decline compared with that of September 2008, and the September 2009 Index declined further to 56.6. This level is lower than the 2007 peak, but not as low as the scores for 2002-2005, when the economic recession resulted in a depressed Index score.

Table 1. **The Taub Index of Social Confidence, 2001-2009**

2001	2002	2003	2004	2005	2006	2007	2008	2009*	2009
57.9	53.6	47.9	53.1	54.5	57.9	60.3	58.2	57.9	56.6

* In March 2009 an interim survey was conducted. In those years in which there were two surveys or more, the comparison relates to the full survey as follows: in 2005 and in 2006 the full survey was conducted in July; in 2007, the full survey was conducted in September.

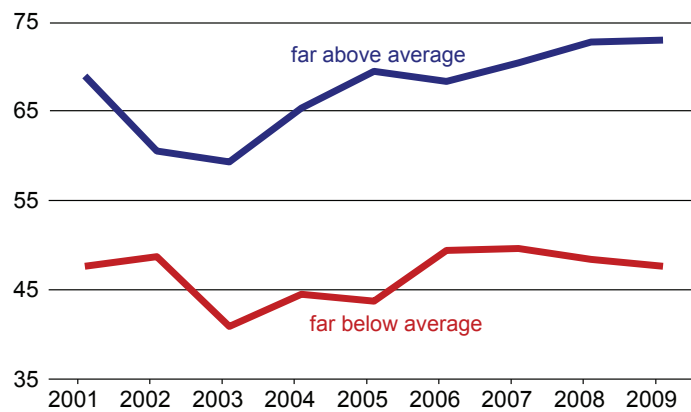
Figure 1
The Taub Index of Social Confidence
2001-2009



Source: Taub Center, Social Survey, various years.

The Index, when calculated for different population groups, shows the differences in their sense of social confidence. For example, dividing the population by income groups reveals variance in the Index levels as well as a deepening gap in the sense of well-being. In 2009 the Index for people with much-higher-than-average income reached a high of 73 points, compared with 61 points for those with slightly-higher-than-average income, 58 points for those with close-to-average income, 54 points among those earning slightly less than average and 48 points among those with significantly lower income than average. This is the widest gap recorded since the Index was formulated, with the exception of 2005⁴ (see Figure 2).

Figure 2
The Taub Index of Social Confidence
by income group, 2001-2009



Source: Taub Center, Social Survey, various years.

⁴ The question presented in the survey was: “The average monthly income for a family of four is today NIS 13,000 before taxes (and for a single person, about NIS 5,000 after tax). Compared to this income, is your income much below average, slightly below average, about average, slightly above average, much above average?”

An examination by level of education distinguishes between the Index trend typical of people with very low education (primary or partial secondary) and those of the other three education-level groups (higher education, post-secondary education and secondary education) where the differences are relatively minor. For people with higher education, the index in 2009 was about 58, only slightly higher than the overall average, reflecting a decline compared to recent years. The Index score of those with low education was 49 points, also showing a decline from recent years.

Two years ago a general question was added to the survey concerning the overall sense of socioeconomic confidence: *“Generally speaking, how would you define your and your family’s sense of socioeconomic confidence?”* Responses to this question further validate and confirm the Index findings. 61 percent of respondents placed their sense of socioeconomic confidence between the “not so good” (44 percent) and “not good at all” (17 percent), and only about 40 percent attested to a “good” sense of socioeconomic confidence (of which 7 percent say “very good” and 32 percent “good.”). Generally speaking, there is no significant change in 2009 compared to the previous two years. The percentage of those attesting to a “good” and “very good” sense of socioeconomic well-being eroded slightly from 2007 (42 percent) but is close to that of 2008 (39 percent); and the percentage of those expressing a “not good” sense is similar to 2008 (17-18 percent) and slightly higher than 2007 (from 15 to 17 percent).

Table 2. Responses to the question: *“In general, how would you define your and your family’s sense of socioeconomic confidence?”* (percent)

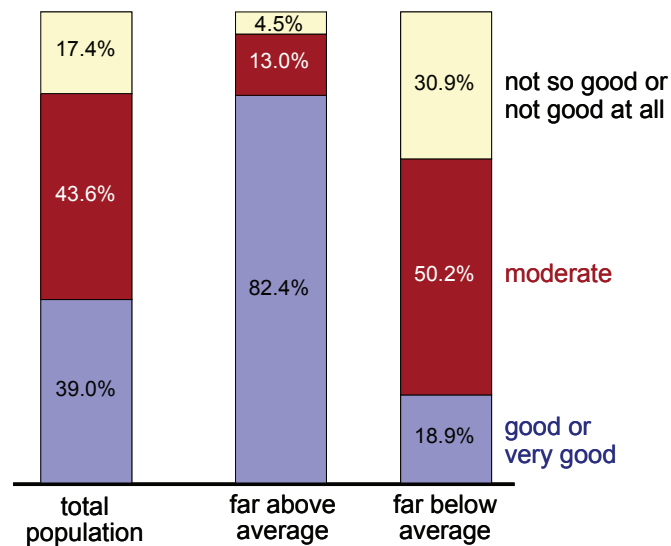
	2007	2008	2009	
			March	September
Very good	9	8	5	7
Good	33	31	34	32
Moderate	43	42	45	44
Not so good	11	13	11	12
Not good at all	4	6	5	5

Income level greatly affects the reported sense of social confidence as illustrated in Figure 3. The percentage of those who answered to a “good” sense of socioeconomic confidence increases along income levels from 19 to 82 percent, while the percentage of those who attest to a “not good” sense declines from 31 to 5 percent. Education level also has an effect but of a lesser magnitude than income: thus, the percentage of people with low education reporting a “good” sense is below 18, rising to 41 percent among people with higher education (only slightly higher than the average for the entire population).

While, on the whole, the change from recent years was small, improvement can be seen in several population groups. Among new immigrants, for example, the percentage of those reporting a sense of “not good at all” fell sharply (from 40 to 34 percent). The percentage of people with higher education who claimed to be satisfied rose by 7 percent and the unsatisfied declined accordingly. Some improvement is noticeable among those with the lowest incomes, reflected mainly in a decrease in the share of those who are not satisfied with their situation in the past year (from 38 percent in 2008 to 31 percent in 2009). Even among Israeli Arabs the share of those attesting to a sense of “not good” declined, from 27 to 18 percent, with no change in the percentage of

those who attest to a sense of “good” (that is, the percentage of those reporting “moderate” rose). The ultra-Orthodox reported an opposite sense: the percentage of those attesting to a sense of “good” declined (from 49 percent in 2007 to 31 percent in 2009), of those attesting to a sense of “not good” showed no change, and reports of a sense of “moderate” rose from 36 to 54 percent.

Figure 3
Economic Confidence
by income group, 2009 (percent)



Source: Taub Center, Social Survey, various years.

2. Changes in Standard of Living

In all the surveys we asked several questions about the public's assessment of its living standards. Responses to this cluster of questions largely reflect fluctuations in the Israeli economy over the decade.

The first question in the "standard of living" cluster gauges the ability of survey participants to meet basic subsistence needs (and is included among the Index questions).

Table 3. Responses to the question: *"To what degree does your income level allow you and your family to meet your basic needs?"* (percent)

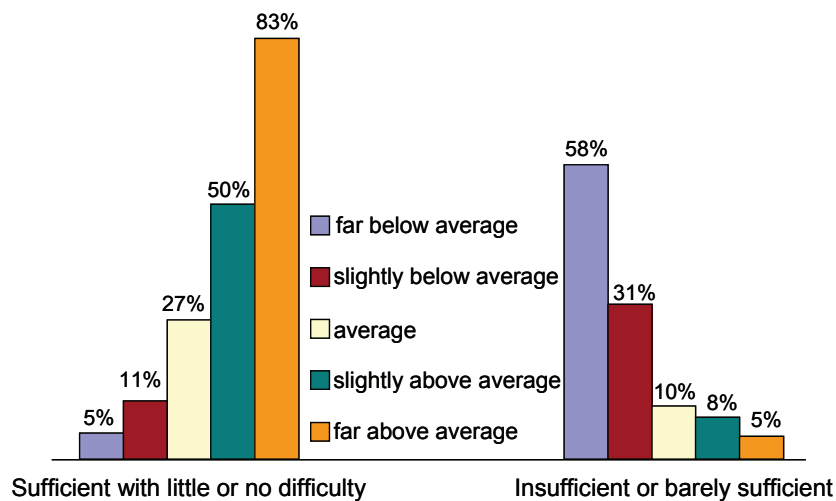
	2003	2004	2005	2006	2007	2008	2009	
							Mar	Sep
Allows it without any difficulty	22	23	23	27	29	30	23	27
Allows it reasonably	47	43	41	41	47	45	46	47
Doesn't allow it at all	31	34	37	32	24	25	31	27

This year, answers to this question indicate a change from the decade-long trend of consistent improvement that was expressed in a sense that income allows subsistence without difficulty. 27 percent of respondents stated that their income provides for basic subsistence needs without difficulty (compared to 29 and 30 percent the previous two years) and another 27 percent stated that their income does "not at all" or "barely" meets their basic needs. However, most families still believe that their income is sufficient to meet basic needs "without difficulty" or "reasonably well" (74 percent together).

Answers to this question indicate a clear correlation with respondent income, and the shift in the percentage of respondents for each category

is notable (see Figure 4). Thus, among those with much-higher-than-average income, the percentage of those whose income allows them to meet their basic needs without difficulty is very high (83 percent), continuing the rising trend since 2003, albeit at a somewhat slower pace in the past three years. Still, even over the past two years with its accompanying economic crisis, the percentage of respondents with higher income who say that they can manage without any difficulty kept rising, while that of respondents who reported barely managing declined. The gap between the two groups increased from 67 to 78 percent.

Figure 4
**To What Extent Does Your Income Allow You
 and Your Family to Meet Basic Needs**
 by income group*, 2009 (percent)



* With the category “allows it reasonably” the distribution by income totals 100.

Source: Taub Center, Social Survey, various years.

The percentage of low income families responding that they cannot manage with their income declined from 68 percent in 2005, to 53 percent in 2007, but rose again in 2009 to 58 percent. This finding indicates that the 2005-2007 economic prosperity “trickled down” to the underprivileged segments of the population, but the 2008-2009 crisis hit them much worse than the more well-off segments. Later we refer to this issue: the impact of economic boom or recession on weaker versus more well-off populations. A particularly noteworthy finding is that over half of low income respondents (58 percent) reported that they were unable or barely able to meet their basic needs on their income.

An analysis of responses by education level indicated that the declining economic situation that began in 2007 continues both among people with higher education and among poorly educated ones; of the latter, only 4 percent indicated that they can manage without difficulty on their income, compared to 18 percent in 2008. The percentage of highly educated people whose income allows managing without difficulty, 33 percent, is much lower than that of people with higher income subsisting on their income without difficulty, 83 percent. This differentiation is not surprising, since among those with higher education many hold occupations with relatively low income, such as teachers, social workers, and others, as well as many immigrants from the FSU who often are not even employed in their academic specialty. Nonetheless, there are signs of an upward trend of the percentage of those who are able to manage as their education level rises.

For population groups considered weak, namely the ultra-Orthodox, Israeli Arabs and new immigrants, the percentage of those who can manage on their income without difficulty is much lower. The percentage of those who have difficulties living on their income is higher for those three groups than the entire population average. Furthermore it is clear that the situation of the immigrant population, which improved significantly between 2004 and 2006, continued to deteriorate in 2009. The survey also reveals that 2009 was a very bad year for the ultra-Orthodox, of whom the number of respondents who stated that they are

able to subsist on their income without difficulty dropped to the lowest level ever measured by this survey (9 percent). At the same time, the number of ultra-Orthodox respondents who declared they are unable to manage with their income rose to 42 percent in 2009 and is much higher than the average for the entire population (27 percent) or even the entire Jewish population (25 percent).

The second question in the standard of living cluster examines respondents' current living standards compared to the previous two to three years. Less than one-fifth of participants answered that their standard of living has improved in recent years, and another nearly two-fifths felt a deterioration. Compared with 2007-2008, the share of those who experienced a decline rose significantly, while the share of those reporting an improvement dropped a great deal. While in 2008 the greatest change was among those who feel that their situation worsened, the greatest change in this survey is among those who feel that their situation improved, whose share declined from 26 to 19 percent. The two points of time in 2009 when the survey was conducted (March and September), support our impression that respondents' standard of living took a turn for the worse.

Table 4. Responses to the question: *“When you compare your and your family’s standard of living to that of 2-3 years ago, do you think it has...”* (percent)

	2003	2004	2005	2006	2007	2008	2009	
							Mar	Sep
It improved	8	12	19	21	26	26	20	19
It has not changed	34	38	43	46	49	42	41	44
It has declined	58	50	38	34	25	33	39	37

It is interesting to note the correlation with the respondent's age. It turns out that the share of those who attest to improvement declines with a rise in age, from 30 percent among young people up to age 29, to 20 percent among 30 to 49-year-olds, 15 percent among the 50 to 64-year-olds, and only 6 percent among the elderly. There seems to be some correlation with respondents' education (from 10 percent reporting about improvement among the poorly educated to 22 percent among the highly educated), and, as expected, also with respondents' income – from 10 percent reporting improvement among those with low income to 41 percent among those with high income.

Special attention should be given to the disturbing finding that about 50 percent of the poorly educated reported a worsening of their situation, as was found with other weak population groups. Also prominent is the fact that there is little improvement compared with 2008 within Israel's Arab population – 48 percent of Israeli Arabs attest to a decline in their situation, versus 35 percent among Jews.

The third question in the living standard cluster seeks to elicit the public's expectations of changes in its economic situation in the near future. Responses indicate that while most of the public believes that there will be no change (56 percent), there was a slight increase in the share of those who expect things to become worse, from 13 percent in 2006 to 15 percent in 2009; and a decrease in the share of those who expect an improvement, from 40 percent in 2006 to only 29 percent in 2009. Compared to 2008 there is a feeling of some increased optimism, and we also have preliminary indications early in 2009 that this is the case: although the change is moderate, the public may be sensing that the peak of the economic crisis is over, a feeling supported when comparing the results to the March survey, which was fairly grim.

Table 5. Responses to the question: “*Do you expect that your and your family’s situation will change in the coming year?*” (percent)

	2004	2005	2006	2007	2008	2009	
						Mar	Sep
It will worsen a lot	13	16	13	14	21	24	15
It will not change	58	58	47	57	54	54	56
It will improve somewhat	29	26	40	29	25	22	29

Interestingly, in line with earlier findings, the expectation of improvement decreases with age, from a high of 37 percent among young people in their 20s, to 34 percent among 30 to 49-year-olds, to 20 percent among 50 to 64-year-olds, and a low 17 percent among the elderly. These results may be indicative of the effect of age on the changing level of optimism, as well as a more realistic perspective of the chances of improvement in the individual life path, a perspective that reflects more than simply the impact of the economic crisis and its outcomes. Expectation for improved situation does not increase with increased education or income level (although the percentage of those who think their situation will worsen declines with the rise of income, indicating economic confidence of those with the highest incomes).

The fourth question of the living standards cluster related to the fear of falling into poverty. A stable pattern seems to have emerged in the past two to three years where almost half of the public are afraid to some degree (47 percent last year) while 53 percent are not at all concerned about the possibility of falling into poverty or distress. The high incidence of those who are concerned suggests that the sense of economic confidence among respondents is unstable. However, the situation over the past three years has been decidedly better than that of the previous years.

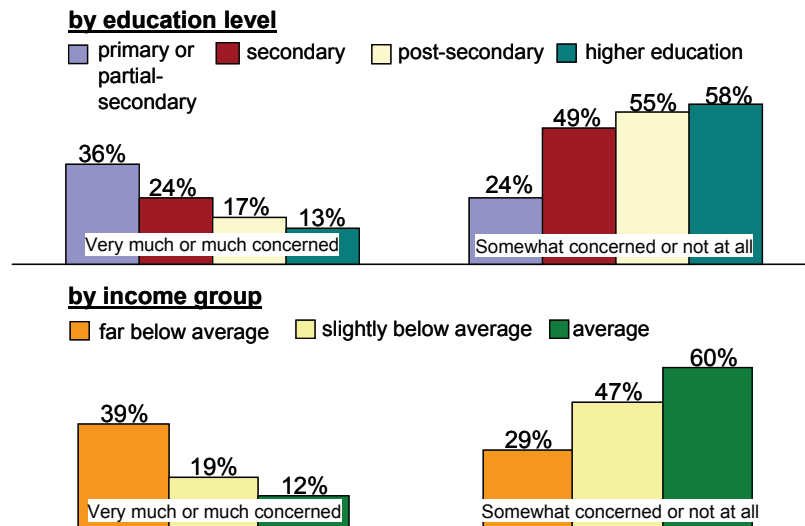
Table 6. *“Are you concerned that you or your family might find yourselves in poverty or economic distress?”* (percent)

	2004	2005	2006	2007	2008	2009
Much or very much concerned	31	27	18	18	20	18
Concerned to some degree or somewhat concerned	43	43	49	24	28	29
Not at all	26	30	31	58	52	53

When we examine the various population groups in their assessment of the possibility of falling into poverty we find very large differences between the groups (see Figure 5). The degree of concern (greatly and very greatly) decreases with increased education, from 36 percent among those with poor education, to 13 percent among those with higher education (university level). The share of those not concerned at all is also correlated with education and it could be claimed that the survey shows that education gives a degree of economic confidence. Interestingly, the biggest leap from one education level to the next, in terms of confidence in the face of the prospect of poverty, is from primary or partial-secondary education to full secondary education. Although we did not see the influence of education on over-optimism about the possibility of imminent improvement, it affects the sense of relative immunity when it comes to concern about the possibility of falling into poverty and distress. Obviously, a clear correlation to income level can be seen when the share of those greatly or very greatly concerned declines with the rise in income, from 39 to 3 percent, respectively, and the feeling of economic security is the highest among those with the highest income level. The concern of falling into poverty is much higher among Arab Israelis – twice that of Jewish Israelis (on average) and higher among new immigrants compared with the average Jewish population.

Figure 5

Concern about Falling into Poverty and Economic Distress*, 2009



* With the category “concerned to some degree” the distribution by education and income totals 100.

Source: Taub Center, Social Survey, various years.

Following the question about a setback in economic security, we asked the public about its expectations of standard of living at old age: “Do you believe that you are guaranteed an adequate standard of living at old age?” Responses to this question are very alarming, because more than 40 percent of survey participants answered the question in the negative (responding that an adequate standard of living at old age is “not really” or “absolutely not” guaranteed to them). Moreover, the percentage of those who believe that they are not guaranteed an adequate standard of living at old age is twice that of those who think their income at old age will allow them to live in dignity. This question was included in the Taub Center surveys in previous years as well and the findings show that the rate of those concerned has been fluctuating between 40 and 54 percent

over the decade, and the share of those who feel secure about their standard of living at retirement has been relatively stable at about one-fifth of the population. The percentage of those who are concerned was high early in the decade and rose further in the years 2003 and 2006, which were times of economic recession.

Table 7. *“Do you believe that you are guaranteed an adequate standard of living at old age?”* (percent)

	2000	2001	2003	2006	2008	2009
To a great or very great degree	28	20	19	16	21	21
To some degree	28	33	27	32	42	38
Not really or not at all	44	48	54	52	37	41

Gaps between the different population groups in response to this question largely overlap the socioeconomic differences. Among new immigrants, who are less likely than the rest of the population to qualify for high retirement pension, the “pessimistic” rate is threefold that of the “optimists,” and even more so among poorly educated and low income respondents. It should be noted that the much-lower-than-average income is not a marginal population group in the survey sample, representing 28 percent of respondents.

The impression created by the survey findings regarding the worsening of social disparities, from the Taub Index questions and questions about the standard of living, as well as from reliable and objective measures indicating the deepening of social gaps and inequality,⁵ leads to the next section of the report about social gaps and inequality. First we examined the importance of the problem of social gaps and their widening, and the desired position of this issue in public priorities; later we examined the reactions of the public to the way the government handles the problem as well as the public’s willingness to really engage in reducing inequality and social gaps.

⁵ See, for example, the “Macro Perspective” chapter in this book.

3. *Gaps and Inequality in Society*

This cluster of questions examined several dimensions of survey participants' ideological/value system and their assessment of government policy in those areas.

3.A. *Widening Gaps in Society*

The first question in this area was, *“Do you think socioeconomic gaps have widened, narrowed or not changed at all in the past year?”* The majority (71.4 percent) believe that gaps have expanded and another one-fifth responded that gaps have not changed in the past year (21 percent). The public seems to be aware of changes in the level of social equality. This is not a new finding in the Taub Center surveys, but it is being repeatedly validated, and the impression from subsequent questions on the same topic is that government policy does not properly address the issue of widening gaps.

As an indicator of public sensitivity to this problem, respondents were asked whether they felt that gaps were widening. While no deterioration was detected in the past year compared with 2008 (when those who believed that the gaps increased reached 75 percent (see Table 8)), the situation worsened considerably over the past two years compared with 2007 (when 61 percent responded that the gaps had increased over the previous year). This or a similar question was included in many Taub Center surveys and, looking back to the early part of the decade, we find even in its early years a trend of increasing awareness of the widening gaps. The share of those who believe that the gaps increased (annually) rose from 61 percent in 2000 to 67 percent in 2001 to 75 percent in 2002. In 2003, 72 percent of survey participants found that gaps have increased and this percentage declined somewhat in 2007 (in the years 2004-2006 the question was not asked in a similar way). In the past two years the share of those who believe that gaps have expanded rose to over 70 percent.

Table 8. *“Have socioeconomic gaps widened, narrowed or not changed at all in the past year?”* Share of respondents thinking that gaps have widened (greatly or slightly)

2000	2001	2002	2003	2007	2008	2009
61	67	75	72	61	75	71

The public assessment of the deepening gaps varies between different population groups: working age respondents stood out in their assessment that the gaps have deepened, compared both to younger and older respondents. The highly educated thought, more than any other education group, that gaps have expanded. There was a positive correlation between the level of education and perception of widening gaps: from 63 percent among the poorly educated to 77 percent among those with higher education. Israeli-born stand out compared with other groups of origin, with 80 percent who believe that gaps in society widened, compared with only 56 percent among new immigrants. Classifying the population by degree of religious observance, a higher proportion of ultra-Orthodox (86 percent) believe that gaps are wider, whereas modern Orthodox and traditionally observant Jews are similar to the general average. Nonetheless, Jewish Israelis, more than Israeli Arabs, believe that social gaps are widening (75 percent versus 57 percent, respectively), which is rather surprising, given the relative situation of the Israeli Arab population.

Interestingly, with regard to comparable surveys from previous years, we found that early in the decade salaried employees, people with higher education and those with average income are more concerned by the widening disparities, while poor and less educated people are less aware of deepening gaps than others.

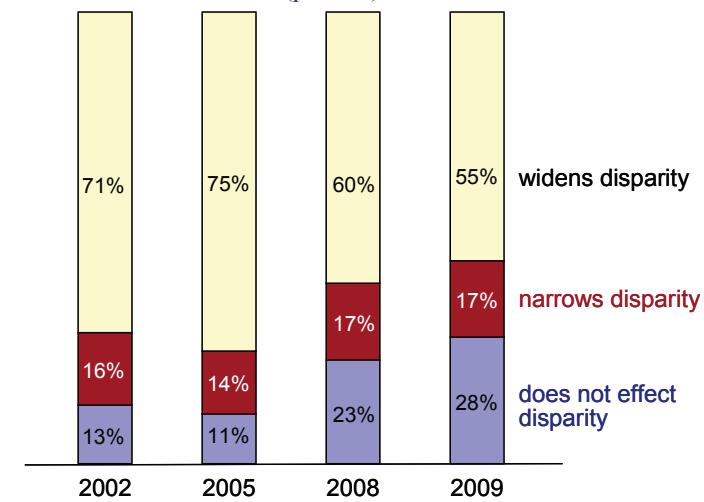
In this context, the following question, concerning the impact of government on social gaps, shows that the public is not satisfied with government policy in this field. This is another of the oft-repeated questions in the Taub Center surveys. In this survey (2009) 55 percent of the public thought that government increases the gaps and 28 percent

thought it has no impact whatsoever on them. Although most of the public believes the government increases disparities, it is interesting to note there is some change in the public assessment of the government's policy and influence in this area. The change is reflected in an increasing proportion of Israelis who believe that the government has no impact on the gaps and that its policy "has no impact at all." In 2008, 60 percent believed that government policy increased gaps, 75 percent thought so in 2005, but as early as the beginning of the decade more than 70 percent of survey respondents said that government policy increases disparities. Additionally, the proportion of those who believe that the government has no impact at all rose from 10-13 percent to 28 percent, and the increase came largely "on account" of the category of increasing gaps. (It is possible that when the government makes budget cuts, which are often characterized by a worsening in the conditions for the weaker population groups, the public believes the government policy causes an increase in the gaps).

Figure 6

Effect of Government's Economic Policy on Social Disparities

2002-2009 (percent)



Source: Taub Center, Social Survey, various years.

Higher proportions of university educated people believe that government policies contribute to widening gaps (62 percent). Classified by degree of religious observance, the ultra-Orthodox were particularly prominent (59 percent). Interestingly, when we divide respondents by income levels, we find that only 44.5 percent with income far above the average thought that policy increases the gap (lower than the overall average), whereas 22 percent of them contended that government policy helps reduce the gaps, compared with an average of 16 percent for the population as a whole.

In this context, it may be noted that in the survey conducted in 2008 which placed special emphasis on the issue of disparities, it was found that the public is not satisfied by the widening of social gaps in Israeli society and does not shy away from expressing its views on the subject. Furthermore it was found that most people think it is possible to reduce significantly the gaps in Israel. We also found a wide consensus that the government has a central role to play in narrowing gaps (see the 2008 Social Survey). Consequently, finding that “the government has no impact at all” is in fact a criticism of government policy for not applying an active and focused policy to reduce social disparities.

This year there were two additional questions about the widening gaps and the effects of crisis or prosperity on those with low income (the poor). Generally speaking, the vast majority believes that economic prosperity has not improved the situation of the poor or that prosperity did not benefit them as much as it did the rich. Likewise, the feeling is that in times of crisis the weak are hurt more than the strong. 52 percent responded to the question about the effect of economic prosperity on those with the lowest incomes by saying that the condition of the weak has not improved at all and 31 percent responded that their situation improved less than others. To the question regarding the expected impact of the recession on people with low income, 64 percent responded that their situation will worsen more than those with higher income and 16 percent thought that the situation of both groups will worsen equally.

Only two population groups assessed that the recession will have a lesser effect on the poor: FSU immigrants and people with high income.

It seems that in addition to an awareness of the widening disparities, most of the Israeli public is consistent in its assessment that those with low income are less likely to benefit from economic growth but are the first to be hurt in times of crisis. More people aged 50 and over (57 percent) said that the situation of the weak has not improved at all (compared with 48 percent of younger people). These findings match the findings of last year's survey (2008), in which we asked in general about the distribution of benefits from economic growth among population groups in recent years: a large majority (73 percent) responded that the rich are the main beneficiaries of growth and only 7 percent thought that the primary beneficiary is the poorest population.

3.B. *Government Policy Priorities*

In view of the depiction of the role of government policy in reducing gaps in society, it is interesting to examine the public's opinion about the desired priorities in government policy. In this year's survey we included the old question, "*Which of the following areas should be at the top of the government's priorities?*" Respondents could choose from the following: economic growth, security, reducing unemployment, reducing poverty and social gaps, or other.

Table 9. "*Which of the following areas should be at the top of the government's priorities?*" (percent)

	2006	2007	2009
Economic growth	13	13	16
Security	34	47	35
Reducing unemployment	9	5	13
Reducing poverty and social disparities	41	32	33
Other	3	0	4

The public is split evenly between the choice of security (35 percent) and reducing poverty and social disparities (33 percent). It should be noted, though, that another 12 percent of the public chose as their top priority the reduction in unemployment, so that 45 percent of the public prioritized social issues this year. Security declined significantly compared to 2007 but it is partially similar to 2006 (the 2006 survey was conducted in July, before the Second Lebanon War). Presumably the prominent position of security in 2007 reflects and was influenced by the “after the war” public debate. As noted, in 2006, the percentage of people who placed the reduction of disparities and poverty at the highest priority was high (41 percent) and another 9 percent placed unemployment at a high priority (altogether 50 percent for social issues). Our impression is that in relatively “quiet” security periods, the public gives preference to the social sphere. Incidentally, this year (2009) there was a slight increase in the importance of economic growth in the public eye.

With regard to economic growth there are significant differences between population groups. In contrast to people of higher income level who believe that economic growth is as important as the issues of security and reducing gaps, immigrants from the former Soviet Union continue to emphasize security (62 percent) and only a small minority (13 percent) think the first priority is to introduce a policy of reducing social gaps. Israeli Arabs stand out in the relatively low priority they attach to security (23 percent) and the high importance they attach to treating problems of unemployment (23 percent versus 13 percent on average in the entire population).

3.C. Willingness to Pay More Taxes for Specific Objectives

Following the question about the desired government priorities we asked survey participants whether they are willing to pay more taxes to reinforce the government's handling of certain issues. (*“For the improvement of which of the following areas would you be willing to pay*

more taxes?”). Respondents were given six areas and the possibility of “not willing to pay more taxes.”

The most remarkable finding is that 41 percent of respondents said that they are willing to pay more taxes to ensure an improvement in education. In second and much lower place, 13 percent are willing to increase their taxes in order to improve healthcare. 26 percent of the public are not willing to pay more taxes. Interestingly, when asked in 2005 about willingness to pay more taxes to improve social services (without distinction between areas), sixty percent of the public rejected paying more taxes.

When respondents were divided by population groups, the main differences were by age: the middle-age group is much more willing to pay increased taxes for education compared with other age groups (48 percent); Israeli-born stand out compared with other groups of origin (46 percent); and people with higher education stand out compared with all other education groups (44 percent). Another interesting point, Israeli Arabs express more willingness to pay higher taxes for improved health-care compared to Jews (20 vs. 11 percent) and slightly less so for education (43 vs. 41 percent). In addition, a much lower rate among Israeli Arabs, 15 percent versus 28 percent among Israeli Jews, stated that they are not willing to pay more taxes. Among Jews, new immigrants from the Former Soviet Union stood out in their lack of willingness to pay more taxes (37 percent versus 26 of the overall average), and at a similar level are the ultra-Orthodox (36 percent). Interestingly, new immigrants from the former Soviet Union are willing to pay more taxes, well above average, for security – 19 percent versus 7 percent of the population average.

3.D. The Public's Position Regarding Wage Differentials

As in the previous survey, respondents were asked about the level of acceptable wage gaps in the public sector.

Table 10. *“What do you think the acceptable differential should be between the lowest and the highest wages paid in the public sector?” (percent)*

	2008	2009
There should be no differential	12.6	13.1
Double	27.8	29.1
5 times	25.9	31.7
10 times	16.4	12.8
20 times or more	5.7	4.4
There is no need to limit the differential	11.5	8.9

The impression from answers this year (2009) and their comparison with those of 2008 is that the general inclination among survey respondents is to limit wage differentials. More than 60 percent of respondents were divided between limiting the difference to 2-times and 5-times – that is, wage gaps will not exceed 5-times – compared with 54 percent last year. This rate and maybe also the change may be attributable to the public debate following the collapse of banks and other institutions in the United States and elsewhere which publicized the issue of large wage differentials. On the other hand, about a quarter of the public believes that wage gaps of ten times or more are acceptable, and 12 percent believes that wage differentials should not be limited at all. Needless to say, in this context, current income gaps in Israel are much higher than 20-times. (This point could have been shared with survey participants before asking the question and it would have been interesting to note its affect on answers.)

There are also differences between population groups on this question. Among higher income earners none believe the gap is totally unnecessary, and the share of those who think that no limit should be set is twice that of the average for the entire population. However, even within this group the majority believes that the gap should not be higher than 5 times. In contrast, 20 percent of lowest income earners, those with the lowest education and Israeli Arabs believe there should be no gap at

all. Furthermore, 22 percent of very young (18-22), whose share of the sample is 9 percent, believe there should be no gap at all. This share declines sharply starting in the next age group.

Another question about sharing the cake or sharing the burden, as well as the welfare state approach and allocating resources to the entire population, had to do with granting social security benefits to high income earners. A similar question was asked in previous surveys, which indicated a certain consistency in the feelings of the Israeli public. On the one hand, the majority of the public opposes a complete elimination of benefits for high wage earners, but on the other hand, it feels that benefits for stronger population groups should be restricted.

This year the question was changed slightly and offered several options for altering the distribution of social security benefits. Here, too, the indication is that there is no majority for the complete elimination of benefits for the rich – only one-fifth of the public chose the option to cancel benefits for the rich and allocate the full amount to the poor. However, 34 percent chose to reduce the amounts for the rich and increase them for the poor. A similar share of 35 percent indicated the need to establish criteria other than income for the allocation of benefits – a finding that might be worthy of further study. That is, this year's responses show that only 11 percent believe no change is needed. The survey, though, cannot indicate the desired change but only its general direction.

3.E. *Social Solidarity*

Another issue that came up in past Taub Center surveys shows the face of social solidarity. In 2008 survey participants were asked about the need for affirmative action for the two population groups identified as economically weak – Israeli Arabs and ultra-Orthodox. Responses indicated a (slightly) higher willingness to show preference to Israeli Arabs over the ultra-Orthodox, with nearly 50 percent of the public thinking neither population group should have preferential treatment.

This year the question was slightly re-phrased and two separate questions were asked. Responses are consolidated below.

Table 11. *“The Israeli Arab/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?”* (percent)

	Israeli Arab	Ultra-Orthodox
Yes, in all areas of government services and National Insurance allowances	18	20
Yes, but only in providing government services (education, health, etc.)	10	7
Yes, but only in the areas of employment and providing jobs	12	9
Yes, provided that they agree to participate in National Service	18	26
No, there should not be affirmative action for Arabs/ultra-Orthodox populations	43	39

The results are interesting. For both sectors, the percentage of those who believe that they should have no preference or that they should have preference in all areas is similar. 18-20 percent of the public chose to give preference to these populations in all areas, and 40 percent chose not to give them preference at all. On the other hand, a certain support for preference to Israeli Arabs in public service or employment was noted. A differentiation in the attitude toward Israeli Arabs and ultra-Orthodox was found in making affirmative action conditional on participation in national service: 26 percent responded to stipulate preference for the ultra-Orthodox on their participation in national service, and for the Arabs, only 18 percent said that affirmative action should be conditional on their doing national service.

There are differences in the solidarity of various population groups toward the two sectors: ultra-Orthodox Jews and immigrants from the

former Soviet Union stood out in their opposition to giving preference to Israeli Arabs (more than 70 percent). Also, most of the religious (modern Orthodox) Jews also opposed giving preference to Israeli Arabs (61 percent). However, the biggest supporters of giving preference to Israeli Arabs – other than the Israeli Arabs themselves – are Jewish Israelis with university degrees and high income. Also, in certain areas, immigrants are willing to give more preference to Israeli Arabs than to the ultra-Orthodox. This is similar to the secular community in the population who showed more opposition to affirmative action in favor of the ultra-Orthodox (54 percent) than for Israeli Arabs (45 percent). Also it is interesting to note that while the rate of Israeli Arabs opposing affirmative action for the ultra-Orthodox is 22 percent, the rate of ultra-Orthodox opposed to affirmative action for Israeli Arabs is more than threefold – 72 percent.

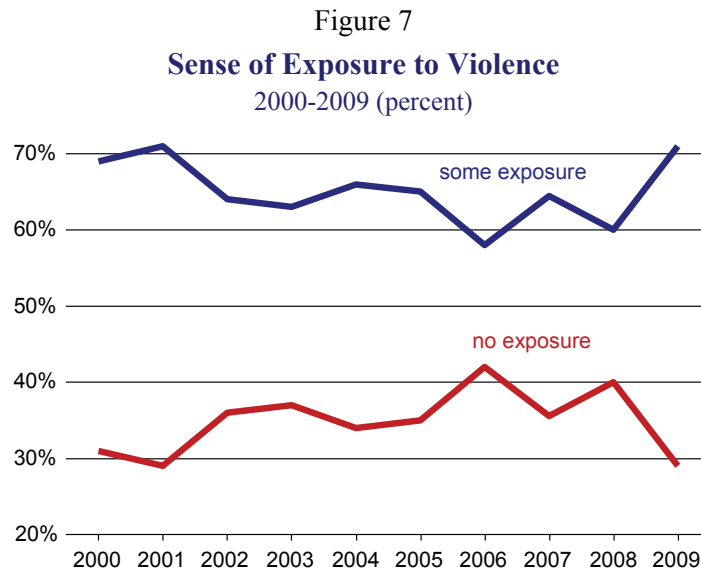
4. Exposure to Violence and Level of Personal Safety

In light of the current growing public discourse about violence and personal safety in Israeli society, a cluster of four survey questions was dedicated to the issue of violence in order to examine the public's feelings in relation to personal safety as well as the possible options for dealing with it. The importance of violence on the public's agenda emerged also from the education cluster of questions (see next section below), since this year responses showed overwhelmingly that dealing with violence is the main problem which the education system has to cope with today.

4.A. The Extent of Public Exposure to Violence

The first question in the violence cluster is included in the Taub Index of Social Confidence and was asked in most past surveys. As shown in Figure 7, the sense of exposure to criminal violence increased compared to recent years. Almost half of survey participants said they feel exposed to violence, from “somewhat” to “very much” (47 percent), and a total of

about 70 percent reported that they are exposed to violence to some degree. Conversely, less than 30 percent responded that they are “not at all” exposed to violence. Over the decade there were some fluctuations in the range of exposure to violence, from 60 to 70 percent, and those who report no such exposure fluctuated accordingly. Outcomes from the past four years indicate a consistent trend – an increase in exposure to violence from 58 to 71 percent with a concomitant decline in non-exposure, from 42 to 29 percent. These findings are alarming and reflect a distinct decline in quality of life. Although the high percentage may be affected by increasing public and media discussion of violence in Israeli society, it may also stem from the feeling that violence has come close to every family in Israel. However, it should be noted that high rates of exposure to violence in 2009 are similar to rates that characterized the early part of the decade.



Source: Taub Center, Social Survey, various years.

Regarding distinctions between population groups, older people, more than younger ones, report that they feel exposed to violence to some degree (75 percent on average among those aged 30 or more compared with less than 60 percent among 18 to 29-year-olds). This finding was somewhat surprising and does not reflect the common impression about exposure to violence among young people in Israel. The elderly (aged 65+) reported more exposure to violence than any other age group, although differences stand out when segmented by the degree of exposure: the elderly reported a sense of being exposed to violence “to a very great degree” at higher rates than the average, 12 versus 7 percent, and conversely they report a lower rate of “not at all” – 22 versus 29 percent on average.

The sense of exposure to violence does not correlate to the level of education of survey participants, although university graduates reported a high sense of exposure to violence (at any level) compared with other education groups – 78 versus 67 percent for others. When segmenting the outcomes by degree of exposure it was found that “very much” exposure is higher among those with low education (elementary or partial secondary) – 16 versus 7 percent on average (there may be correlation of this group with old age).

The rates of “some” exposure to violence are similar among Israeli Arabs and Jews, but rates of “much” or “very much” exposure to violence is higher among Israeli Arabs – 28 versus 18 percent. Rates of exposure to violence of immigrants are higher than the rest of the population. 87.5 percent of them reported “some” exposure to violence.

It is further interesting to note that there is an inverse correlation between reporting exposure to violence and level of religious observance. Rates of reporting any exposure to violence rises from 52 percent among the ultra-Orthodox, to 66 percent among the religious, 70 percent among traditional and 78 percent among the secular. The ultra-Orthodox stand out on the “protected” side, compared to the rest of the population, with very low rates among them who report exposure to violence. It seems that the Orthodox have the highest sense of personal safety.

4.B. *Does the Fear of Violence Affect Behavior?*

Following the impression of the sense of exposure to violence, we examined whether fear of violence affects the public's behavior at two levels: one, *"Have you refrained from making a comment to someone about inappropriate behavior out of fear of a violent reaction?"* The other was, *"Have you avoided visiting certain places out of concern for your personal safety?"*

The survey shows that fear of violence affects the behavior of the Israeli public. Two-thirds of respondents noted that they refrained from commenting to others on inappropriate behavior for fear of violent reaction; one-fifth of all respondents (19 percent) refrained many or very many times; 44 percent refrained once to several times. Conversely it was found that only 36.5 percent of the public responded that they had never refrained from making a comment when they felt it was appropriate.

Certain differences between specific population groups were also found. On the one hand, the ultra-Orthodox and new immigrants stood out in that they demonstrated less than average levels of concern about a possible violent reaction to their comments – 57 percent of new immigrants and 52 percent of ultra-Orthodox said they had never refrained from making a comment and relatively low rates – 10 and 7 percent – stated that they had avoided making comments many times. An interesting contrast between the two groups is between their levels of exposure to violence – which is higher than average for the new immigrants and lower than average for the ultra-Orthodox.

For ultra-Orthodox, the answers match the high sense of personal safety in the responses to the previous question. Most likely, their high degree of confidence may be ascribed to their lifestyle in an insulated community with clear and controlled boundaries and codes of conduct. They have different mobility and entertainment habits than the rest of the population, and their insulation is often enhanced by geographical boundaries, whether segregated neighborhoods or "closed" communities. These conditions may explain their relative high sense of security.

The second question was about avoiding certain places out of personal safety concern. This is a much more universal question by nature, but here, too, there is a unique Israeli context: in the reality of our lives such avoidance may be linked to the security aspect, which is inseparable from the issue of personal safety (the survey did not make a distinction between avoiding a certain place due to criminal violence or violence related to the national conflict; responses reflect the interpretation of respondents).

More than half of the public indicated avoiding certain places out of concern for personal safety, of which 15 percent stated that they avoided them “many times” or “very many times,” and another 42 percent stated that they avoided them “several times,” or “once or twice.” On the other hand, 43 percent of participants stated that they had never avoided visiting certain places out of fear for their safety. The responses to this question are correlated with the responses to the previous question, about the sense of “freedom” to make comments to others. Here, too, a higher rate than average of the new immigrants and the ultra-Orthodox responded that they had not avoided particular places.

Incidentally, in the 2005 survey the issue of personal safety was introduced in several questions, one of which was, “*Have you or any member of your family changed his behavior to avoid being exposed to displays of violence?*” At that time 65 percent of respondents stated they had not changed their behavior or habits to avoid such exposure. This is not comparable to current responses where 36.5 percent responded that they were never hesitant to make comments to others, and 43 percent responded that they had never avoided certain places out of fear for their safety.

The last question in this cluster examined respondents’ thoughts about “*What needs to be done to reduce the level of violence in society?*” Respondents were given five options. The vast majority was split between two main solutions: more severe sentencing by the courts (37 percent), and increasing education for tolerance and violence prevention (36 percent). It is interesting to note that strengthening the police force

(which is centralized on the national level in Israel) did not find much support (15 percent), nor did the option of creating municipal police forces reporting to the heads of the municipal authorities (10 percent). Perhaps this reflects the public's view that the courts are the weakest link in social enforcement.

5. Problems at the "Heart" of Education

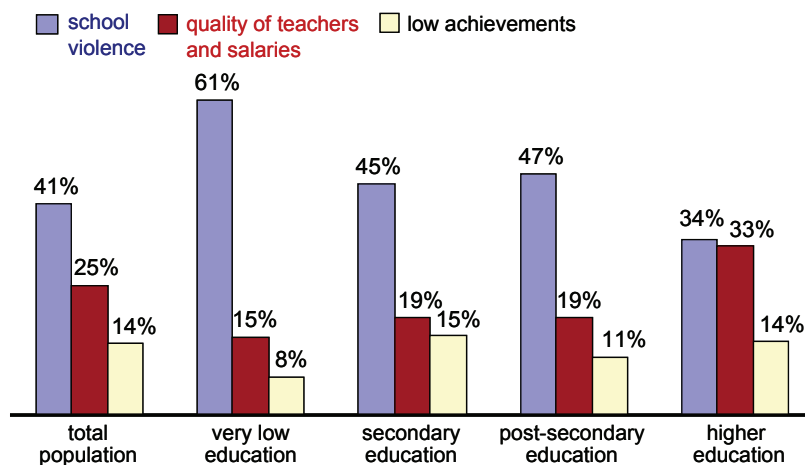
In this year's survey a series of questions were dedicated to education, and asked about the public's opinion on two central issues. One was the key issue with which the education system must cope, and to which goals more resources should be directed. The second had to do with the introduction of a core curriculum in the basic areas taught in schools.

5.A. The Primary Problem of the Education System

The first question examined the attitudes of respondents in the survey toward the main problem to be dealt with in education. The public responded that the main issue is violence (41 percent of the population). When the percentage of respondents who believe that the main problem is the quality of life at school (10 percent) was added, more than half the public believe the main issue is not low achievement (only 13 percent) or large academic disparities (9 percent), nor even the salaries and quality of teachers (25 percent). This finding stands out in view of the recent public attention given to Israeli pupil achievement on international tests. This may be a reflection of the relatively low importance attributed to this issue by parents, and the discrepancy between the concern of those who head the educational system (low achievements and large disparities) and the general public. There is a kind of displacement of emphasis from what is naturally perceived as the primary role of schools – to provide knowledge and skills – to a real concern for the safety and well-being of the children. It seems that the public directs its helplessness in the face of increasing violence in society toward the educational system.

It was also found that the respondents' level of education has an impact on their choice of the main problem to be handled in the educational system (see Figure 8). First, an inverse relationship between the percentage of those who believe that violence is the main problem and the education level of respondents was found: from 61 percent among those with low education to 34 percent among university-educated people. It was also found that the share of those who believe that it is necessary to raise teachers' quality and salaries increases as respondents' education level rises. Most college-educated respondents have indicated two major problems to be handled in the educational system: violence and improvement of the quality of teachers' and their salary levels (67 percent).

Figure 8
The Education System's Primary Problem*
 by education level, 2009



* With the categories "large academic disparities" and "quality of life at school" the distribution totals 100.

Source: Taub Center, Social Survey, various years.

The problem of improving the quality of teachers and the level of their remuneration had a significantly higher priority among people with much higher than average income, 40 percent of whom indicated improvement of teachers' quality and pay as the most urgent problem in need of a solution. Only 25 percent of them indicated the problem of violence as the most urgent problem to handle. This, as well as the pattern of respondents' priorities according to education level, indicates that socioeconomic background has a strong impact on the priorities in allocating resources for raising teaching quality and wages. In other words, the quality of teachers and their wages were perceived as an urgent problem requiring attention more by respondents with a higher socioeconomic status than by those of medium or low socioeconomic status. This finding can be linked to an interesting connection found in another study recently undertaken by the Taub Center between the evaluation of teachers and their social status (prestige) and the socioeconomic status (by rating of residential community) of the respondent (Blass, Romanov, 2010, in preparation).

Interestingly, the option to handle violence also differed by income levels, similar to differences between levels of education. An inverse relationship was found between income level and the share of those who chose violence as the primary problem to handle, but less intensely (compared to level of education) – rates range from 45 percent among those with much lower income to 26 percent among those with much higher than average income.

These findings may reflect the fact that different population groups are responding to schools in different environments; that is, children of more prosperous and well educated families attend schools where the level of violence is lower than schools serving weaker pupil populations. Another possibility is that when problems of violence arise in schools attended by children from well-established population groups, the parents are more aware of this and believe that they can cope with them in collaboration with the schools' educational staff.

New immigrants from the former Soviet Union responded differently to this question than the rest of the population. First, a much smaller share of them indicated violence as the main problem that must be handled (12 versus 41 percent in the overall population). Second, a relatively high percentage of them chose the issue of low achievement (about 25 percent) as the major issue, a higher share than all other groups. The majority of this group responded that the main issue in the education system is low teachers' salaries (42 percent), a share surpassing all other groups and much higher than the overall average (25 percent) (a similar ratio to that of people with much higher income than average).

Regarding respondents' level of religious observance, the main finding is that 59 percent of the ultra-Orthodox view violence as the main problem of the educational system. This is especially remarkable in view of the relatively low level of concern they show about violence in general, and their relatively low sense of their own exposure to violence. This, of course, raises the question of whether they are referring to violence in their own schools, violence in general or violence in the State system. The answer to this question is not obvious, but in view of the detachment of this population group from whatever lies outside it, it seems reasonable that they are referring to violence in State schools and not their own. Unlike the ultra-Orthodox, secular Jews regard school violence as less important, although 30 percent of them see it as the main problem. Finally, it is interesting (and maybe somewhat unexpected) that the group that chose gaps in the educational system as the most severe problem is the much higher than average income group (21 percent), who showed much less uniformity in responses to other questions (see below).

The next question in the education cluster refers to ways to solve the problems in the educational system. This year a very high rate of respondents chose to prioritize allocating more resources to reducing class size (44 percent), about one-quarter chose to allocate more resources to weak student populations (26 percent), and another quarter chose to improve teachers' working conditions and wages (24 percent). Interestingly, only a very small percentage chose to increase budgets for

programs for outstanding students (4 percent). This finding seems to be consistent with the relatively low importance attributed to academic achievements by the Israeli public as reflected in the results of the survey. In this area, incidentally, young people aged 18-22 stood out in giving a higher priority to supporting programs for exceptional pupils (13 percent).

This question was asked in the past, but in slightly different phrasing, and so the results are not comparable. The alternatives of improving teachers' wages, reducing class sizes and giving preference to allocations to students from weak population groups appeared in all years, but there were changes in other alternatives offered in the question that also make the responses non-comparable to the past. Having said that, the Israeli public attributed great importance to these three areas. In 2006 and 2007, for example, the options were given in the same way, and the choices indicate that more than one-quarter preferred to improve teachers' wages and working conditions (26 and 29 percent in the two years, respectively), one-fifth (20 and 21 percent) prioritized the reduction of class sizes and 15 percent chose the allocation of resources for students from weak populations. But in both those years about 22 percent pointed to the need to change the curriculum and another 13-21 percent indicated allocating resources to reducing violence. As noted, this issue corroborates the Taub Center findings this year that the public considers violence as the main problem of the education system in need of attention.

Table 12. *“Assuming that the education budget is increased significantly, to which of the following areas would you give first priority in allocating the supplement?” (percent)*

	2002	2004	2005	2006	2007	2009
Improve teacher’s wages and employment	31	21	20	26	29	24
Reduce class size	25	14	16	21	20	44
Increase budgets for weak population groups	–	–	–	11	15	26
Change educational content and programs	20	23	23	22	22	–
Reduce school violence	–	31	21	21	13	–
Increase budgets for outstanding pupils	–	–	–	–	–	4
Other (improve physical conditions, long school day)	23	10	–	–	–	2

– means that this option was not offered that year.

Examining the responses by population groups, the differences found in the current survey are interesting. The established population and new immigrants from the former Soviet Union are the lowest supporters of allocating resources to weaker populations (15 versus 26 percent on average). The ultra-Orthodox and Israeli Arabs, by contrast, stand out in their significant support of resource allocation for the weaker populations (43 and 34 percent, respectively). In this context it is disappointing to find that support for increasing budgets for weaker population groups decreases as income increases, from 30 percent among those with much-lower-than-average income, to 15 percent among those with much-higher-than-average income, even though this is the group that pointed to the issue of disparities as the most serious. People with low income also give more support than average to raising teachers’ wages, but this is the case only in the Jewish sector; Israeli Arabs support for increasing

teachers' salaries is relatively low. This finding is consistent with another finding, described in the chapter on education, indicating that teachers' wages in weak communities (including the Israeli Arab communities) is higher than wages in other occupations, including professions requiring university education. It is not surprising, therefore, that their support for raising wages is low.

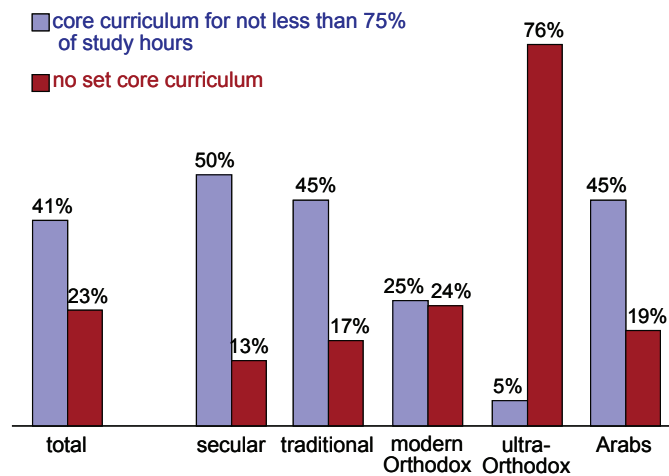
5.B. Introducing a Compulsory Core Curriculum in Basic Areas

This year two questions were asked concerning the introduction of a core curriculum in study areas of the education system, an issue that periodically resurfaces in the public agenda. The responses are rather interesting: 41 percent of the respondents think that the State should set a compulsory curriculum of no less than 75 percent of the hours of schooling, and about another one-quarter of the respondents support a compulsory core program of no less than 50 percent. Conversely, only 23 percent found it unnecessary for the State to set a core curriculum in the basic areas. This was consistent with the position regarding sanctions to be imposed on schools that do not follow the core curriculum. About three-quarters of the respondents believe that sanctions should be imposed – from a full ban to operate the school to budgetary reductions.

The relationship between Jewish respondents' level of religious observance and their responses was as expected. Support for a core curriculum of no less than 75 percent of hours of schooling decreases with the rise in the level of religious observance, from 50 percent among those who consider themselves secular, to 45 percent among traditionally observant, 25 percent among the modern-Orthodox and 5 percent among the ultra-Orthodox. While the ultra-Orthodox community's overwhelming objection (76 percent) to a core curriculum is not surprising, still one-quarter of this population group supports, in varying proportions, the introduction of a core curriculum into the education system.

An interesting phenomenon is that the percentage of Israeli Arabs who support the introduction of a core curriculum is similar to that of traditionally observant Jews (45 percent) (see Figure 9). This support is higher than the overall average (and it is higher among secular Israeli Arabs than among religious Israeli Arabs – 56 versus 40 percent, respectively). This support goes to a core curriculum of no less than 75 percent of the curriculum. This is a very important finding in light of widespread public sentiment that this population group tends in recent years to highlight its distinction from the Israeli society.

Figure 9
Support for Core Curriculum*
by level of religious observance, 2009



* Two more categories were offered in the question: core courses will be no less than 50% of the hours and – no less than 1/3 of the hours.

Source: Taub Center, Social Survey, various years.

Another interesting point is the connection between strong support of introducing the core curriculum and respondents' age: support for a core curriculum increased with the rise in age, from 32 percent among young people (up to age 29) to 55 percent among people aged 65+. It was also found that younger respondents are more likely to object to sanctions against schools that do not teach the core curriculum.

No relationship was found between support for introducing a core curriculum and level of education, although there was a relationship with rising levels of income. Perhaps the reason for greater support for the core curriculum within population groups with higher-than-average income is a higher proportion of secular Jews in this group.

6. A Question of "Health"

The health services basket to which the public in Israel is entitled has been set in the National Health Insurance Law about 15 years ago. Israeli residents are entitled to healthcare services from sick funds and have the freedom to choose and switch between funds. The level of healthcare is considered relatively high by international standards. In recent years, however, the public was increasingly required to participate in the cost of services such as specialist consultation, some essential services and various medical equipment. Also, there was a significant increase in the co-payment for medications

Since the first survey conducted by the Taub Center in 1999, the public's level of satisfaction with healthcare services has been examined both on an overall satisfaction level (the assessment level of healthcare services provided to the public in general) and on the personal and family level (the level of individual satisfaction with the services for the respondent and his family). These questions were phrased consistently

over time.⁶ In addition, respondents were asked about their avoidance of using essential services due to the required co-payment. The rate of affirmative responses to this question indicates a worrying phenomenon in the area of public health, with a serious impact on the deteriorating level of public health.

The first and more general question was “*Compared to one or two years ago, do you think the level of healthcare services given to the Israeli public has changed?*” Responses in the latest survey indicate that about one-quarter of the public believe that it had deteriorated, another 44 percent believe that there was no change, and about one-third believe that it had improved over the last years. If we compare the answers with previous years, we can see a trend of improvement at the beginning of the decade, but it stopped in the middle of the decade.⁷ In 2004 the rate of those who believed that it had worsened was exceptionally high and reached a peak. In comparison, this year the rate of those who believe that it had improved increased and the rates of those who believe it had worsened remained stable (see table below).

⁶ The question about healthcare services appeared in all the survey's years, but in the years 1999-2002 and 2004 the phrasing was about healthcare services in general, and in the years 2003, 2005, 2006, 2007 and this year (2009) we referred in the question to the survey interviewee's healthcare services specifically, i.e. the services provided to him and his family.

⁷ It is interesting to note that in the past we presented an international comparison of satisfaction with healthcare services that showed higher satisfaction level in Israel compared to Australia, the United States, the United Kingdom, New Zealand and Canada (see: The Taub Center, 2005 – Health Care Chapter, p. 153). However, a similar comparison with those countries today would probably not indicate that the healthcare system stood up to the challenge of maintaining the relatively high level of satisfaction.

Table 13. Responses to the question: *“Compared to one or two years ago, do you think there was a change in the level of health-care services given to the Israeli public?”* (percent)

	1999	2000	2002	2004	2009
They improved significantly or somewhat	36	47	46	23	32
They have not changed	44	41	35	40	44
They have declined significantly or somewhat	20	10	23	37	24

It is interesting to examine the differences between population groups, as there are probably different assessments due to disparities in accessibility to healthcare services. However, the general evaluation of services may not be the product of personal experience alone, as we shall see below. Apparently, the sense that healthcare services have generally worsened increases with the age of respondents, from 13 percent among young people (aged 20-29) to 28 percent among the elderly. Presumably, despite the fact that the question refers to healthcare services in general, responses are affected by their sense about services accessible to them or those close to them, and thus the heavier users of healthcare services respond more than others to a deterioration.

A sense of improvement is reported in particularly high rates by the ultra-Orthodox: 51 percent believe that services have improved compared to 32 percent on average for the entire population. This result was noted in past surveys, and presumably it indicates a real improvement in the services that are accessible today to the ultra-Orthodox population, as well as their greater openness to using services offered by the sick funds. Overall the survey indicates a relationship between degree of religious observance of respondents and changes in healthcare services: the rate of those who report improvement declines with the increasing levels of religious observance, from 51 percent, as stated, among the ultra-Orthodox, to 31 percent among modern-Orthodox religious and

traditionally observant and to only 26 percent among the secular community.

More Israeli Arabs than Israeli Jews have the impression that health-care services have improved (on average). Most likely, the finding reflects a real improvement in accessibility to healthcare services to this sector in recent years as was found with the ultra-Orthodox. These two populations assessed that there was an improvement in healthcare services in general, despite the trend of increasing disparity in the healthcare system expressed by a rise in household participation in paying for healthcare services.

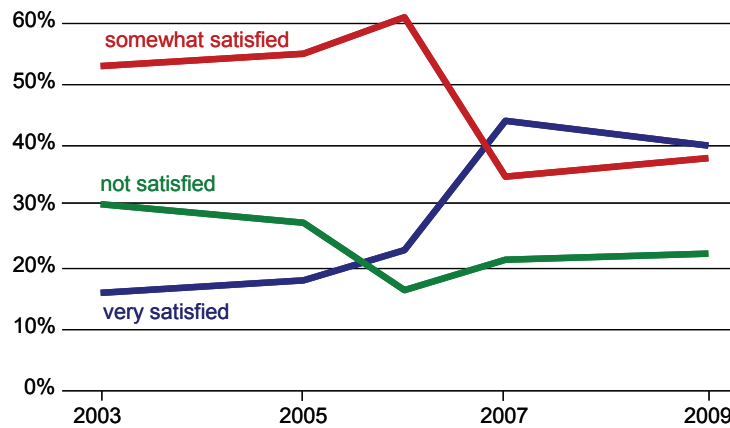
The second question in the cluster examined the satisfaction of survey participants and their family members with the services they receive from their sick fund (this year we asked both questions, but, as stated, not so in all previous years). A certain difference emerges from the responses when passing from their general assessment of the healthcare services to the personal and family level of services.

It seems that a fairly high proportion, over three-quarters of the public, are satisfied (to various degrees) with the services they receive. This level was stable in the past years as was the number of those who described themselves as “very satisfied” compared to the middle of the decade. 22 percent of those questioned responded that they are not very satisfied or not at all satisfied. While the rate of those dissatisfied rose slightly since 2006, it is lower than 2003-2005 (Figure 10).

Regarding differences between population groups, we did not find a significant decline in satisfaction with increasing age to the same degree as the previous question, and the rate of dissatisfied among the elderly is even lower than average. That means that responses by the elderly to the previous question apparently do not come from the service they receive personally, but express their general assessment. The ultra-Orthodox, who stood out in their positive assessment of the services in general, were also very pleased with the service provided to them and their families, at a slightly higher rate than average, and Israeli Arabs are about average in

the rate of very satisfied but slightly higher in the rate of those not at all satisfied (29 percent) compared with 22 percent on average.

Figure 10
Satisfaction with Healthcare Services
 2003-2009 (percent)



Source: Taub Center, Social Survey, various years.

Similar data were found in a number of other surveys, such as the Central Bureau of Statistics (CBS) social survey and the Myers-Joint-Brookdale Institute's bi-annual survey (Gross, Brammli-Greenberg, Weitzberg, 2008; various years). In the latest CBS survey for 2007, it was found that about two-thirds of 20-year-olds and older (67 percent) think that the healthcare system in Israel is well functioning as do 89 percent of Israeli Arabs and 63 percent of Israeli Jews (CBS, 2009). A general assessment of the functioning of the healthcare system in the Myers-Joint-Brookdale Institute survey indicates a rise in those who are very satisfied, 63 percent compared with 57 percent in 2005 (op.cit. 2008).

The Myers-Joint-Brookdale Institute findings indicate that the satisfaction rates with the healthcare system are lower than the satisfaction with sick fund services, an annually recurring finding in the Taub Center surveys as well. The same survey also finds that 88 percent of the public report satisfaction with their sick fund (op.cit., 2008), and among Israeli Arabs the rate was above average.

The next question in the healthcare cluster looks into an additional area, and is an accepted indicator of use, accessibility and equity of the healthcare services. Survey participants were asked: *“In the past year, have you or any of your family members refrained from a necessary medical service, such as a doctor visit, purchase of medications or medical equipment, etc. due to the price you were required to pay for the service?”* This question was included in most of the surveys conducted by the Taub Center over the past decade and it shows a stable, consistent and worrying trend: about 20 percent of the public report that they had to forgo a medical service during the past year, in various frequencies, due to the requirement to pay for it.

Especially worrisome is the fact that among the population groups a few weak groups stand out with an even higher rate of forgoing a medical service or the purchase of medication: in particular, the poorly educated population group, where over 40 percent reported that they had to forgo a medical service at least once in the past year (this group constitutes five percent of the sample). Among Israeli Arabs there were especially high rates: 32 percent avoided a necessary medical service, despite the fact that the general satisfaction of Israeli Arabs with healthcare services was similar to the average. Among those with low income this rate reached 30 percent and it declines steadily with income in very clear steps. An interesting finding in the survey is that rates of forgoing necessary medical services due to cost are above average among the very young, 18 to 22-year-olds. (It should be noted that the group constitutes nearly nine percent in our sample, and is not marginal at all.)

A similar question appears in many other surveys. Thus, for instance, the Hebrew University announced recently, on the occasion of the Day

for the Elderly, that 14 percent of 50-year-olds and older in Israel forgo health services due to their high cost (Litvin, Sapir, 2009). The study indicated that this phenomenon is especially prevalent among people in their 50s and 60s, more than those 70 and older, and that it is influenced by their perception of their economic ability. The authors compared their findings with select European countries, and they point out that these proportions are much higher, three- or four-fold, compared to them. The study found that people who experienced economic distress tended more often to forgo health services due to their cost, compared to others. This finding appears again and again, as stated, in different studies conducted in the field.

The latest survey by Gross et al. (op.cit., 2008) reports that in contrast to the surveys mentioned above, there was a decline in those who claimed that they had to forgo medical treatment or prescription medications in the past year (12 percent in 2007 compared to 17 percent in 2005, excluding dentistry). In another survey, conducted a year ago for the Medical Union (Degani, A., Degani, R., 2008) several questions about forgoing medical services were asked, while differentiating between different types of services: 10 percent went without a doctor visit; 13 percent had to forgo the purchase of prescribed medications due to their high cost; 6 percent of parents had to forgo or restrict medical treatment for their children; and 13 percent did the same for medical treatment or help for elderly parents. In total, the findings show that 31 percent went without at least one medical service during the year preceding the survey. This proportion was higher in the north, in population groups making minimum wages per family, the poorly educated, Israeli Arabs and ultra-Orthodox.

7. Conclusion

The findings of the Taub Center's social survey and the Taub Index of Social Confidence have been published for over a decade and present, over the years, the sense of welfare and social confidence of the public and of the public's attitude to its standard of living, social disparities, violence in society and various social services. This comes alongside the public's expectations from the government in the areas of social welfare and social services. The Taub Index of Social Confidence which is calculated using a number of fixed questions from the survey, provides a complementary indicator of social well-being when analyzed alongside the Taub Center's annual report

The Social Survey findings add a significant dimension to the other parts of this report on social services and their development, in two ways: one is whether the service recipient feels that he receives the services he expects, or how he assesses his welfare in various areas; the other is how the social situation is perceived by the citizen and what he "knows" about the allocation of resources to the public, in general, and about the development of services. This can provide feedback for decision makers regarding policy planning, taking into account the major emphases that attract the public's attention.

Comparing the picture of the situation provided by responses to the survey and the quantitative "objective data" about the situation shows that the public has a pretty good idea of the allocation of resources for social services and their development. The Taub Index also accurately reflects the socioeconomic developments over the years.

In recent years, a number of indices have been regularly published for quantifying the impression of major social phenomena in Israel. Some of them are based on common social indicators and others come from processing and analysis of regularly conducted public opinion surveys, shedding light on various areas of the social life. We found it necessary to comment briefly on the relationship between the Taub Center Social Survey and some of these surveys and indices.

The various surveys make a great contribution to the enrichment of the public discourse. The publication of quantitative indicators and results of surveys, which can serve to focus public discourse, attract the attention of the public and its leaders – the decision makers – to issues that are of interest and concern to the public.

The Social Strength Index, published since 2003 at the initiative of the Social Security Council and made public in the *Sderot Conference for Society*, helps conceptualize key trends in the strength of Israeli society (See: Reut Institute, 2009). This year the index found, like the Taub Center survey, that violence is the element causing the greatest concern for the Israeli public according to 81 percent of 2009 survey respondents, compared with 73 percent in the previous year. Furthermore, for the first time, violence was ranked first versus government corruption, with the issue of poverty and disparity between rich and poor in third place.

It is interesting to note that on the basis of a wide ranging survey conducted by the Harold Hartog School of Government and Policy at Tel-Aviv University (2006), a Criminal Violence Index was constructed from three sub-Indices: the Index of Concern with Criminal Violence (88 percent in May 2006 versus 85 percent in January 2005 and 83 percent in July 2004); the Index of Personal Injury from Criminal Violence (a stable 12 percent in all three surveys); and the Index of Inefficiency in Handling Criminal Violence. The survey indicated that criminal violence is the issue that concerns the Israeli public most of all, after ranking it highest against 10 other key concerns – 25 percent of the public indicated criminal violence in the Israeli society (versus 20 percent for the security situation (2006), 16 percent for the economic situation, and low percentages for a variety of other issues).

The Social Strength Index this year indicated that social and economic issues were considered more important than security issues. This finding is corroborated by the findings of the Taub Center survey, both in responses to the question about prioritizing the issues on the government's agenda, and in the public's choice of areas for

improvement for which the public is willing to pay more taxes, as presented in this chapter.

The concern with the inability to “age with dignity” surfaces for a number of years in the Taub Center survey, reflected in over 40 percent of respondents stating that they are not guaranteed an adequate standard of living in old age – twice the rate of those who believe that their income at old age will allow them to live with dignity. It is noteworthy that the Social Strength Index showed this year that 60 percent of respondents are concerned with this issue.

It is clear that the social reality in Israel is seen similarly in a large number of surveys. Given the consistency of surveys conducted regularly, and the correlation of findings across surveys conducted by different entities and at different points in time, it is incumbent on decision makers to be aware of the findings from the surveys of the public’s preferences, criticism and assessment of government policy.

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