

The Herbert M. Singer
Annual Report Series

STATE OF THE NATION REPORT

**Society, Economy and Policy
in Israel**

2011-2012

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, December 2012

Taub Center for Social Policy Studies in Israel

Established in 1982 under the leadership and vision of Herbert M. Singer, Henry Taub, and the American Jewish Joint Distribution Committee (JDC), the Center is funded by a permanent endowment created by the Henry and Marilyn Taub Foundation, the Herbert M. and Nell Singer Foundation, Jane and John Colman, the Kolker-Saxon-Hallock Family Foundation, the Milton A. and Roslyn Z. Wolf Family Foundation, and the JDC.

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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Foreword

The Taub Center turned 30 this year. It was originally established in conjunction with the Prime Minister's Office as the Center for Social Policy Studies in 1982 by visionaries in the Joint Distribution Committee (JDC) who understood the need for policy makers and the public to receive a professional, evidence-based perspective on Israel that could move the public discussion and the subsequent decision making forward based on more accurate foundations.

Since those early days, the Center has evolved and developed its unique research and policy focus. In recent years, the Taub Center has taken the lead in emphasizing long-term perspectives in its analyses. The Center's seminal studies on Israel's "big picture" have led to a growing public internalization of the country's problematic long-run trajectories. This perspective is particularly important these days. While the Western world has still not escaped the worst recession since the Great Depression, and Israel is still in the process of recovering from its own major recession a decade ago, casual observation may lead some to conclude that Israel is closing the gap with the advanced countries.

But the larger perspective shows why such cyclical behavior purportedly indicating convergence can be misleading and should not be confused with relatively steady long-run trajectories that show an Israel with a standard of living that has been falling further and further behind leading Western countries for almost four decades. Some of Israel's primary physical and human capital infrastructures have been allowed to languish and the country is only beginning to grasp the implications.

There have been some major budgetary corrections in recent years, but these are nonetheless a "drop in the bucket" compared to the primary problem: the overall national priorities that have driven the allocation of Israel's scarce public resources have put the country on socioeconomic

trajectories that are simply unsustainable in the long run – with all of the associated existential implications. A country having to shoulder such a tremendous defense burden to ensure its very survival must have the wisdom, the wherewithal and the leadership to determine how best to distribute its remaining civilian resources in ways that benefit the general good rather than the private and sectoral interests of the few and the politically powerful.

This year's *State of the Nation Report* continues in the tradition of recent volumes. It focuses on the current socioeconomic situation and highlights some aspects that contributed to the massive social protests in 2011 – while framing these within the larger historical and international perspectives.

Once again, some of Israel's most prominent researchers contributed to this volume. It is a rare manuscript in Israel that manages to bring so many respected scholars from such diverse backgrounds and disciplines – note the interdisciplinary backgrounds of this *Report's* contributors – together on such issues in one volume. This does not mean that we all agree in our interpretation of the problems. In fact, the opposite is often true, and that is one of the important features that make the Taub Center so unique. What brings us all together is the attempt to get the facts right and the need to provide as accurate an evidence-based picture as possible, with professional interpretations and recommendations that are allowed – and often, expected – to differ.

The Taub Center has five Policy Programs in the areas of health, labor, social welfare, education, and economic policy and the Chairs of these Programs, all leading researchers in their fields from some of Israel's top universities – respectively are: Dov Chernichovsky (economist, Ben-Gurion University), Ayal Kimhi (economist, Hebrew University), Michael Shalev (sociologist and political scientist, Hebrew University), Yossi Shavit (sociologist, Tel-Aviv University) and Eran Yashiv (economist, Tel-Aviv University). Each has contributed here.

In addition, one of Israel's foremost economists, Reuben Gronau from the Hebrew University and a member of the Taub Center's Economic Policy Program contributed a piece on the privatization of Israel's social services while one of America's leading education researchers, Adam Gamoran, a sociologist from the University of Wisconsin and a member of the Center's International Advisory Council, wrote on incentives and investments in education. Veteran Taub Center senior education policy researcher, Nachum Blass, updates in this realm as well. The Dean of the Hebrew University's School of Social Work and one of the country's most respected scholars in his field, John Gal, a Policy Fellow – and former Chair – of the Taub Center's Social Welfare Policy Program, partnered in the writing of the chapter on the cost of social welfare.

This issue also marks the important contributions of the Center's excellent in-house researchers, Sagit Azary-Viesel, Haim Bleikh, Yulia Cogan, Nir Eilam, Eitan Regev, and Kyrill Shraberman, who have co-authored sections in the *Report*. Carmel Blank, recipient of the Taub Center's Lautman Education Fellowship, and Yael Navon, two Tel-Aviv University doctoral students in sociology also co-authored (separately) chapters.

The Taub Center is currently in the midst of implementing a multi-year strategic plan for significantly upgrading its research and dissemination capacity. To facilitate this implementation, the Center's structure underwent an extensive reorganization this past year. To our ranks, we welcome Suzanne Patt Benvenisti as managing director, Michal Rubin as director of strategic partnerships, Inbal Gafni as editor of the Center's publications, and Daniel Premysler, our new in-house researcher. We also welcome back Haya Stier from Tel-Aviv University, who has returned to chair the Social Welfare Policy Program after completing her sabbatical abroad, and thank the outgoing Chair of the Program, Michael Shalev, who is now enjoying his sabbatical abroad. Many thanks to Laura Brass and Hedva Elmackias, whose invaluable support in every realm has made it possible to put out this *Report* and to keep the Taub Center moving forward. Thanks also to Asher Meir for his

instrumental role in putting out our *Rosshandler Bulletin Series*, and to the important assistance provided by Kasanesh Ambao and Aharon Cohen. This is a wonderful team that has been coming together at the Taub Center and I am indebted to you all.

Looking forward, Israel is facing some tremendous challenges – and in contrast to conventional wisdom, not all of its existential threats are external. The Taub Center has focused, and will continue to focus, on some of the primary domestic foundations that need attention. It is our duty, our obligation – and our mission.

Dan Ben-David

Executive Director

Taub Center for Social Policy Studies

I. THE MACRO PICTURE

The Start-Up Nation's Threat from Within

Dan Ben-David*

Abstract

Three main vantage points are brought together in this chapter: (1) Israel's relatively good economic performance in recent years – at least, in comparison with other Western countries that have still not emerged from the recession; (2) motivations for the wave of social protests that erupted in Israel in the summer of 2011, and; (3) the big picture, which is the primary one, incorporating the first two vantage points with additional issues, and framing them within long-run and international contexts. This third vantage point focuses on the very problematic trajectories that Israel has been on for decades and the state of some of the country's primary infrastructures – human capital and transportation – that underlie these trajectories. Space limitations do not make it possible to provide a full exposition of all three vantage points here. However, the conventional socioeconomic discussion in Israel often makes it difficult to see the forest for the trees. Hence, the emphasis here is on a perspective from a vantage point far above, so that it will be possible to see, to understand, and to internalize the magnitude and the implications of the entire picture.

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

I am indebted to Taub Center researchers, Yulia Cogan, Nir Eilam and Eitan Regev, each of whom provided considerable assistance in putting together some of the various sections of this paper. I also thank Nachum Blass, Haim Bleikh, Dov Chernichovsky, and Ayal Kimhi for their valuable comments and suggestions.

Israel's macro picture can be divided into three non-exclusive parts. The first are primary macroeconomic indices from recent years that, compared to leading Western countries, look quite favorable for Israel. The second aspect of the current macro picture is related to the causes underlying the massive social protests that came to a head in 2011 and are still simmering beneath the surface. And the third aspect of the current picture is how it relates to the bigger – long-run – macro trajectories that Israel is situated on.

These parts are not mutually exclusive because the current macro picture is rosy only in relative terms. The West – mainly the US and Europe – has been in the most severe economic downturn since the Great Depression while Israel's primary recession in recent decades occurred a decade ago, during the massive terror wave that accompanied the *intifada*. Since then, Israel has been emerging from that very problematic period while parts of the West are still undergoing some very difficult years. In the final analysis, both recent trends – Israel's and the West's – are relatively short-term and the respective countries will eventually return to their fairly steady long-run economic growth paths. The primary problem, as will be highlighted later in this chapter, is not with how the country is faring vis-à-vis countries currently experiencing a downturn, but rather with Israel's problematic long-run trajectories.

The issue of the summer protests in 2011 had to do with socioeconomic problems that are here and now in Israel: among these, high prices, social services in decline and inequality in incomes and services. Two chapters in this *Report* deal directly with some of the protest's underlying issues. The chapter by Michael Shalev, Johnny Gal and Sagit Azary-Viesel ("The Cost of Social Welfare: Israel in Comparative Perspective") focuses on underlying grievances of the middle class – focusing on young adults in their late twenties and early thirties since the 1990s – while the chapter by Reuben Gronau ("The Privatization of Social Services in Israel: Considerations and Concerns") looks at some of the implications of the privatization process that the government has adopted in administering social services. Some of these

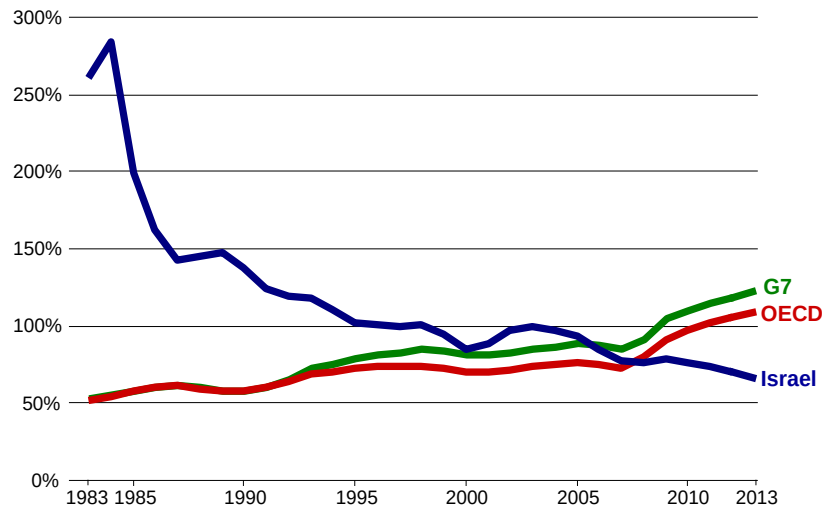
problems are due to insufficient competition, others to inadequate regulation, and still others to a host of idiosyncratic issues with effects that differ across population sectors and geographic regions. One thing that many of them share is that they are tips of a much larger iceberg – and that iceberg is characterized by socioeconomic trajectories that are simply unsustainable in the long-run. These trends were highlighted in the *State of the Nation Report 2009* and as will be shown here, these problematic long-term trends continue unabated.

1. Some Aspects of the Current Macro Picture

Government Debt

Israel's macroeconomic behavior until the mid-1980s was so problematic that the government's extraordinarily high spending led to triple digit inflation – reaching 450 percent in 1984, the peak year – that threatened the economic viability of the country. If debt to GDP (gross domestic product) ratios in Europe that hover around 100 percent are considered high today, imagine the implications of such a ratio nearly reaching 300 percent, as was the case in Israel in 1984 (see Figure 1, which includes OECD projections through the year 2013). Then, when it was a step away from the brink, a far-reaching and enormously successful stabilization program was adopted that helped the country implement a dramatic change in direction in 1985, moving back from the brink and towards economic solvency.

Figure 1
Debt-GDP ratio, 1983-2013*



* OECD projections for 2012 and 2013.

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

Data: Bank of Israel, OECD Economic Outlook.

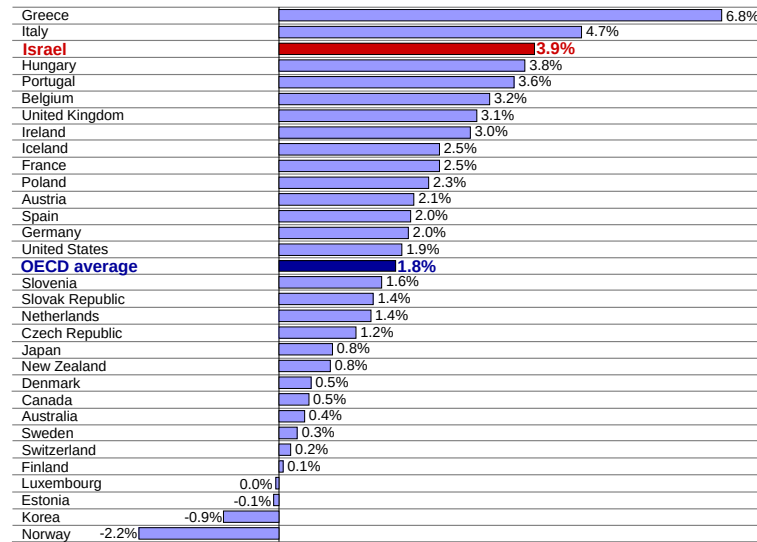
As documented in last year's *State of the Nation Report 2010* (Ben-David 2011b), while GDP per capita steadily increased, government after government kept a lid on expenditures with almost no change in real (i.e., after discounting inflation) government spending per capita during most of the past quarter century. The effect has been the steady multi-decade decline in Israel's debt-GDP ratio. The country has changed places with the OECD, not to mention the G7 countries that lead the Western world.¹ The average debt-GDP ratio in the OECD rose to 107.6 percent in 2011 (it is higher today) while debt in the G7 countries was 113.8 percent of GDP. By contrast, Israel's debt fell to 74.2 percent of GDP.

¹ The G7 countries include the United States, Canada, Japan, France, Germany, Italy, and the United Kingdom.

But while Israel and the OECD have switched places relative to each other's positions a decade ago, that picture is a bit misleading. As the Bank of Israel noted in its recent *Annual Report* (2012), the long-run interest rates that Israel borrows at today are still very high – in some cases, double – the rates charged to countries with substantially higher debt-GDP ratios.

Consequently, Israel's interest payments relative to its GDP are still much higher than the OECD average (Figure 2). In fact, Israel's share of net interest payments out of GDP is above all but two OECD countries: Greece and Italy, both of which are facing considerable economic distress. In other words, Israel's margin of error on the issue of debt is extremely small. Despite the steady reduction of its share of public expenditures to GDP for over a quarter century reaching a level that is among the lowest in the Western world – and the resultant, relative low debt-GDP ratio – Israel must still pay a high risk premium on its loans that raises the burden of these payments to nearly the top of the OECD.

Figure 2
Net interest payment on the government debt
 as percent of GDP, 2011



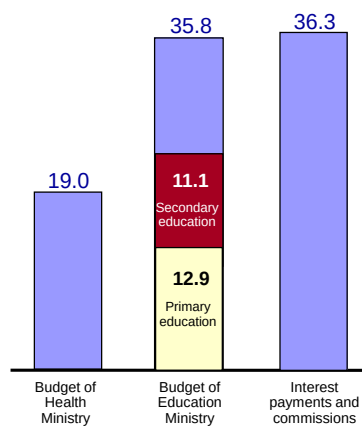
Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: OECD Economic Outlook.

To put these interest rate expenditures into a more meaningful perspective, Figure 3 shows Israel's interest payments in terms of their cost in NIS (shekels). In 2011, Israel's interest payments reached NIS 36.3 billion. This was the penalty imposed on the country for not living within its means and having to borrow. It should be remembered that these interest payments must be paid above and beyond the principal that

must be returned. This is essentially money that is lost to the government since it is not available for spending on other budgetary needs.²

Figure 3
Government budget, 2011
in NIS billions



Source: Dan Ben-David, *State of the Nation Report 2009* (updated).

Data: Ministry of Finance.

Note that this amount is 51 percent greater than the country's entire primary and secondary education budget, and exceeds the entire education budget including academic institutions. The amount that the government had to spend on interest payments was 91 percent greater than its entire allocation for the Ministry of Health.

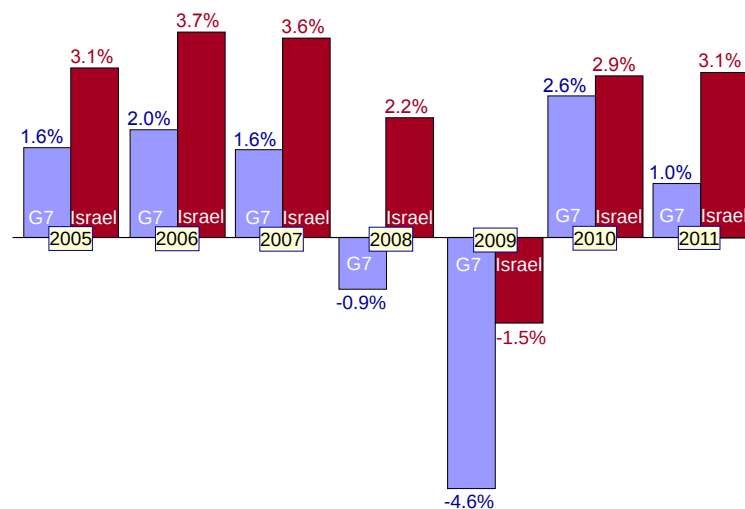
² This is not to say that all borrowing is bad. If it is used to finance a road that the next generation will also benefit from, for example, then there is no reason why they should not also participate in the financing of that road.

Therefore, it is difficult to over-exaggerate the importance of fiscal discipline. A lack of discipline is not only reflected in increasingly difficult access to international capital, it also takes a large bite out of the country's national priorities by substantially reducing the size of the budget remaining for dealing with the primary problems.

Economic Growth

When it comes to economic growth in the three years prior to the recent economic downturn in the West, Israel's growth rates exceeded those of the seven top Western economies (Figure 4). When the recession hit in 2008, the G7 countries moved into negative growth territory while Israel's growth rate fell, but still remained positive. The brunt of the recession was felt in 2009, with both the G7 countries and Israel exhibiting negative per capita economic growth. In the tentative recovery years that followed, Israel's growth rate continued to exceed the G7 rate.

Figure 4
Growth in GDP per capita
changes in GDP per capita in G7 countries and Israel, 2005-2011

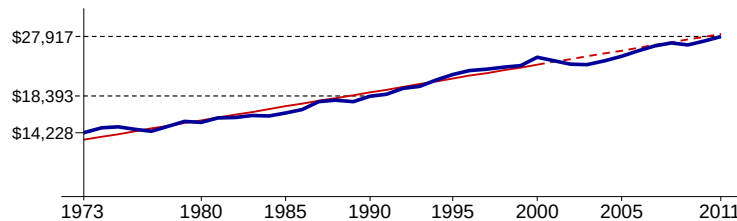


Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: OECD.

While this outcome is definitely preferable to the alternatives – for Israel – it is also a bit deceiving. As Figure 5 shows, Israel has been on a very steady economic growth path since 1973 and all of the fast growth that has occurred in recent years has reflected a return to this long-run path. If one takes the trend line for GDP per capita between 1973 and 2000 (the solid red line in the graph) and extrapolates this trend for the next 11 years (the dotted red line) – which include the severe recession in Israel in the early part of the last decade, the subsequent period of recovery, the Western recession and the recovery from that – then Israel in 2011 has essentially returned to the same long-run growth path that it has been on since the 1970s.

Figure 5
Israel's long-run growth path
GDP per capita, 1973-2011*



* In 2011 international dollars, logarithmic scale. The continuous red line corresponds to the level of GDP per capita from 1973-2000. The broken red line is an extrapolation over the next 11 years. The blue line corresponds to the actual growth path.

Source: Dan Ben-David, *State of the Nation Report 2009* (updated).

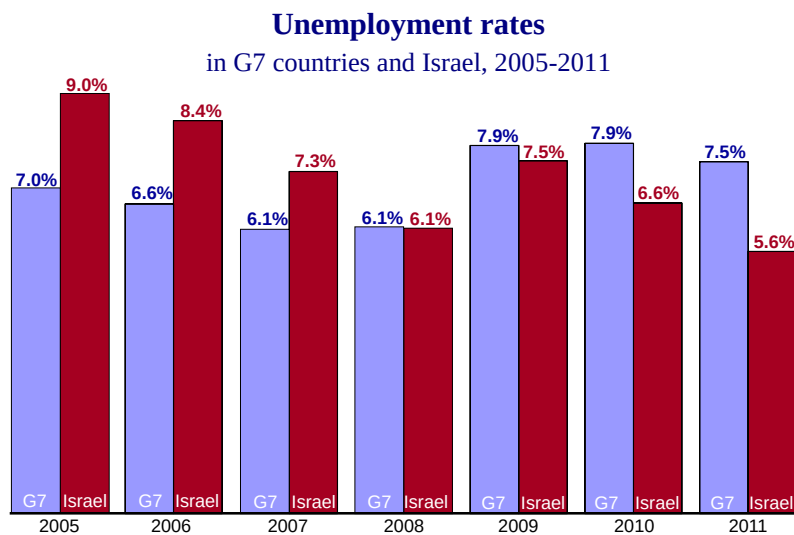
Data: Central Bureau of Statistics.

The problem is that this steady multi-decade path reflects economic growth that is slower than that in the West's leading countries over the long-run, which in turn means that Israel's living standards have been falling further and further behind those of the leading Western countries for decades (for a more complete analysis see Ben-David, 2010b).

Unemployment

Another area in which Israel has experienced substantial gains in recent years is the area of unemployment/employment.³ Unemployment rates have been falling for several years, from double digit levels in the 1990s and in the early part of the last decade. The decline is readily evident in Figure 6, which shows unemployment in Israel falling to G7 levels by 2008. In 2009, with the full brunt of the severe recession in the West, unemployment rates rose in Israel and in the G7 countries. They have since fallen in Israel to levels below the G7 as those countries struggle to emerge from the deep recession that they have undergone.

Figure 6



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

Data: OECD.

³ At the time of this writing, unemployment in Israel has begun to rise again, though it is still too early to determine the extent of the problem and severity of the situation.

While the decline in Israel's unemployment rates is a very welcome turn of events compared to previous decades, it is necessary to keep in mind what this statistic shows and what it does not. Rates of unemployment measure the share of individuals not finding work out of those participating in the labor force. It does not include those who are not participating in the labor force altogether – and who, by definition, are not looking for work. The primary problem in Israel is the large size of this latter group.

Eran Yashiv shows in his chapter (“A Macro Perspective of the Economy and Society in Israel”) that as unemployment rates have fallen since the deep recession and *intifada* in the early part of the past decade, labor force participation rates have increased – i.e., both indicators are moving in positive directions. However, as will be shown, the number of individuals who are not employed as a share of the entire population is still relatively high in Israel when compared to other countries in the West.

In summation of this section, a comparison of some of Israel's primary economic indicators to those in Western nations indicates that Israel has (until the time of this writing) weathered the global economic crisis better than other countries. However, narrowing the focus only to recent years – when the West is in its serious crisis, while Israel has emerged from its major crisis a decade ago – yields a picture that is far from an accurate socioeconomic reflection of Israel within a long-run comparative international perspective. Elements of this long-run picture will be provided in the following sections of this chapter, but first, a glimpse at some of the underlying symptoms leading to the social unrest that surfaced last summer.

2. The Tip of the Iceberg: Israel's 2011 Summer Protests

If the current economic picture is so bright in comparison with the West, as some of the earlier graphs would appear to indicate, then what brought 400,000 Israelis – in a country of under eight million – out into the streets one Saturday night in August in one of the most massive protests that the country has ever witnessed, a nation-wide protest characterized by several weeks of improvised tent cities on Israel's boulevards that were punctuated by smaller scale rallies? Different issues bothered different groups to varying degrees, and it was not just one primary problem that brought people together under the “social justice” umbrella that served as the slogan for the summer of 2011. The heads of the Taub Center's Policy Programs – all authors in this *Report* – published a manuscript titled *A New Public Agenda for Israel* (2011) last summer which documented the principal reasons underlying the protests and suggested a number of solutions. A sampling of some of these issues is provided here (issues such as inequality in incomes and services are addressed in other chapters of this *Report*).

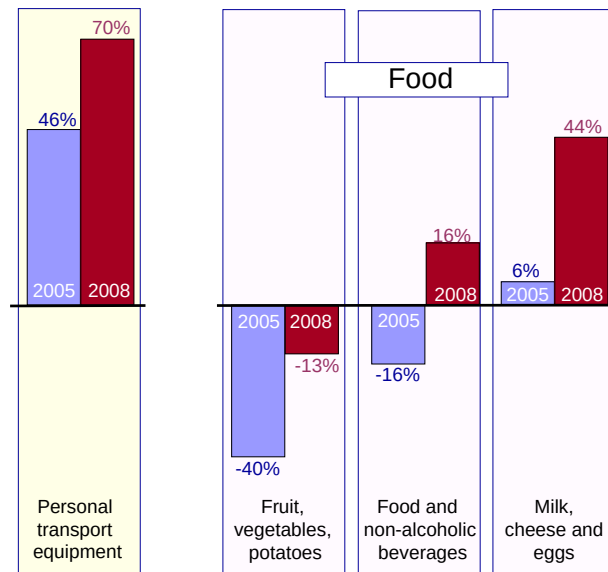
Food Prices

One of the catalysts that kicked off the summer protests was the price of cottage cheese – viewed by many as excessively high – together with a host of other dairy products considered overly expensive. One way to compare prices across countries is via the index of purchasing power parities, which compares the consumer prices of various baskets of goods around the world. The OECD calculated just such an index of price comparisons in 2005 and in 2008. While 2008 is not particularly recent, the changes in some of the categories since 2005 are quite revealing.

Figure 7 compares food prices in Israel with the OECD average. In the case of dairy products (milk, cheese and eggs), Israeli prices in 2005 were 6 percent higher than the average price in the OECD countries. By

2008, the price gap between Israel and the OECD had risen to 44 percent. One of the main causes for these differences is the limited competition that exists in Israel in the manufacturing and distribution of dairy products.

Figure 7
Prices in Israel relative to the OECD average*



* The difference between prices in Israel and the average OECD prices.

Source: Dan Ben-David and Nir Eilam, Taub Center.

Data: OECD purchasing power parity.

It is important to keep in mind that these comparisons reflect only price differences and do not account for differences in the standard of living. To the extent that living standards in the OECD are higher than those in Israel, then this would only magnify the differences highlighted in Figure 7.

The price of other food products and non-alcoholic beverages in Israel was 16 percent cheaper than in the OECD in 2005 and 16 percent more expensive in 2008. Agricultural produce was less expensive in Israel in both 2005 and 2008, but the gaps fell from 40 percent to 13 percent by 2008.

Chernichovsky (2011, and in the chapter “Israel’s Healthcare System” in this report) provides evidence on how healthcare prices have substantially outpaced consumer price index growth. He also catalogues substantial growth in out-of-pocket medical expenses in Israel.

Prices of Vehicles and Housing

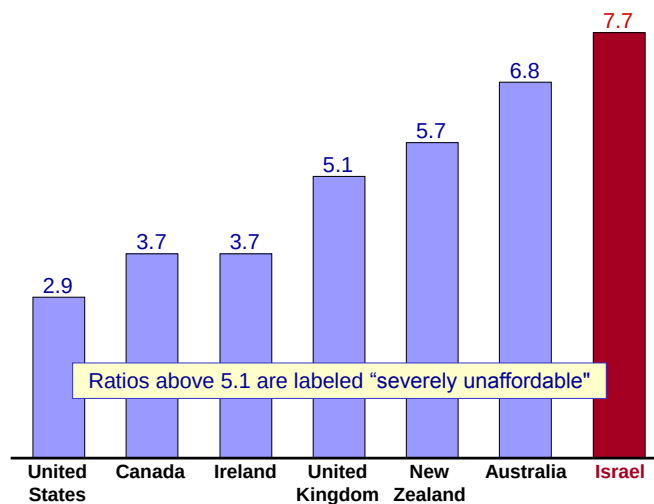
Two of the “big-ticket” items in any household budget are automobiles and housing. In the case of personal transport vehicles, Israeli prices exceeded the OECD average by 46 percent in 2005 and by 70 percent in 2008. Limited competition within Israel along with heavy taxes combined to yield this outcome.

In contrast with the price comparisons until now, the comparison of housing prices takes into account the income levels in the respective countries. A study conducted by Demographia focused on the number of median incomes that are needed to purchase the median housing in a number of different English-speaking countries.⁴ Above 5.1 years of income was considered to be “severely unaffordable.” As Figure 8 shows, it took 2.9 years of median income to purchase the median American home and 3.7 years to do so in Canada and Ireland. Housing is considerably more expensive in England (5.1 years), New Zealand (5.7 years) and Australia (6.8 years). In Israel, 7.7 years of median income are required to purchase the median apartment. In fact, the Israeli cost of housing – relative to income – is more expensive than housing in 32 of

⁴ When focusing on the median housing in each country, the focus is on the cost of the housing and no distinction is made between houses or apartments, nor does the study account for the size of the housing unit.

England's 33 metropolitan areas (including London) and more expensive than housing in 174 of America's 175 metropolitan areas (including New York City).

Figure 8
Number of years of work needed to buy a house, 2009
comparison of countries*



* Median house prices divided by annual median household incomes. The focus is on the representative housing price in each country rather than on specific housing characteristics (size, quality, etc.) that may differ across countries.

Source: Dan Ben-David and Nir Eilam, Taub Center.

Data: Demographia International Housing Affordability Survey.

There are a number of reasons commonly given for Israel's prohibitive housing prices. Among these is the country's Land Administration, which controls the government land (over 90 percent of the land in Israel) and operates inefficiently – to say the least – often as a

monopoly more intent on maximizing its profits than on improving the welfare of the residents. High demand for Israeli apartments by wealthy foreigners, who leave these apartments empty most of the year, is also considered by many to be a major cause of the high prices. These, among other reasons, are often cited as the primary causes for the very high housing prices in Israel.

As compelling as these reasons are – and they do indeed contribute to the problem that led so many young, middle-class Israelis into the streets to protest – they are really only a symptom of much more serious, endemic problems faced by Israeli society. It is, so to speak, just the tip of the iceberg – and it is this iceberg that warrants serious attention if the problems are to be treated at their source.

Not all housing in Israel is exorbitantly priced. There are outlying areas, in the geographic “peripheries” – as opposed to suburbs – where only a few Israeli want to live. Interestingly enough, the majority of these areas are not even far from a major city if one were to measure distance by air, but they are light years away in terms of the transportation infrastructure that physically connects them to the cities and also in terms of the quality of the majority of their schools. As a result, few people are willing to live in these areas and those who do so are primarily those who do not have a choice. Consequently, residents in the periphery have limited access to jobs and suffer economically, while their children have limited access to a good education and their socioeconomic mobility is impaired as they grow up.

Suppose, though, that the country invested heavily in these schools and in the transportation infrastructure that connects these areas to the cities. If schools there were at least as good as schools in the expensive cities, and if there were a fast, dependable and low-cost way to commute to the cities where the majority of the jobs are, then two of the primary problems facing young families would be solved – education for the children and employment for the adults. In light of Israel’s very small physical size, the vast majority of its population lives in what should be no more than a 30-45 minute commute to a large city. Young families

would then be able to benefit from the low housing prices in these areas without sacrificing their children's education or their careers.

Not only would the immediate housing needs of young middle-class families be met, though. If there were better schools in areas that could now be called suburbs rather than peripheries, and if employment prospects were increased as a result of a vastly improved transportation infrastructure, then the residents of these outlying areas would benefit even more. Their children would now receive a good education and be afforded the chance to escape the impoverished conditions of many of their parents, and the parents would have increased access to employment and be able to improve their economic conditions.

In a nutshell, this is the iceberg: a very large proportion – a proportion that is steadily increasing – of Israel's population is not receiving either the tools or the conditions to work in a modern economy. As a result, the country has extraordinarily high rates of poverty and income inequality compared to other Western countries, and compared to itself in the past. In addition, there is a shrinking share of the population that is capable of assimilating new technologies and ideas and developing them further. Such a capability is a necessary condition for the productivity increases essential for expanding economic growth and moving Israel onto a new long-run growth trajectory that would reduce the differences in living standards between it and the leading economies. On paper, the government is indeed spending more on education and transportation, but as has been detailed in past *State of the Nation Reports* as well as in this chapter, there is a major issue of how much and how this money is spent.

3. The Iceberg: Israel's Primary Socioeconomic Challenges

As Ben-David (2003, 2010) has shown, Israel is situated on a number of very problematic long-run socioeconomic trajectories since the 1970s. The country has much higher rates of poverty and income inequality than it did in the past and these are higher than what most other Western countries experience today. Instead of continuing to catch up with the leading Western countries, as it did in the 1950s and 1960s, Israel's standard of living – as reflected by its GDP per capita – has been progressing along a steady and slow long-run path that is causing it to fall increasingly behind the living standards in leading Western countries (this despite relative gains in recent years as Israel emerged from its major recession a decade ago and the West entered its own serious recession).

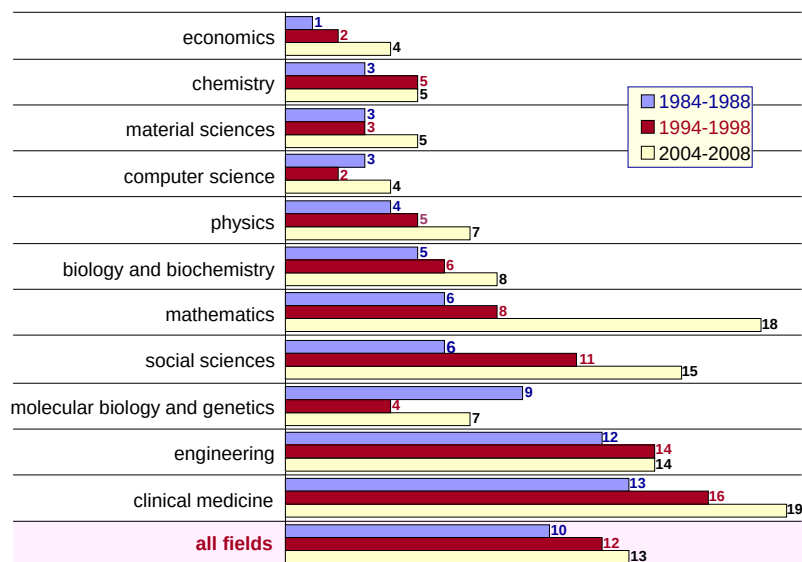
The key underlying reason for these long-run phenomena is that a very large and growing segment of Israel's population is not receiving either the necessary tools or the proper conditions to work in a competitive global marketplace. Some of these problems will be highlighted here.

Productivity

The principal element leading to economic growth is productivity. Productivity is driven by innovation, something that it would appear Israel is not lacking – either in the area of basic, academic research or in the business sector. A recent study by Uri Kirsh (2011) from the Technion highlights Israel's academic achievements in 11 important fields (Figure 9). In the fields of economics and chemistry, Israel was ranked in first and third place in the world, respectively, according to the average number of times that each of its academic articles was cited in the literature during the years 1984-1988. In addition, in the past decade, six Israelis have received Nobel Prizes in these disciplines. In all of the

fields analyzed, Israel was ranked 10th overall in the world. During the subsequent decade, there was a slight decline in most fields (and some improvement in the rankings of others) leading to an overall drop to 12th place in all fields. A further relative decline ensued in the past decade, with the country moving to 13th place overall. Even with the relative fall in recent decades, the number of citations of academic articles written by Israelis is still among the highest in the world – a very important indicator of originality and importance.

Figure 9
Israel's academic ranking in the world
 according to academic citations by article in selected fields

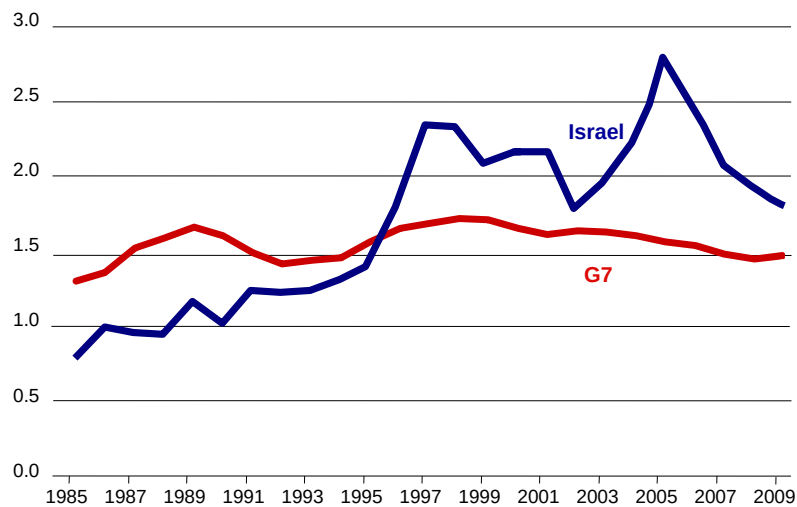


Source: Uri Kirsh.

Data: ISI Web of Knowledge.

Innovation in the business sector is more difficult to quantify, but one indicator in this area is patents. Figure 10 shows the number of patents filed in the G7 countries and in Israel between 1985 and 2009. These are patents filed in all three parts of the triad – the United States, the European Union and Japan – and they are discounted by GDP in order to facilitate comparison across countries. As indicated in the figure, the number of patents filed (relative to country size, as reflected by GDP) from the leading G7 countries was considerably higher than the number of patents filed by Israelis in 1985. However, while the number of G7 patents filed over the next quarter century increased at the same pace as GDP in the G7, the number of Israeli patents increased more quickly, eventually surpassing the G7 in the latter half of the 1990s and remaining higher ever since.

Figure 10
Patents by Israel and the G7, 1985-2009
 patents filed in all 3 parts of the triad*: US, EU and Japan
 per 1 billion dollars GDP**



* Patents filed in all three constitute 20-30 percent of all Israeli patents.

** Constant 2005 dollars, by PPP.

Source: Dan Ben-David, *State of the Nation Report 2009* (updated).

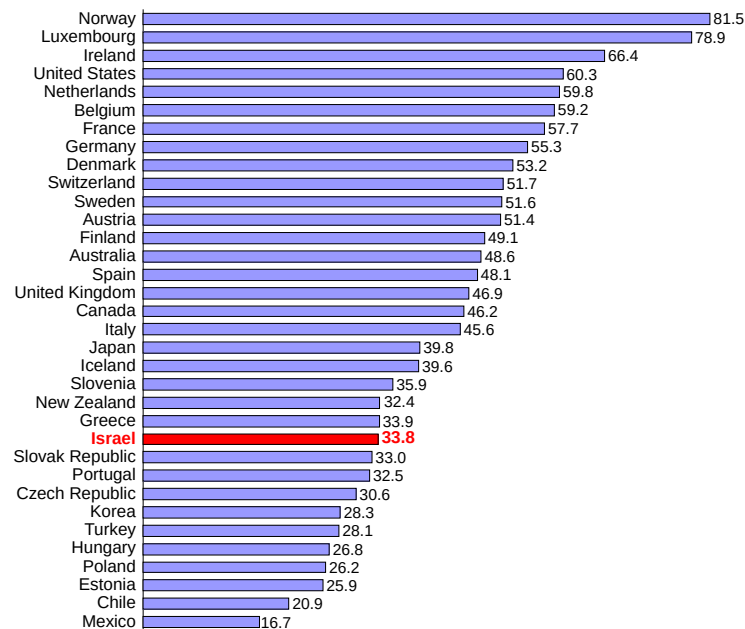
Data: OECD, World Bank.

So how is this relatively high level of Israeli innovation factoring into the country's productivity – and then into its living standards? Figure 11 suggests that the relation between the two is poor, at best. Labor productivity, which is defined by GDP per hour worked, is one of the more common ways to measure productivity in a country. In 2011, Israel's labor productivity was lower than the labor productivity in 23 of all 34 OECD countries.

Figure 11

Labor productivity, 2011

GDP per work-hour in 34 OECD countries, in dollars*



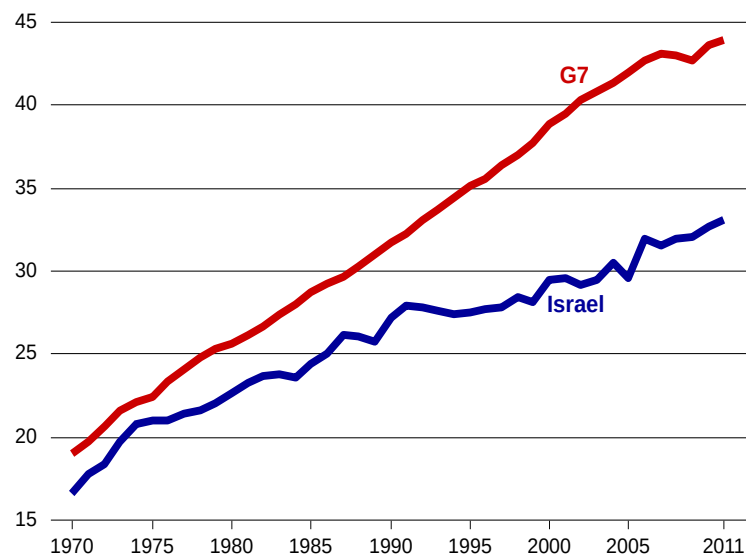
* GDP per work-hour in current PPP adjusted dollars.

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

Data: OECD.

Things were not always this way. Figure 12, first shown in Ben-David (2010a) and updated here, shows labor productivity in the G7 countries and in Israel since 1970. Labor productivity in the G7 countries increased at a very steady pace for three and a half decades, slowing down in recent years with the onset of the massive recession in these countries. Labor productivity in Israel grew faster than the G7 average until the mid-1970s. Since then, however, Israel's productivity has been falling further and further behind in relative terms – and falling with it, in relative terms, is Israel's standard of living.

Figure 12
Labor productivity, 1970-2011
 GDP per work-hour in 2005 dollars*



* GDP per work-hour in 2005 PPP adjusted dollars.

Source: Dan Ben-David, *State of the Nation Report 2009* (updated).

Data: Central Bureau of Statistics, Bank of Israel, OECD.

It should be pointed out that productivity is a measurement that applies only for individuals who are employed. Those who are not employed work no hours, do not contribute to GDP, and are therefore not included in either the numerator (GDP) or in the denominator (hours worked) of this measure. So the fact that fewer working age people work in Israel than in other countries only exacerbates the problem since living standards are reflected by GDP per capita.

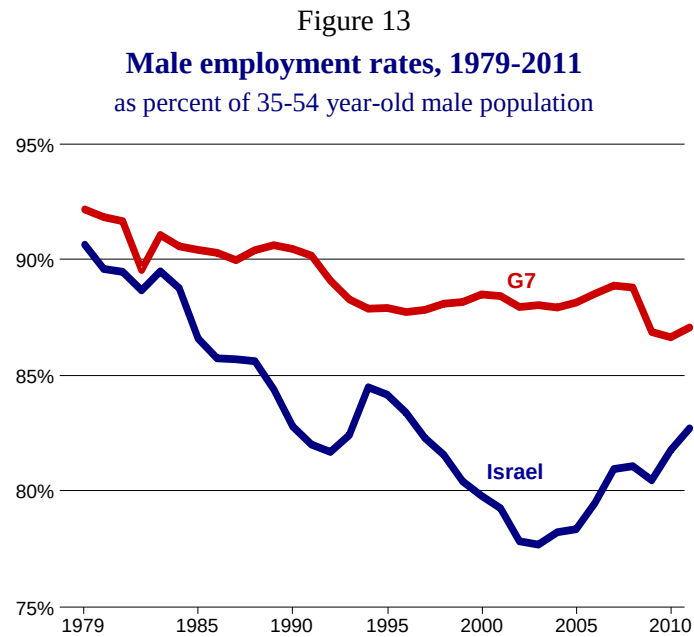
A country's physical and human capital infrastructures are key in creating the productivity improvements necessary for economic growth. In the case of the former, the transportation infrastructure previously discussed in the context of housing prices is elementary and crucial. If people and trucks are stuck in traffic jams, then they are not working – and more are needed to produce the same output, with lower productivity as a result. As will be shown, Israel's roads are among the most congested in the Western world while the rail alternatives are even less developed.

As for the country's human capital infrastructure, Israel's education system is discussed further in this chapter. Suffice to say at this point that achievement in core curriculum subjects by the nation's children has been consistently below every one of the 25 relevant OECD countries since the late 1990s (Ben-David 2010a, 2011c), with all that this implies regarding the future ability of these children to compete as adults on the international economic playing field.

Employment

Not only is Israel falling behind the OECD in terms of productivity, it is also lagging in terms of employment among males (employment levels among women are below those of the OECD, but have been exhibiting a slight convergence in recent decades). While employment rates among men have been declining throughout the Western world (and employment rates among women have been rising), the decline has been much more severe in Israel.

Figure 13 shows just how much more severe the Israeli employment decline has been. The focus in this figure is on prime working age men aged 35-54 in the G7 countries and in Israel.⁵ Just over three decades ago, in 1979, employment in both the G7 and in Israel topped 90 percent of the prime working age men. It then fell in the G7, until leveling off in the mid-nineties – and sharply falling in recent years with the onset of the recession in the West. Employment rates in Israel fell much more quickly and much further.



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

Data: Central Bureau of Statistics, OECD.

⁵ Due to compulsory military service in Israel, many men are still students in their mid to late twenties. In order to minimize this negative employment effect that is unique to Israel, the comparison here is for men between the ages of 35 and 54.

Despite a negative bubble in the early 1990s associated with the influx of immigrants from the former Soviet Union – who numbered about one-fifth of Israel's population – the recovery in the middle part of the decade was not to G7 levels but to the earlier downward trend. Another major negative bubble occurred in the early part of the last decade, with the onset of the *intifada* and the most serious recession that Israel has experienced in decades. This recession was followed by a substantial recovery in employment – one that accompanied the recovery in GDP per capita discussed previously and shown in earlier figures. Nonetheless, the gap in employment between the recovering Israel and the G7 in the depths of its recession is still considerably larger than the employment gap that existed over three decades ago.

Education has played a major role in determining Israel's rates of employment. The left panel of Figure 14 shows the extent of this. The figure distinguishes between prime working age men and women, Jews and Arab Israelis, and it differentiates between different levels of education to show how employment in each group has been affected by schooling. This analysis excludes the ultra-Orthodox (Haredi) Jews for whom education means something else entirely. In light of a curriculum severely lacking in core subjects in the Haredi schools, years of schooling do not have nearly the same relevance to the modern labor market as they do for the other groups.

When the focus is on relatively uneducated prime-working age Arab Israeli women, those with no more than 11 years of schooling, only 11 percent of these women were employed in 2011. The situation among relatively uneducated Jewish non-Haredi women and Arab Israeli men is better, though not particularly bright, with roughly two-thirds of them employed – and it is only marginally better for Jewish non-Haredi men of similar education levels.

All four of the groups exhibit substantial improvements in employment when the focus turns to individuals with a high school diploma.⁶ The improvement in employment ranged from 13 percentage points for Jewish men, 16 percentage points for Arab⁷ men, 18 percentage points for Jewish women, and 22 percentage points more for Arab women. Note that the lower the employment among a group's relatively uneducated members, the higher employment gains from the acquisition of a high school diploma.

An academic education reduces the employment inequality even more. Roughly 90 percent of all Jewish and Arab men and Jewish women with academic degrees were employed in 2011. And while employment rates for Arab women with academic degrees reached 79 percent, these are nonetheless in a different ballpark altogether than the employment rates for less-educated Arab women.

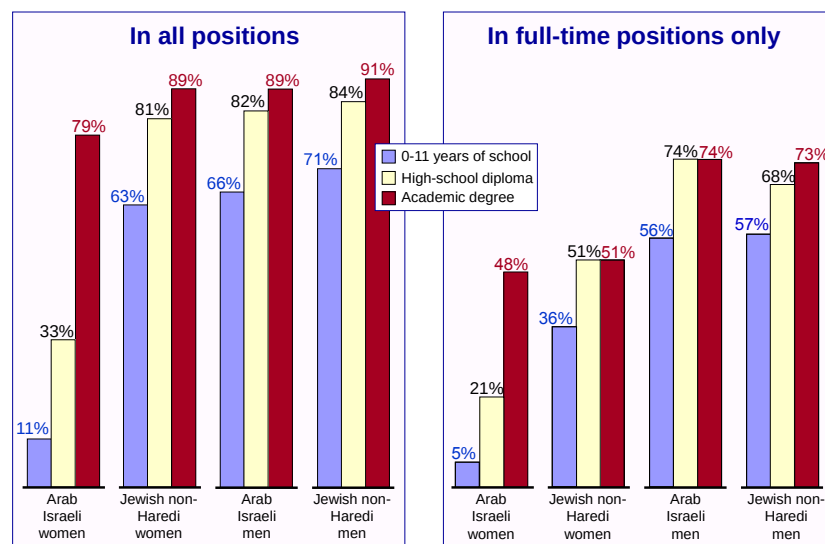
While the differences in employment rates across gender, population groups and education levels are substantial, not all employment is full-time. The right panel in Figure 14 provides an indication of how the groups differ in terms of the relationship between education and full-time employment. In this case, gender plays a much larger role than before. There is little difference between Jewish and Arab men with academic degrees (employment rates of 73 percent and 74 percent, respectively) and little difference between Jewish and Arab women with academic degrees (employment rates of 51 percent and 48 percent, respectively), but a substantial difference between men and women. The primary reason for this would probably be that in both societies, the primary caregivers for children are women – and the price that they pay in terms of full-time employment is shown quite clearly in the figure.

⁶ Graduating from high school in Israel implies successful completion of matriculation exams (called *bagrut* in Israel). There are several levels of the matriculation exams that are considered sufficient for receipt of a high school diploma, although not all of these levels are sufficient for gaining entrance into a university.

⁷ The terms Arabs and Israeli Arabs are used interchangeably to refer to the same population.

When the focus is on full-time employment for women without academic degrees, large differences between Jewish and Arab women are in evidence (with much smaller differences between Jewish and Arab men). Among women who did not finish high school, only 5 percent of the Arab women are employed full-time, compared to 36 percent for similarly educated Jewish women. Full-time employment among Arab women who graduated from high school rises to 21 percent while rates of full-time employment among Jewish women who graduated with high school diplomas is identical – 51 percent for both. Full-time employment among Jewish women who graduated with high school diplomas and academic degrees is identical – 56 percent for both. Full-time employment among Jewish men who graduated with high school diplomas and academic degrees is identical – 74 percent for both.

Figure 14
Rates of employment, 2011
 among 35-54 year-olds

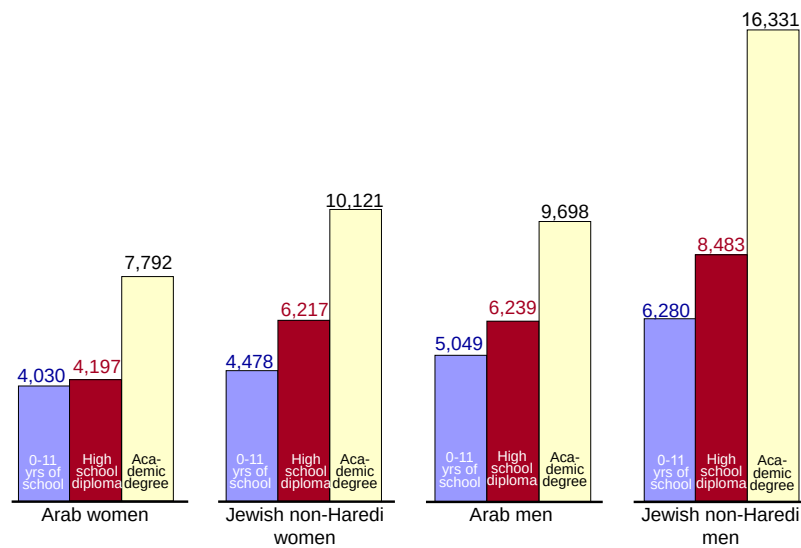


Source: Dan Ben-David and Eitan Regev, Taub Center.

Data: Central Bureau of Statistics.

As Kimhi shows in 2011 and 2012 (in this *Report*), differences in levels of education play a major role in determining wage gaps in Israel. This is clearly in evidence again in Figure 15, which continues the focus on prime working age Jewish and Arab men and women while concentrating on median monthly wages in full-time positions.⁸

Figure 15
Median monthly wages in full-time positions, 2010
 35-54 year-old full-time salaried employees, NIS



Source: Dan Ben-David and Eitan Regev, Taub Center.

Data: Central Bureau of Statistics.

⁸ The figure shows median wages. Average wages for each group appear in the appendix.

Those earning the least are the least educated. Arab women who did not complete high school and work full-time (remember, these are only 5 percent of all prime working age Arab women) earn a median wage of NIS 4,030 a month, just above the minimum wage (which was NIS 3,850 in 2010). Jewish women with a similar education who work full-time earn NIS 448 a month more and Arab men with 0-11 years of education earn an additional NIS 571. Jewish men with similar levels of education have a median income that is NIS 1,231 higher than Arab men.

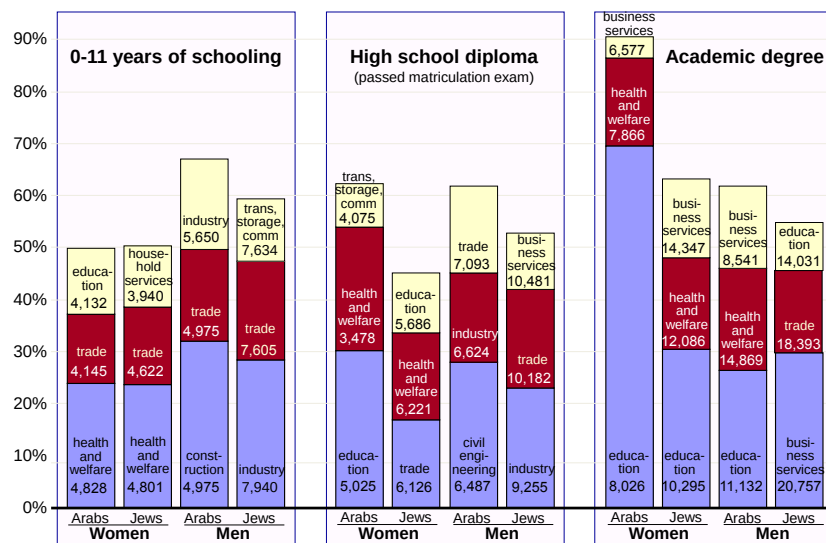
Wage gaps between Jewish and Arab women rise to over NIS 2,000 a month for high school and academic graduates. Wage gaps between Jewish and Arab men rise to NIS 2,244 for high school graduates and to NIS 6,634 for individuals with academic degrees.

The bottom line is that a high school education leads to substantially higher wages for Jewish and Arab men, as well as for Jewish women – although less so for Arab women. An academic education provides an even larger step up in wages for each of the four groups. That said, the benefits of an education vary greatly.

Educated Jews make more than similarly educated Arabs, and this holds true for both men and women. Part of this undoubtedly has to do with discrimination in the Israeli job market against Arabs. That is not the entire story, though, nor may it even be the primary one. It makes a substantial difference what a person studies and where. It also makes a difference if the employment is in the private sector or in the public one, where wages are lower. Here there are substantial differences in the selection of professions and areas of specialization. Figure 16 provides some evidence of the variance in this regard. It shows the three most common employment branches for each of the groups, with the share of each branch out of the total employment for each group (the distribution of employment for all 15 classifications, by level of education, gender and sector, appears in Appendix 2). For example, of the prime working age Arab women with 0-11 years of education who work full time, 24 percent are employed in health and welfare services, 13 percent in trade, and another 13 percent in education. Together, these three employment

branches comprise 50 percent of the employment for this group of women. The average monthly wage for full-time employment in each of these branches is shown as well.

Figure 16
Three most important employment branches*
 average wage of each group in each branch,**
 by education, gender and sector, ages 35-54



* The share of the three most common branches out of each group's total employment, 2011.

** Average monthly wage from full-time employment (at least 35 hours/week), 2010.

Source: Dan Ben-David and Eitan Regev, Taub Center.

Data: Central Bureau of Statistics.

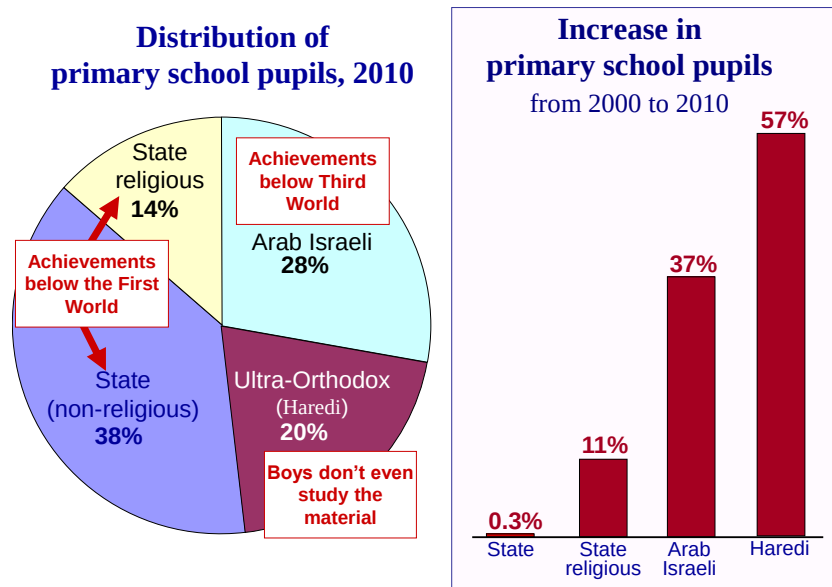
While the economic branches may be the same, the type of work done in each branch is clearly not going to be the same for individuals with different levels of education. For example, employment in the education branch for individuals with academic degrees invariably means teachers or managerial positions while employment in this same branch for individuals with 0-11 years of education is most likely in the area of maintenance – and the monthly wages reflect these differences. But this is also not a fine enough resolution to understand the wage differences between groups with the same education levels within the same economic branch. Continuing with the education example, not everyone works the same number of hours. In addition, while some of the work by the same individual may be in public sector schools, other work may be private (such as tutoring). Pay in the public sector education is also affected by whether the degree is a BA, an MA, or something else.

Even this, though, provides an incomplete picture. What one eventually studies in college – and which college one is able to get accepted to – is highly dependent on the quality of education that one receives in the pre-primary, primary and lower secondary schools. Here Israel is facing a major problem, especially when looking forward.

Education and Demography

The pie graph on the left-hand side of Figure 17 breaks up Israeli children into the country's four main education streams. Just over half of the primary school pupils (52 percent) studied in the State schools (both non-religious and religious schools). The average achievements of these children in mathematics, science and reading are below the average achievements in every one of the 25 relevant OECD countries (Ben-David 2011c). The education provided to Arab Israeli children – who comprise 28 percent of the primary school pupils – yields achievements below many Third World countries.

Figure 17



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

Data: Central Bureau of Statistics.

Twenty percent of Israel's primary school pupils are in the Haredi system. This system does not teach the core curriculum to boys beyond eighth grade and what is studied through eighth grade is minimal at best – no science or English for nearly all of the boys, and mathematics at a level that is nowhere near what children at their ages in other Western countries are studying. The situation for some of the girls is somewhat better, although this is far from uniform even for them.

A look at enrollment trends in the primary schools over the past decade is indicative of Israel's underlying demographics (bar graph on right-hand side of Figure 17). Between 2000 and 2010, there was almost no change (0.3 percent) in the number of pupils enrolled in the non-

religious State schools, and an 11 percent increase in the religious (though not Haredi) State schools. Enrollment in the Arab schools went up by 37 percent. In the Haredi schools, the number of pupils increased by 57 percent in the past decade alone.

In light of the fact that about half of today's children are either Arab or Haredi, and given achievement levels that are at best Third World and below, the current demographic changes reflect a socioeconomic evolution that will be unsustainable when these children grow up.

How poor is the Haredi school system in preparing its children for work in a modern economy? A glimpse at some labor market outcomes is quite revealing in this context.

As noted previously, the process of economic growth involves a continuous process of productivity improvements, and these involve an ever-increasing demand for educated, skilled workers – and a simultaneous decreasing demand (in relative terms) for less educated, unskilled workers. Consequently, while rates of employment for all levels of education exceeded 90 percent in 1970 (for men aged 35-54), the lower the level of education, the sharper the decline in employment over the next four decades (Ben-David 2011a).

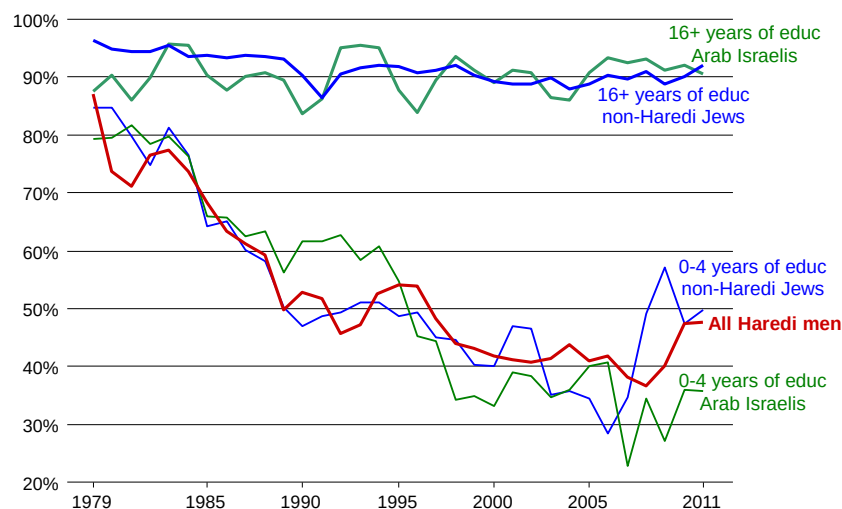
Figure 18 shows the groups at each end of the education spectrum since 1979, those with 0-4 years of education and those with an academic education. In both cases, the figure distinguishes between non-Haredi Jews and Arab Israelis. The employment behavior of Jews and Arabs with an academic degree has been very similar over the past 33 years (the higher fluctuation among the Arabs is due to the small sample size of academically educated prime working age men) and it has stabilized at approximately 90 percent.

Employment rates of uneducated Jewish and Arab men have moved in tandem too – but in this case, the picture is one of a steady deterioration since the 1970s. These rates, which exceeded 90 percent in 1970, had fallen to around 80-90 percent by 1979, the first year shown in this figure, and continued to fall to around 30-40 percent rates about half a decade

ago, with a slight improvement among Jews in recent years as Israel has moved out of the *intifada* and recession period.

What about prime-working age Haredi men? As noted previously, they do not study any core curriculum subjects beyond eighth grade. But even what they do study is at such a poor level that their rates of employment – for all years of study, since the number of years of Haredi schooling matter little when it comes to receiving the basic education needed for working in a modern and competitive economy – closely mimic the rates of employment among the least educated non-Haredi Jews and Arabs Israelis for the past 33 years (Figure 18). These are the employment opportunities that the Haredi education system provides their boys.

Figure 18
Male employment rates, 1979-2011
35-54 year-olds

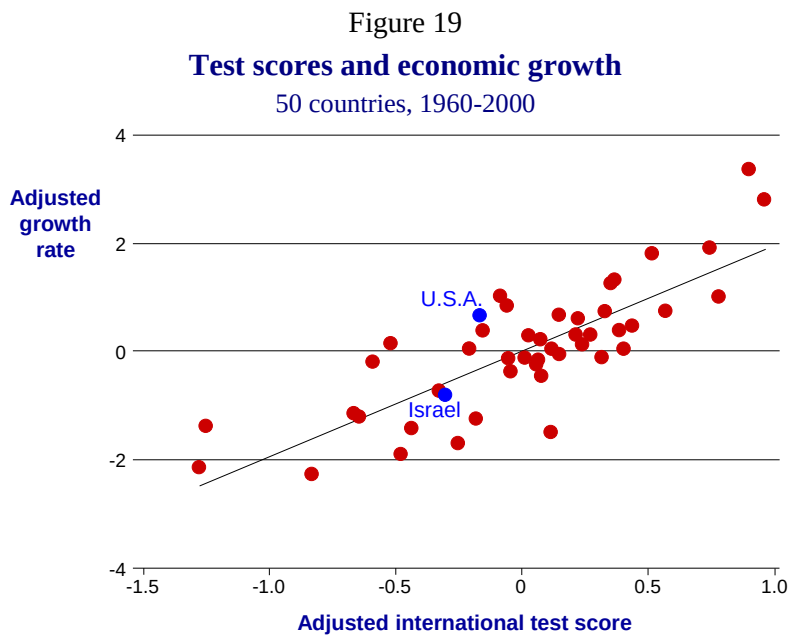


Source: Dan Ben-David and Eitan Regev, Taub Center.

Data: Central Bureau of Statistics.

The issue of the quantity of education – that is, years of schooling – and the quality of education extends far beyond its importance in the Haredi context. While the quantity of education has repeatedly been shown to be highly related to economic outcomes for the individual – and for the nation (see, for example, Mankiw, Romer and Weil 1993 and Barro 1991), increasing evidence has been accumulating on the vital importance of the quality of education.

Hanushek and Woessmann (2010) show how achievement in core curriculum subjects – mathematics, science and reading – in 50 countries over 40 years has been strongly correlated with differences in national rates of economic growth (Figure 19). When applied to Israel, their calculations suggest that had the country's achievement levels in the core subjects yielded a national score 50 points higher since 1980 (which is roughly the gap between the OECD average level of achievement and the Israeli level), Israel's rate of economic growth in per capita GDP would have been higher by 0.44 percentage points in 2010.



Source: Eric A. Hanushek and Ludger Woessman, presented at Taub Center International Conference on Education (2011).

In other words, instead of continuing along the current growth path that has taken Israel further and further behind the leading Western countries, Israel could have been closing the gap. In 2010 alone, another 41 billion shekels (approximately the size of the country's entire domestic defense expenditures)⁹ would have been added to Israel's GDP – had the country improved its education system (Ben-David 2011b). It is hard to overemphasize the socioeconomic implications of what this gap has cost Israel and what those resources could have enabled it to do.

Evidence on the importance of the quality of education is accumulating at the individual level as well. Chetty, Friedman, Hilger, Saez, Schanzenbach, and Yagan (2011) show that high quality classroom environments between kindergarten and third grade led to higher rates of academic education, higher incomes and homes in better neighborhoods a couple of decades later. Chetty et al. raise the possibility that differences in the quality of education perpetuate income gaps when these children grow up. Chetty, Friedman, and Rockoff (2011) estimate that income correlations between one generation and the next would have fallen by one third had the children in their sample been learning in schools with similar quality levels.

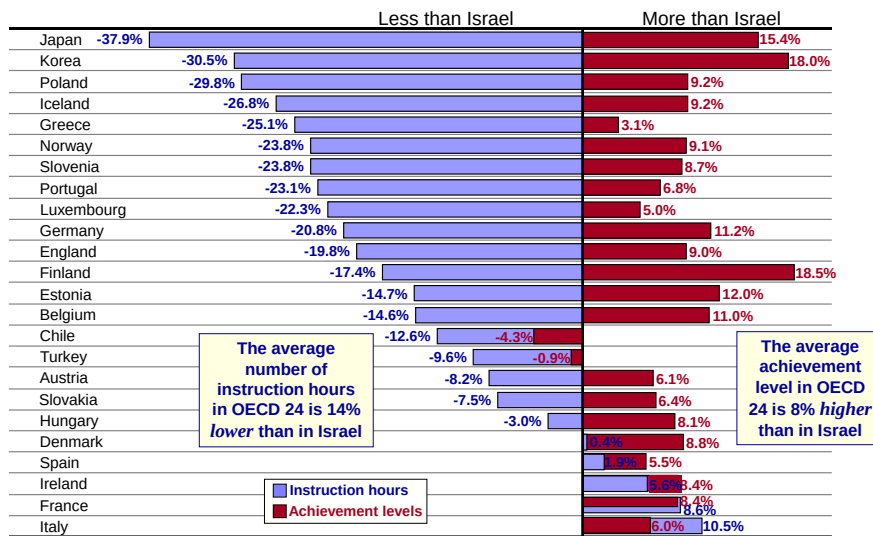
How does a country improve the quality of its education? A number of claims have repeatedly been made in Israel regarding the reasons underlying its children's poor achievements on international exams – among these, too few instruction hours, classrooms with too many pupils and insufficient resources.

Figure 20 provides a comparison of 24 OECD countries to Israel in terms of the number of instruction hours and in terms of achievement in the most recent PISA international exams in mathematics, science and reading in 2009. Overall, the average number of instruction hours in these OECD countries was 14 percent below Israel's, while their average achievement level was 8 percent higher. More specifically, in 19 of these

⁹ Domestic defense expenditures equaled NIS 43 billion in 2010 (data from the Bank of Israel).

countries, pupils were provided with fewer instructional hours than the children of Israel. However, in 17 of these 19 countries, levels of achievement were higher than Israel's.

Figure 20
Instruction hours and achievement*, 2009
 24 OECD countries relative to Israel



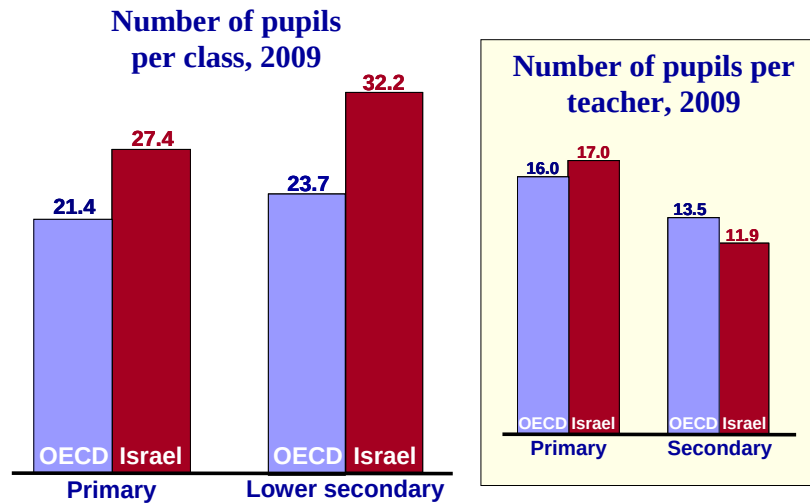
* Cumulative number of intended instruction hours for 7-15-year-olds and average achievement levels in math, science and reading in PISA 2009.

Source: Dan Ben-David, *State of the Nation Report 2009*, (updated).

Date: OECD, PISA.

Class sizes were indeed larger in Israel than in the OECD that year (Figure 21). In Israel's primary school system there were 27.4 pupils per class, compared with an average of 21.4 in the OECD. In lower secondary schools, the gap was even larger: 32.3 pupils sit in the average Israeli classroom while only 23.7 are in the average OECD classroom.

Figure 21



* According to full-time equivalents.

Source: Dan Ben-David, *State of the Nation Report 2009* (updated).

Data: OECD.

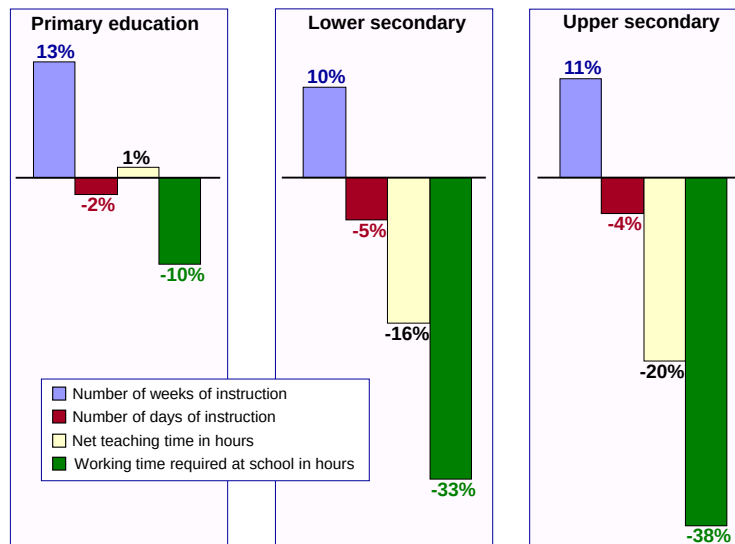
The question is, why is this so? After all, the number of pupils per teacher (in terms of full-time equivalents) in Israel's primary school system (17.0) exceeded the OECD number by just one pupil. In secondary schools, there are actually fewer children per teacher (11.9) than the OECD average (13.5). So why are Israel's classrooms so full? Part of the problem – as has been pointed out in earlier *State of the Nation Reports* – is in the interpretation of the numbers.

Figure 22 shows a variety of measures of teachers' working time over the school year. In all three levels of education – primary, lower secondary and upper secondary – the number of weeks of instruction in Israel is 13 percent, 10 percent and 11 percent higher (respectively) than in the OECD. On the other hand, the number of days of instruction in all

three levels of education is 2 percent, 5 percent and 4 percent (respectively) lower in Israel than in the OECD.¹⁰

Figure 22

Teacher's working time over the year*
percent difference between Israel and OECD average, 2009



* In public institutions.

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

Data: OECD, PISA.

¹⁰ Nachum Blass contends that the OECD data on the organization of teachers' working time regarding the number of weeks of instruction and number of days of instruction in Israel is incorrect. He states that Israeli teachers work fewer weeks and more days per year than the OECD lists. So, while division of total days per year by total weeks per year on the basis of the OECD data yields work weeks of 4.9 days in the OECD and 4.2 days in Israel, Blass's numbers yield the work weeks for Israeli teachers that are 6 days in length. While pupils go to school 6 days a week in Israel, the teachers' work week is less than 6 days, so there appears to be a discrepancy in the Blass numbers. In any event, there is no argument regarding net teaching time in hours and working time in school in hours.

While net teaching time in hours over the school year is roughly the same in primary schools (1 percent more in Israel), it is substantially less in lower secondary schools (by 16 percent) and in upper secondary schools (by 20 percent). In fact, the number of hours that teachers are required to work in Israeli schools is 10 percent below the OECD average in primary schools, 33 percent lower in lower secondary schools, and 38 percent lower in upper secondary schools.

In light of the very problematic long-run socioeconomic trajectories that Israel is situated on and given the future socioeconomic implications of the current state of the country's education system, it is important to emphasize the need for education reform in the country. Previous publications by the Taub Center have detailed many of the aspects that such reform must include while the chapter by Blass, Blank and Shavit in this *Report* ("A Vision and Set of Recommendations for the Israeli Education System") focuses directly on this issue. Suffice to say that education reform must focus on three primary issues: what the children are studying, who is teaching the children and how the education system operates.

Israel's Transportation Infrastructure

A. Roads, Trains and Investments

Whether the focus is productivity, income inequality, housing, or a host of other serious challenges facing Israel, one common underlying theme connecting all of these is the very problematic state of some of Israel's basic infrastructures. The human capital infrastructure, education, was discussed above. A very central part of the physical infrastructure – transportation – is the focus here.

Nearly a decade ago, Ben-David (2003b) discussed the state of Israel's transportation infrastructure together with its socioeconomic effects. This was an infrastructure that was neglected for decades on end by government after government. To a certain extent, that neglect has been replaced by considerably higher investments over the past decade.

Nevertheless, these investments and the current state of the infrastructure need to be put in perspective.

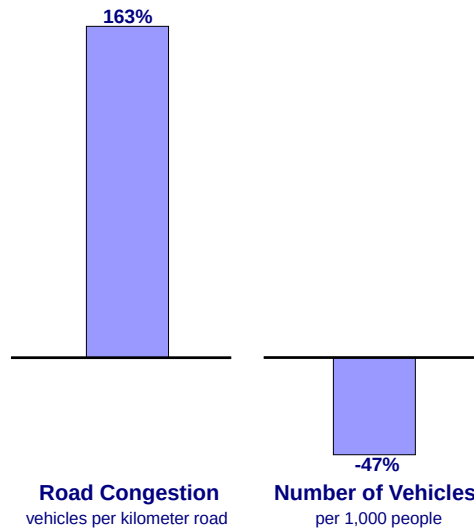
The congestion on Israel's roads is over two and a half times the OECD average; the number of vehicles per capita is about half the OECD average (Figure 23). As shown in Appendix Figure 1, Israel's roads are far more crowded than the roads in every one of the 22 OECD countries in the graph except for Korea, which is even more congested than Israel. On the other hand, as indicated in Appendix Figure 2, Israel has considerably fewer cars than all 22 of the OECD countries in the graph. To the extent that Israel manages to close the gap in standards of living between itself and the wealthier OECD countries (not a given, in light of some of the evidence provided in this chapter), it stands to increase substantially the number of vehicles per capita – with very clear implications regarding the already heavy congestion on the country's roads.

In fact, the situation is considerably worse. Since rail transport is much more developed in most of the other OECD countries, there are more alternatives in those countries to cars and trucks. In other words, in the absence of viable rail options available in other Western countries, there is no reason to assume that the number of vehicles in Israel should merely double to the OECD average as Israel's income per capita rises to OECD levels.

Figure 23

Situation on the roads

Israel relative to OECD average*, 2008



* Average of 22 OECD countries.

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

How poorly developed is Israel's rail system? Appendix Figure 3 shows the number of passenger-kilometers per person in the OECD, with Israel (0.26) having about third of the OECD median country, Sweden (0.76). Regarding the transporting of freight on rail, the picture is similarly problematic, as is shown in Appendix Figure 4. In this case, ratio of freight tonnage to GDP in Israel is about one quarter that of the median OECD country, France.

The problem with the above comparisons is that they include very large countries with huge expanses of land – while Israel is extremely small in size. A better comparison would be to the small developed countries of the OECD. The bottom left panel of Figure 24 shows that

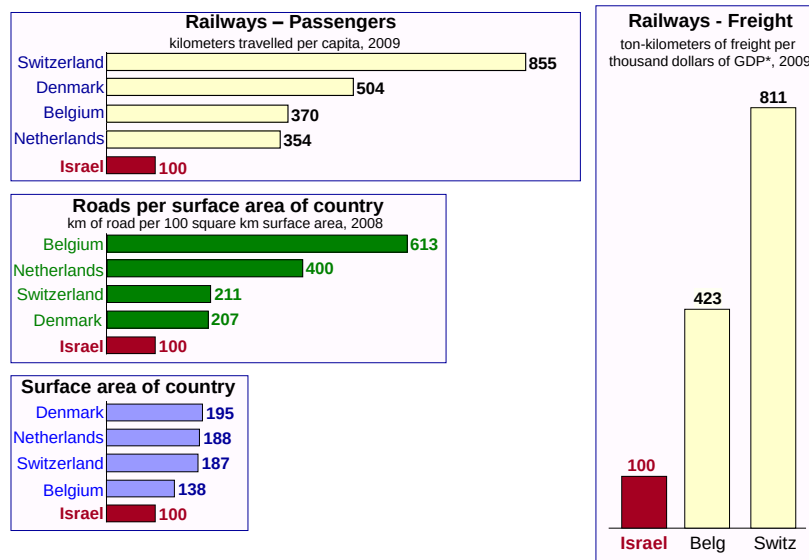
while these countries are small, they are nonetheless larger than Israel: the surface area of Belgium is 38 percent larger than Israel, Switzerland is 87 percent larger, the Netherlands 88 percent, and Denmark 95 percent larger.

That said, the amounts of roads per surface area in these countries are substantially larger than in Israel (middle left-hand panel of Figure 24). These differences range from 107 percent more roads per surface area in Denmark to over 6 times more road per surface area in Belgium.

Figure 24

Transportation infrastructure

in Israel and small European countries, Indices: Israel=100



* 2009 GDP in current US dollars and current PPPs.

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

Data: World Bank.

When the shift is to rail, the gaps in passenger-kilometers per person (top left-hand panel of Figure 24) are even greater – ranging from 3.5 times the Israeli number (in the Netherlands) to 8.6 times the number (in

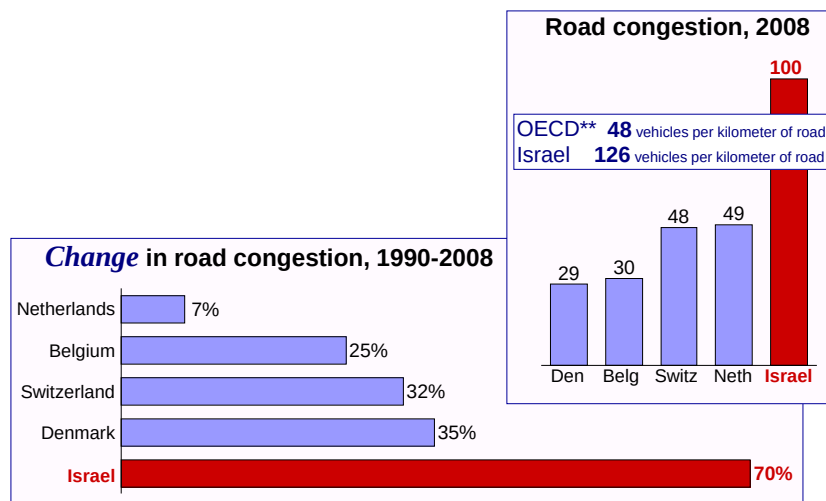
Switzerland). Only two of these other countries provide data on millions of tons of freight, but these differences are similarly large. The ratio of tons per kilometer to GDP in Belgium is 4.2 times the number in Israel while the comparable multiple is 8.1 times Israel for Switzerland.

Hence, it is not surprising that the paucity of alternatives drives Israelis to the roads – literally. The increase in road congestion between 1990 and 2008 among the smaller European countries ranged from 7 percent in the Netherlands to 35 percent in Denmark (horizontal panel of Figure 25). In Israel, road congestion rose by 70 percent during this period. Consequently, road congestion in the Netherlands is 49 percent of the congestion in Israel while the Danes have only 29 percent of the Israeli road congestion (vertical panel of Figure 25).

Figure 25

Congestion on roads*

in Israel and small European countries, Indices: Israel=100



* Vehicles per kilometer of road.

** 22 OECD countries.

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

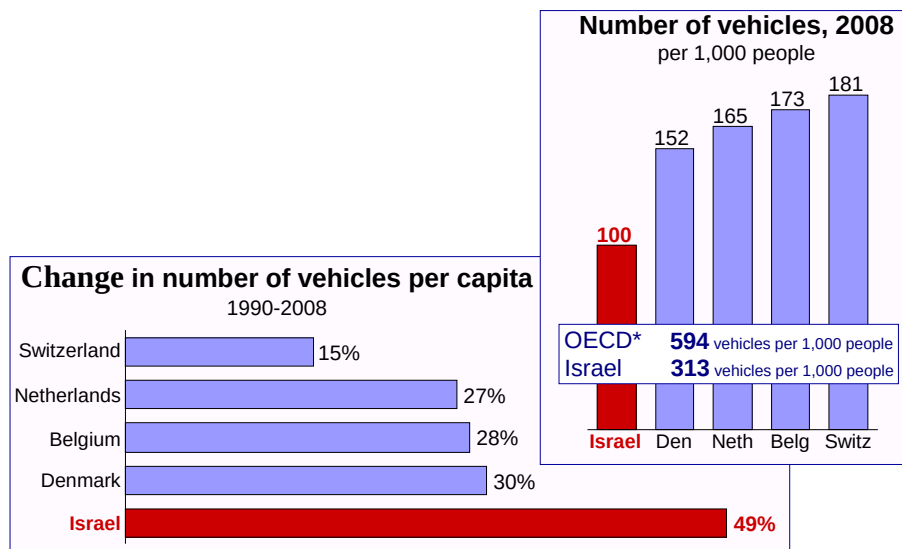
Data: World Bank.

The lack of transportation alternatives has led Israelis to buy many more cars as well. While the inhabitants of the smaller European countries increased the number of vehicles per capita by 15 percent (Switzerland) to 30 percent (Denmark) between 1990 and 2008, the number of vehicles in Israel increased by 49 percent during the same period (horizontal panel of Figure 26). Israel's standard of living is below that of the smaller European countries, so there are currently more vehicles per capita in those countries – between 52 percent more in Denmark to 81 percent more in Switzerland (vertical panel of Figure 26).

Figure 26

Vehicles per capita

in Israel and small European countries, Indices: Israel=100



* 22 OECD countries.

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

Data: World Bank.

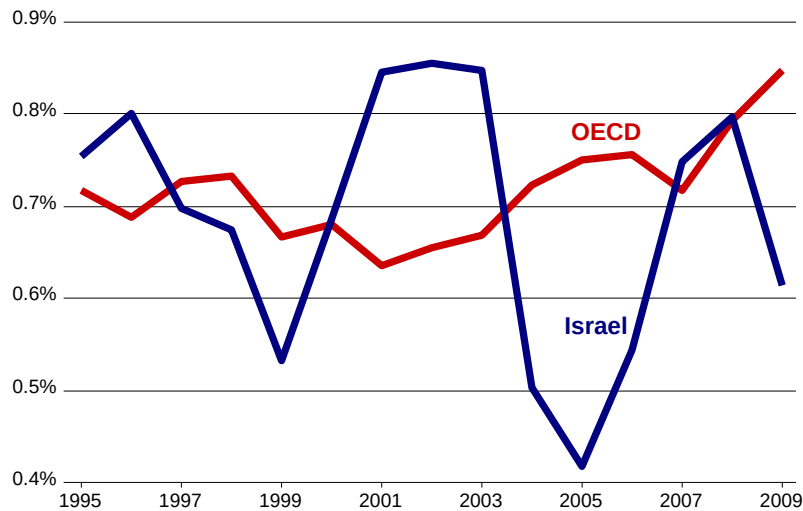
The end result of the comparison of Israel with the Western countries is quite problematic. In the absence of even remotely comparable rail alternatives, Israelis are buying more and more cars; and in the absence of an adequate road infrastructure, the congestion on the country's roads is already substantially greater than the congestion in the West. As incomes in Israel rise, this situation on the roads can only be expected to deteriorate – with all of the attendant economic and social consequences.

In recent years, Israeli governments have finally begun a concerted effort to rectify this problem. However, even with the much larger infusion of resources into the country's transportation infrastructure – a very large part of it from private sources – the national expenditure (i.e. public and private together) is still not at levels that are sufficient to close the existing gaps.

Figure 27 compares national spending on roads in Israel to the OECD average as a share of GDP. This spending has been particularly volatile in comparison with the OECD. Between 1996 and 1999, road expenditure as a share of GDP fell sharply, from 16 percent above the OECD ratio in 1996 to 20 percent below the OECD in 1999. A steep increase in spending began in 2000, reaching 33 percent more than the OECD in 2001. It leveled off in 2002-2003, then plunged from 0.85 percent of GDP in 2003 to 0.50 percent in 2004, continuing to fall to 0.42 percent in 2005 – just over half of the amount spent on roads in the OECD (0.75 percent GDP). A turnaround occurred in 2006, with Israeli levels of spending returning to OECD levels (that had been slightly increasing over the past decade) by 2007 and 2008. In 2009, as OECD expenditures on roads continued to rise, they fell by almost one-quarter in Israel, with Israeli spending decreasing to 27 percent below the OECD.

Two main issues surface from this figure. The first is the extreme volatility in Israeli spending on roads. Those familiar with the Israeli political scene may notice how closely the turnaround years reflected changes in Israeli governments – with the spending on roads very strongly reflecting the national priorities of the country's various governments.

Figure 27
National investment on roads
 as percent of GDP



Source: Dan Ben-David and Nir Eilam, Taub Center.

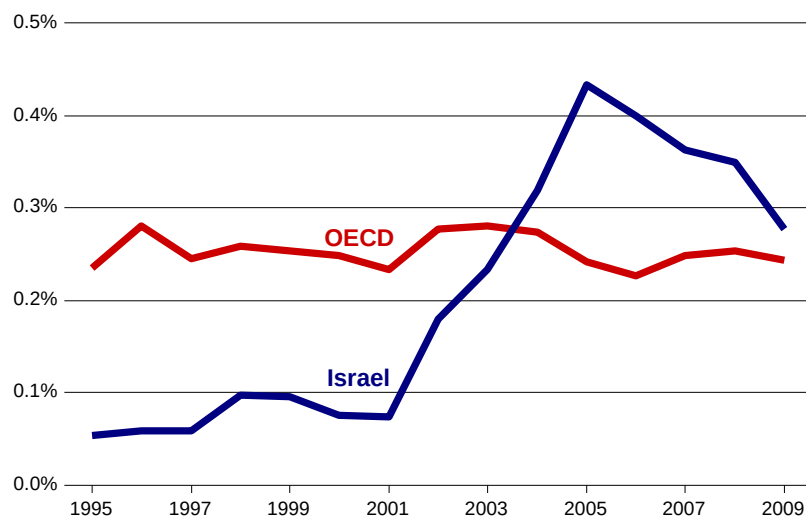
Data: International Transport Forum, Central Bureau of Statistics.

The second issue is that, with the exception of just a few years at the beginning of the last decade, overall spending on Israeli roads has been close to OECD spending, at best, and far below it in other years. It should be remembered that the OECD road expenditures primarily reflect maintenance costs while Israel's spending still needs to include creation of the type of infrastructure that the OECD already has.

Figure 28 provides a comparison of Israel and the OECD in the realm of rail expenditures. In this area, underinvestment in Israeli rail infrastructure ranged from roughly 80 percent below the OECD in the mid-1990s to just under 70 percent less in 2001. In 2002, at the height of the *intifada* and major recession, investment in rail increased by a factor

of 2.4 (compared with the amount spent in 2001). There were further increases, in real terms (i.e. net of inflation) of 26, 37 and 38 percent in 2003, 2004 and 2005, respectively. The result, as readily evident in Figure 28, was a steady increase in the ratio of railroad expenditures to GDP, peaking at 79 percent more than OECD levels – a major effort at reducing the infrastructure gap between Israel and the OECD.

Figure 28
National investment on rail
as percent of GDP



Source: Dan Ben-David and Nir Eilam, Taub Center.

Data: International Transport Forum, Central Bureau of Statistics.

Since then however, spending on rail was cut in each of the years since 2006. By 2009, the share of infrastructure spending on Israeli railroads out of GDP fell to just 14 percent above the OECD average. In light of the vast differences that continue to exist between Israel and the OECD in terms of available rail alternatives to roads, the steady decline in rail investment does not indicate that these gaps will be falling in a major way anytime soon to relieve the congestion on Israel's roads.

B. Toll Roads

One way that Israel has adopted to relieve pressure on public resources in funding the construction of roads has been the extensive use of private investment. The construction of what has become the country's primary north-south artery, Route 6, has relieved some of the pressure on the roads in the central part of Israel – a geographic bottleneck that houses the largest metropolitan area, Tel-Aviv and its surroundings. This was a build-operate-transfer (BOT) project that was primarily privately funded. The rising congestion on this road has led to its widening in recent years, even before completion of its northernmost and southernmost sections.

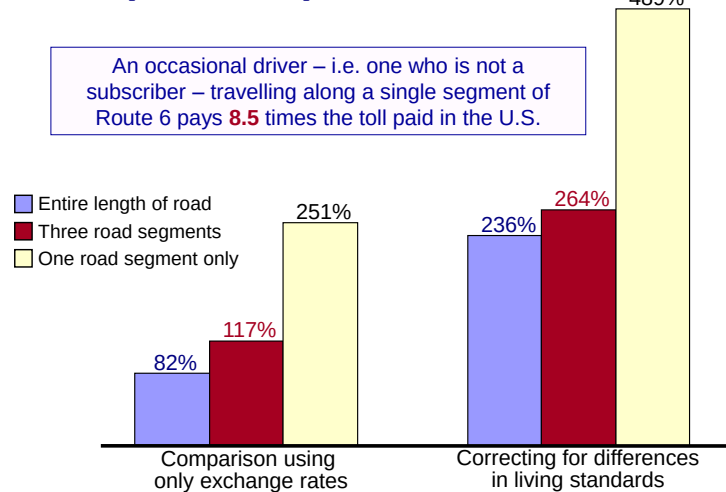
As shown in Ben-David (2005), tolls on this road were substantial when compared with major toll roads in the United States. The comparison initiated by Ben-David (2003b and 2005) was redone by Ida and Talit (2010). Figure 29 shows that the cost of driving on Route 6 is still substantially higher in Israel.

Israeli pricing is for the first three segments driven on the road, with no additional costs for the fourth segment and beyond. Discounted rates in Israel for driving the entire length of the toll road are 82 percent higher per kilometer than discounted rates in the US. The cost of driving three segments in Israel is more than twice the cost in the US, while the cost of one segment is 3.5 times greater than the American cost. This comparison reflects a simple translation of the cost into US dollars and does not take into account the fact that incomes are substantially higher in the US than in Israel.

Figure 29

Tolls on Route 6 relative to US tolls*

price difference per kilometer, 2009



* Comparison of Paskal discount rate (for subscribers) to discount rates on toll roads in New York, New Jersey, Pennsylvania, Ohio, and Florida.

Source: Ida and Talit (2010).

When living standards are considered (specifically, discounting tolls by GDP per capita in the two countries), the gap between the two countries turns out to be considerably higher. The standardized cost of travelling the entire length of Israeli toll roads is 3.4 times the standardized cost in the United States. The standardized cost of travelling just one section is 5.9 times greater in Israel – and this is a comparison of the discounted rates in the two countries. An occasional driver who is not a subscriber to the toll roads pays 8.5 times more in Israel than in the US.

This is one way to fight congestion on the roads, but the dearth of viable alternatives to the car in Israel invariably means that residents must take to the road and bear whatever costs are placed on them. The outcomes are not surprising. One way to try and evade these costs, at least on a daily commute basis, is to live in the big cities – providing yet additional upward pressure on housing costs there, as shown earlier in this chapter.

The bus alternative used to be the primary means of transportation in the younger and poorer Israel of the 1950s and 1960s. As the country's living standards rose and more cars were purchased, the increasing congestion on the roads made travel by bus even more time-consuming and inconvenient. So while fares are subsidized, time costs are not; and increasingly, the public's choice has been away from buses.

Traffic lanes have been somewhat helpful in expediting the movement of buses, but these have come at the expense of lanes on the already narrow and congested city roads. This has not only made life more difficult for motorists, it has also lead many to ignore the restrictions on the public transportation lanes and, in the absence of adequate enforcement, the result has been a hampering of bus travel and a further reduction in its attractiveness.

One alternate way to reduce congestion on the roads – in the absence of sufficient rail options – is to increase the cost of driving. The toll roads have done this well. But these are not the only options for governments with national priorities that do not provide sufficient resources for building viable transportation alternatives.

The next section focuses on the relatively high cost of gasoline in Israel, a source of considerable discontent in recent years. If the strategy is to move people away from cars to alternative modes of transportation by raising the cost of gasoline, then there is a need for adequate alternatives in this realm to be provided. Since the investment in such alternatives has been considerably below what is needed, then it does not appear that the policy of driving up gasoline prices in Israel is related to such a strategy.

C. Gasoline Prices

- *Changes over time*

The price of gasoline in Israel has become the focus of considerable public attention over the past year, with the price of a liter of gasoline reaching NIS 8 per liter (or about 1.36 Euros per liter) by early April 2012. Since the number of liters per gallon (3.785) is roughly equal to what was then the number of shekels per dollar, the equivalent, in American terms, would be about \$8 per gallon of gasoline.

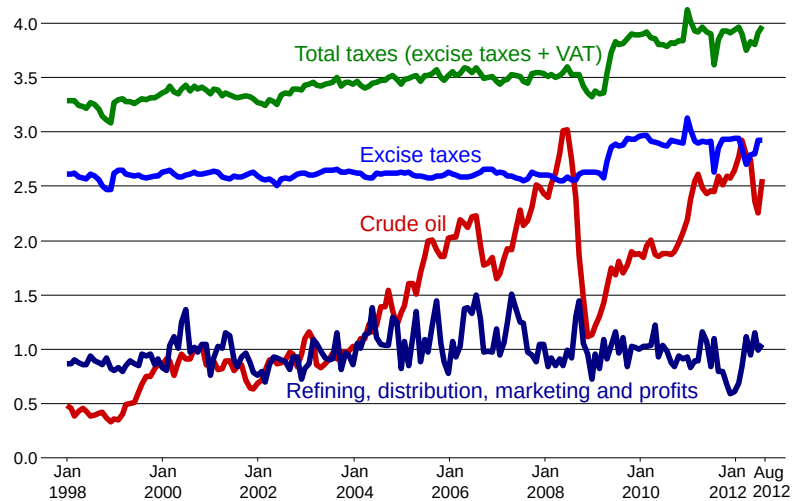
Whether or not the Israeli price is high depends on the countries of reference. It also depends on a number of additional factors and reference points – with several of the more important factors missing from the public discussion.

The primary reason for the large increases in gasoline prices in recent years has been the price of oil. Twenty-five years ago, in the spring of 1987, the cost of a barrel of Brent crude oil was around \$19. The oil price roller coaster peaked at \$144 two decades later, in July 2008, only to plummet to \$34 by December of that year. Within the subsequent three years, the price of Brent crude oil has risen almost four-fold to \$124 by March 1, 2012.

Figure 30 decomposes the primary components in the shekel cost of a liter of Israeli gasoline and shows how these have changed over the past decade. Interestingly enough, while oil prices have contributed the most to fluctuations in the price of Israeli gasoline, they are not the largest cost component.

Two kinds of taxes are imposed on gasoline. The first is an excise tax. In addition, there is a 16 percent value added tax (VAT) that is levied not only on the cost components of a liter of gasoline, but also on the excise tax itself, effectively compounding the overall tax impact. From the government income perspective, the major advantage of the VAT is that it is proportional – so when the price of oil rises, so do government revenues.

Figure 30
Gas price components in Israel, 1998-2012
 price per liter, 95 octane, in 2011 shekels



Source: Dan Ben-David and Yulia Cogan, Taub Center.

Data: Central Bureau of Statistics, Ministries of Finance, Energy and Water Resources, Bank of Israel, OECD

Excise taxes of about NIS 2.5 per liter (in 2010 prices) remained relatively constant – and much higher than the quickly rising oil prices – during the latter part of the 1990s and the early part of the subsequent decade. No attempt was made by the government to mitigate the spiraling cost of oil with even partially offsetting declines in taxes. In fact, the proportional attributes of the VAT had the opposite effect. The higher the price of oil, the greater the government revenues from the value added tax – ensuring that at all times, the total amount of taxes levied on each liter of gasoline always exceeded the price of oil, even when oil prices were at their peak.

Ironically, although the excise tax remained almost unchanged as oil prices shot up, it did not continue to remain constant when oil prices fell during the latter half of 2008. Instead, the Israeli government decided to increase its excise tax by 10 percent in May 2009 – which of course also meant an automatic built-in increase in value added tax income for the government from the excise tax increase. A year and a half later, in January 2011, the government decided to implement a further 8 percent increase in the excise tax, to NIS 3.03 per liter (in 2010 prices), an increase that remained in place for just two months before returning to the pre-January 2011 levels.

Extensive public protests in the summer of 2011 – on a host of socioeconomic issues, including the price of gasoline – led the government to temporarily reduce the excise tax by 10 percent in August. This reduction was meant to calm the protests and the short-lived change in policy was reversed almost immediately after the protests died down. Within two months, by October 1, 2011, the excise tax was back up to NIS 2.83 per liter (in 2010 prices).

Over the 14 years between January 1998 and August 2012, as the price of crude oil rose more than four-fold in real terms, no effort was made to reduce the overall tax burden on the economy in order to relieve it from some of the resultant effects of higher production costs and living expenses. In fact, total taxes per liter rose by 21 percent in real terms during this period – with income from VAT rising by 56 percent in real terms despite a slight reduction in the value added tax rate from 17 percent to 16 percent. The primary tax, the excise tax, exceeded the price of oil during nearly all of this period – rising by 12 percent in real terms since 1998.

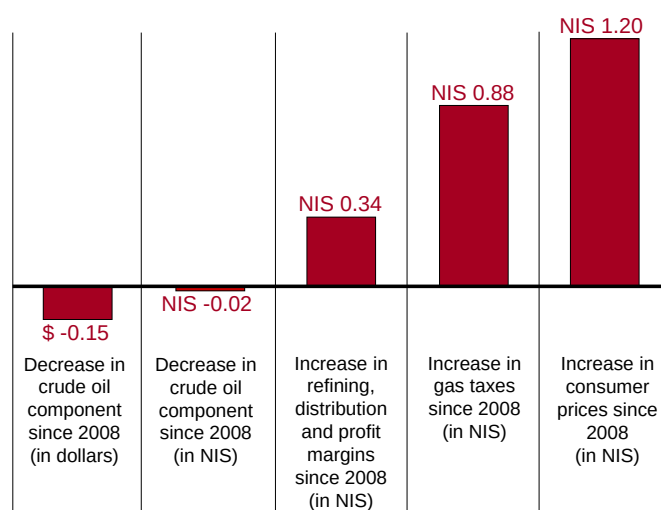
A glimpse at what occurred between July 2008 and Sept 2012 provides a sense of what underlies much of the discontent among Israeli consumers. As shown in Figure 31, the dollar price of the crude oil component in a liter of gasoline fell by \$0.15. A devaluation in the Israeli shekel during this period meant that the NIS price of the crude oil

component in Sept 2012 was nearly identical (it was NIS 0.02 less) to what it had been four years earlier.

Despite the fact that oil prices remained relatively unchanged, the price of a liter of gasoline to Israeli consumers increased by 18 percent, or NIS 1.25. This was due primarily to an increase of NIS 0.88 in gasoline taxes and a NIS 0.38 increase in the margins going to refining, distribution, marketing and profits.

Figure 31

Sources of increase in the consumer price of a liter of gasoline in Israel
July 2008-September 2012*



* Forecast for September 2012 from the Ministry of Finance.

Source: Dan Ben-David and Yulia Cogan, Taub Center.

Data: Ministry of Finance, US Department of Energy.

- *Comparison with other countries*

Do Israelis pay more for their gasoline? An international comparison with OCED countries from Western Europe, North America, and Oceania indicates that the consumer price of a liter of gasoline in Israel in the year 2011 (\$2.00), was greater than the price of gasoline in 18 of the Western countries and lower than the price in the three other countries (Table 1).

Higher oil prices, and the resultant high energy prices, impose a heavy burden on those with lower incomes and on poorer countries. While oil is sold at internationally arbitrated prices that are relatively similar for wealthy and poor countries alike, this does not imply that sovereign nations are entirely powerless to offset some of the negative impact that higher energy prices have on production, available incomes and welfare.

The key ingredient in this regard is the tax imposed on gasoline. As noted, there is an excise tax in Israel on each liter of gas as well as a value added tax that is imposed on both the excise tax as well as on the other components. When the cost of gasoline in Israel is decomposed into its various components, the price of crude oil, distribution, refining, marketing, profits and taxes, then just that last component – taxes – was more expensive in Israel (\$1.08 per liter) than the entire gallon of gasoline in the United States (\$0.96 per liter – or, in terms of gallons, \$4.09 for just taxes in Israel versus \$3.65 for the entire gallon of gasoline in the States).

The cumulative amount of taxes levied by Israel on a liter of gasoline is considerably higher than in the United States and more similar – although at the higher end – of gasoline taxes in Western Europe. As indicated in Table 1, gasoline taxes in roughly three-quarters of the countries are lower than Israeli gasoline taxes. However, this is only a part of the larger picture.

Table 1. **International comparison of gasoline prices* and their domestically determined components**Israel, Western Europe, North America, and Oceania, 2011
(in PPP dollars per liter)

	Gasoline prices		Taxes		Margins**	
1	Portugal	2.45	Greece	1.38	Portugal	0.27
2	Greece	2.34	Portugal	1.38	Spain	0.26
3	UK	2.02	UK	1.22	Greece	0.25
4	Israel	2.00	Netherlands	1.18	Israel	0.25
5	Netherlands	1.97	Germany	1.13	New Zealand	0.25
6	Germany	1.96	Israel	1.08	Belgium	0.25
7	Italy	1.95	Italy	1.08	Italy	0.25
8	Spain	1.86	Belgium	1.03	Ireland	0.22
9	Belgium	1.85	France	0.99	Canada	0.21
10	Ireland	1.77	Finland	0.97	Australia	0.20
11	France	1.73	Ireland	0.96	Denmark	0.20
12	Finland	1.65	Spain	0.91	Germany	0.20
13	Austria	1.60	Sweden	0.90	Netherlands	0.19
14	Sweden	1.57	Austria	0.88	US	0.19
15	Denmark	1.53	Norway	0.86	Switzerland	0.17
16	Norway	1.42	Denmark	0.85	Luxembourg	0.17
17	New Zealand	1.41	Luxembourg	0.67	Sweden	0.16
18	Luxembourg	1.38	Switzerland	0.58	France	0.16
19	Switzerland	1.16	New Zealand	0.57	Norway	0.16
20	Canada	1.09	Australia	0.33	Finland	0.15
21	Australia	0.99	Canada	0.33	UK	0.13
22	US	0.96	US	0.13	Austria	0.12

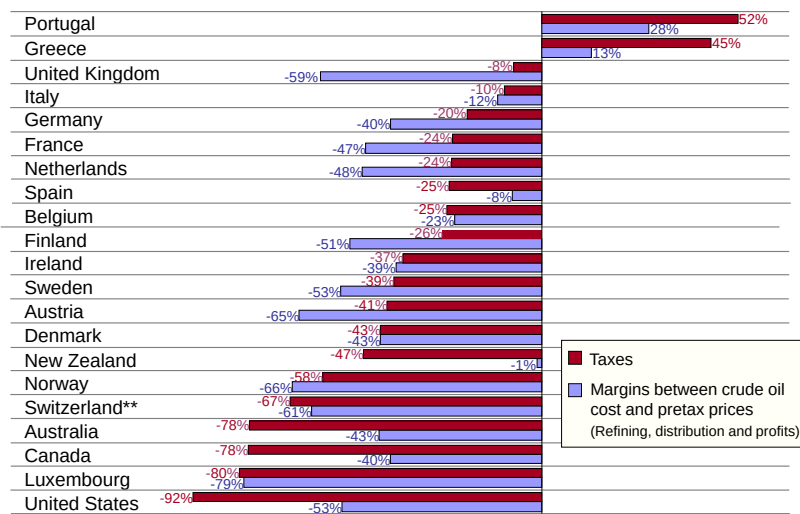
* Comparisons are for premium (95 octane) unleaded gasoline.

** Margins between crude oil cost and pretax prices (refining, distribution and profits).

Source: Dan Ben-David and Yulia Cogan, Taub Center.**Data:** Central Bureau of Statistics, Ministries Finance, Energy and Water Resources, Bank of Israel, OECD.

Israeli incomes are substantially below those of many European countries that tax gasoline at roughly the same levels. What this means is reflected in Figure 32, which shows how gasoline taxes relative to income levels in Israel compare with gasoline prices relative to income levels in European countries.

Figure 32
Gasoline taxes and margins as share of GDP per capita*
 all countries relative to Israel, 2011



* Comparison is for 95 octane gasoline.

** Data for 2010.

Source: Dan Ben-David and Yulia Cogan, Taub Center.

Data: Central Bureau of Statistics, Ministries of Finance, Energy and Water Resources, Bank of Israel, OECD.

On average, when discounting for cross-country differences in living standards, the average tax on gasoline in the 21 countries was 35 percent below the Israeli gas tax, with taxes relative to income lower in 19 of the 21 countries. The primary impact of this is to substantially increase transportation costs for consumers and industry in Israel. In and of itself, this might not be too problematic a policy if there were adequate alternatives to the use of vehicles, but as the preceding section on Israel's transportation infrastructure shows, this is far from the case. The country's rail alternatives languished for decades as resources were diverted elsewhere. Even the surge in construction in recent years reflects expenditures relative to GDP at a level that other countries spend primarily on maintenance and which is insufficient for closing the gaps.

The subsequently higher cost of gasoline combined with the severe congestion on Israel's roads (two and a half times the OECD average, as pointed out in the preceding section) increases production costs and makes Israel's business sector that much less competitive against foreign competition abroad (exports) and at home (imports) – and this has a negative effect on employment and income in the country. To this, one can add the negative effect that the higher gasoline taxes have on available resources that consumers have to spend on other items, and the result is a decline in overall welfare.

Taxes are not the only domestically determined component of the gasoline prices that are high compared to other countries. An often-overlooked factor in determining Israel's gasoline prices is the money going to refining, distribution, marketing, and profits – in other words, the margin between the retail price of a liter of gasoline and the tax and crude oil components. This aspect of the cost is often hidden in the myriad calculations determining the heavily regulated price of gasoline in Israel.

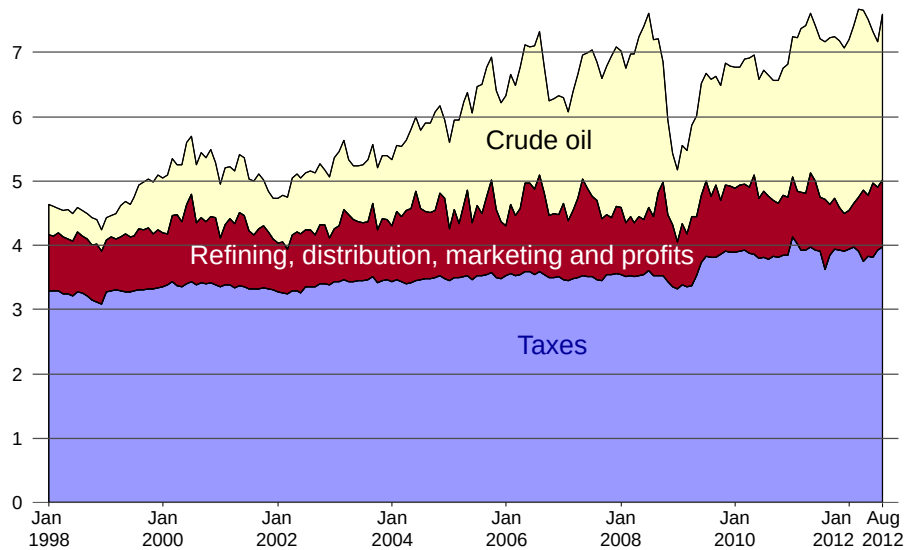
This margin reflects the difference between the gasoline price net of taxes and the crude oil import costs for each country. Figure 33 shows how this margin fits into the broader makeup of the final price of gasoline in Israel. The primary layer in the determination of the retail price is the

tax layer at the bottom. It is very thick, and getting thicker over the years, with the aforementioned jump in taxes in 2009 and the subsequent fluctuations around the new, higher tax level.

Figure 33

Price of gasoline in Israel, 1998-2012

price per liter by main components, 95 octane, in 2011 shekels



Source: Dan Ben-David and Yulia Cogan, Taub Center.

Data: Central Bureau of Statistics, Ministries of Finance, Energy and Water Resources, Bank of Israel, OECD

The top layer is the crude oil cost, which has been by far the most variable. The increases in this component of the gasoline prices have been very steep over the past 14 years and it has gone from being a relatively negligible part of the overall price of gas to a significant element – albeit, still less than the taxes on each liter of gasoline. The middle layer in the graph is the margin that goes to refining, distribution,

marketing and profits. Even after discounting for inflation, this margin has grown in Israel by over one-fifth during the past 14 years. While the margin appears to be overshadowed by the taxes and the price of crude oil, it is a non-negligible part of the cost of each liter of gasoline.

In the comparison with the other countries in Table 1, there are a number of countries with margins similar to those of Israel, though in the final analysis, the dollar value of the margins is nonetheless lower in 18 of the other 21 countries – and this is without taking into account the standard of living in each country. Such a comparison only heightens the degree to which gasoline margins in Israel are disproportionately high in comparison with the rest of the Western world. On average, Western gasoline margins are 38 percent below Israeli gasoline margins, when living standards in each country are taken into consideration. As Figure 32 demonstrates, the gasoline price margin relative to GDP per capita is substantially lower in nearly all of the other countries, with only two countries exhibiting higher margins.

To a certain extent, this kind of discrepancy between Israeli margins and those abroad is reflective of some of the underlying public sentiment against high prices in Israel – in general – compared with prices in other countries. Calls for increased competition, where possible, and increased public regulation – when such competition is not possible – have increased over the past few years. As the above analysis indicates, the argument that the price of gasoline in Israel is abnormally high is not without merit.

4. Summary

The picture painted in this chapter reflects Israel's national socioeconomic priorities. The country is akin to an island whose survival depends on an abnormally large diversion of resources – be they financial or be they in terms of manpower that is diverted away from productive economic activity – to its physical defense. There is always a question of how much is enough, but there is little question about Israel's need to incur a higher defense burden than is shouldered by other Western countries. This means that the remaining resources in Israel must be allocated and utilized much more carefully and judiciously – and this is the major question regarding the national priorities of civilian resources that Israel has avoided dealing with.

The relatively good economic climate in recent years, compared to other Western countries, has been deceiving and policy makers have confused between the relatively rosy short-term picture and the very problematic long-term one. The socioeconomic conditions that led to the summer 2011 protests focused attention to tips of the iceberg instead of to the iceberg itself.

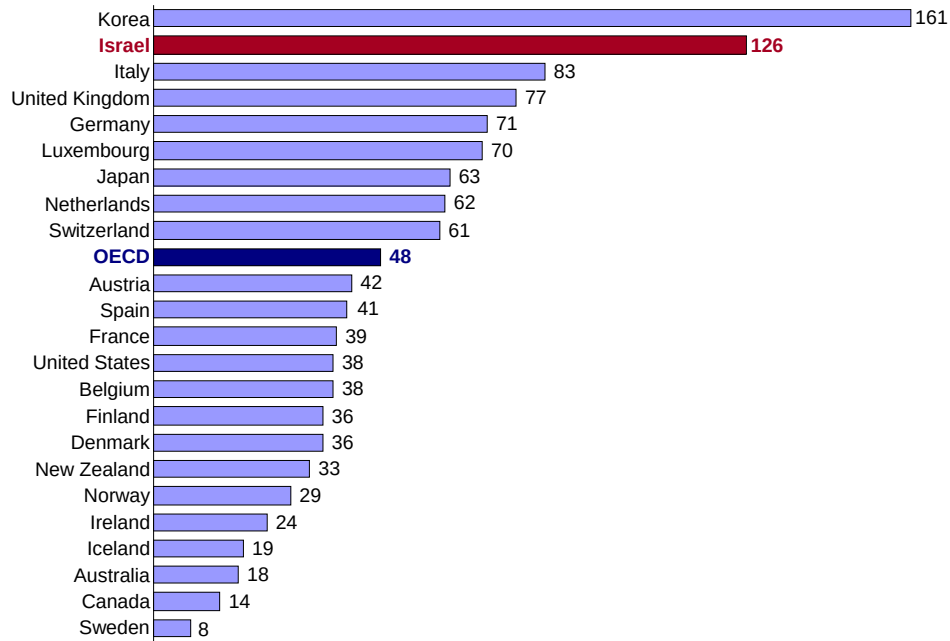
But that iceberg is huge and Israel's demographics are currently leading the country straight into it. The country is not implementing serious changes in policy that would significantly alter Israel's national priorities and divert needed resources towards the primary human capital and physical infrastructures that have been allowed to decay and create the current socioeconomic long-run trajectories. Until there is a major diversion of priorities towards the welfare of many instead of the current biases favoring the few, Israel will continue along its very steady course. There is a point where the inertia will be too great to change course – and then it will simply be a matter of time until the country meets its iceberg.

It should be clear that this outcome is not destiny, nor is it written in stone. It is all a question of priorities and policies – and leadership. All the knowledge that Israel needs to change course is here, still, in its world-class universities and in its cutting-edge hi-tech and medical

sectors. The question is whether the country's leaders will find the wherewithal to ensure that this knowledge reaches all of its children in time, before they grow up and are left to compete in a modern global economy with only Third World tools and infrastructures.

Appendices

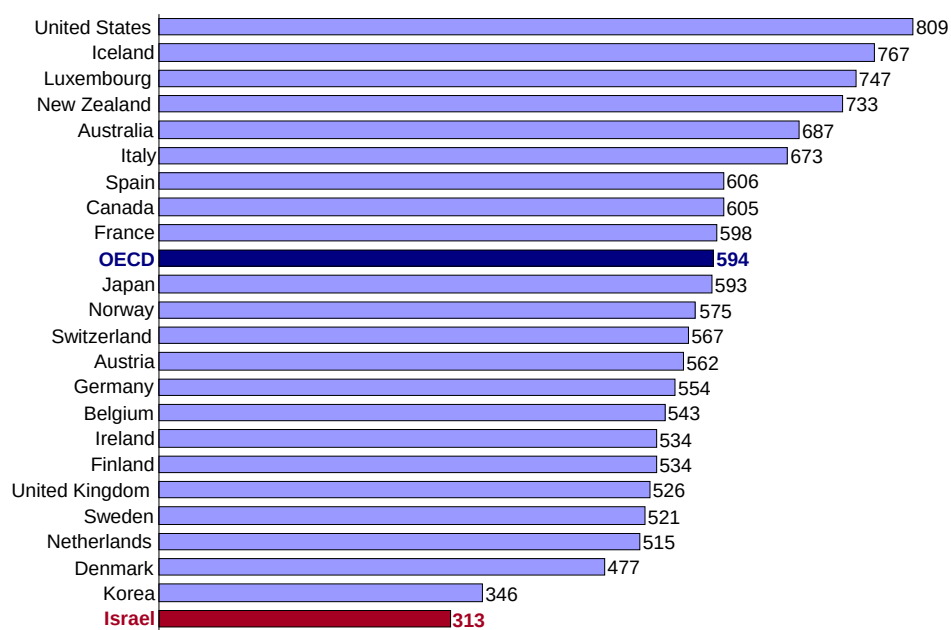
Appendix Figure 1
Congestion on roads
 vehicles per kilometer of road, 2008



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

Data: World Bank.

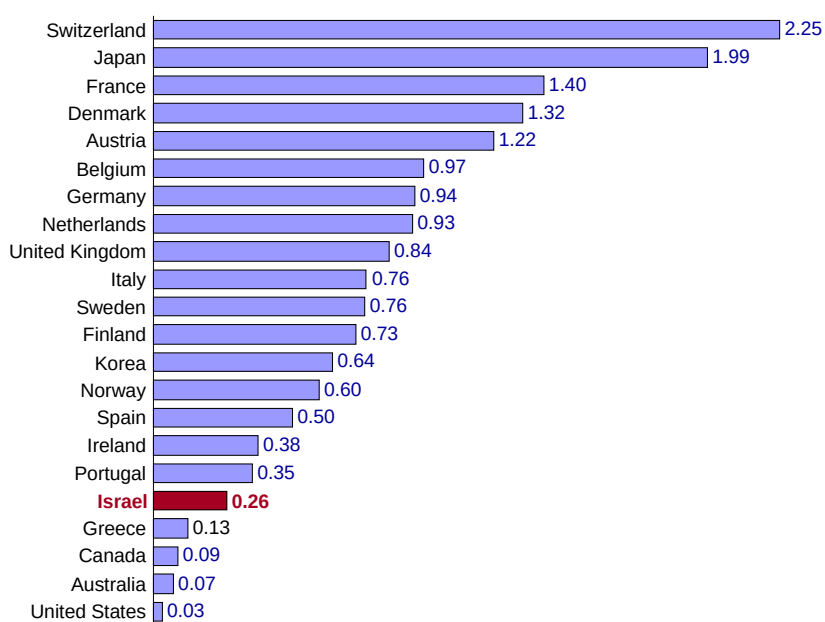
Appendix Figure 2
Vehicles per capita
per 1,000 people, 2008



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

Data: World Bank.

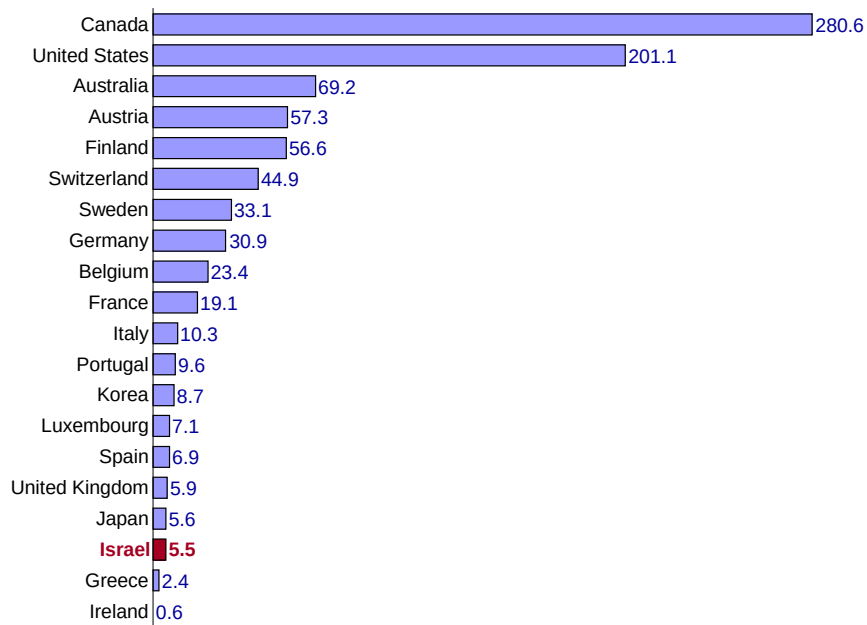
Appendix Figure 3
Railways – Passengers
kilometers travelled per capita, 2009



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

Data: World Bank.

Appendix Figure 4
Railways – Freight
ton-kilometers of freight per thousand dollars of GDP, 2009*



* 2009 GDP in current US dollars and current PPPs.

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

Data: World Bank.

Appendix Table 1. **Distribution of employment and wages by industry, ages 35-54**
0-11 years of education only

Jewish Men			Arab Men			Jewish Women			Arab Women		
	% of total	Wage		% of total	Wage		% of total	Wage		% of total	Wage
average		7,347	average		5,271	average		4,827	average		4,387
Manufacturing	28.9%	7,940	Construction	32.0%	4,975	Health, welfare/ social work	23.7%	4,801	Health, welfare/ social work	24.0%	4,828
Wholesale/retail trade, car/bike repairs	19.0%	7,605	Wholesale/retail trade, car/bike repairs	17.7%	4,975	Wholesale/retail trade, car/bike repairs	14.8%	4,622	Wholesale/retail trade, car/bike repairs	13.1%	4,145
Transport, storage & com- munications	11.9%	7,634	Manufacturing	17.4%	5,650	Domestic help	11.8%	3,940	Education	12.6%	4,132
Construction	10.2%	6,952	Transport, storage & com- munications	11.3%	5,318	Manufacturing	11.5%	5,027	Domestic help	10.6%	
Real estate, rental services, business activities	7.6%	5,320	Lodging services & restaurants	5.1%	5,453	Real estate, rental services, business activities	10.7%	4,035	Manufacturing	10.3%	4,036
Community services, social personal, others	5.2%	6,918	Real estate, rental services, business activities	4.9%	4,510	Education	10.0%	4,912	Real estate, rental services, business activities	9.1%	3,082
Lodging services & restaurants	4.3%	6,675	Agriculture	3.2%	5,517	Community services, social personal, others	5.8%	4,652	Lodging services & restaurants	5.7%	

Appendix Table 1. (continued)

Public administration	3.5%	8,773	Community services, social personal and others	3.2%	5,446	Lodging services & restaurants	5.1%	5,562	Community services, social personal, others	5.4%	3,613
Health, welfare/ social work	2.8%	4,813	Education	1.7%	5,045	Public Administration	2.4%	5,674	Agriculture	4.5%	2,984
Agriculture	2.6%	5,685	Health, welfare/ social work	1.7%	3,329	Transport, storage & communications	1.9%	6,155	Public administration	1.9%	
Unknown	1.4%	8,958	Unknown	1.4%	7,539	Agriculture	0.9%	3,946	Unknown	1.4%	
Education	1.1%	4,872	Public administration	0.3%	5,210	Unknown	0.7%	3,525	Wholesale/retail trade, car/bike repairs	1.3%	12,854
Electricity & water	0.9%	12,492	Domestic help	0.0%		Banking, insurance & finance	0.6%	8,818	Electricity & water	0.0%	
Domestic help	0.6%	4,102	Electricity & water	0.0%		Electricity & water	0.1%	3,203	Construction	0.0%	
Banking, insurance & finance	0.5%	10,755	Banking, insurance & finance	0.0%		Construction	0.0%	11,027	Banking, insurance & finance	0.0%	
Extra-territorial organizations	0.0%		Extra-territorial organizations	0.0%		Extra-territorial organizations	0.0%		Extra-territorial organizations	0.0%	

Source: Dan Ben-David and Eitan Regev, Taub Center.

Data: Central Bureau of Statistics.

Appendix Table 2. **Distribution of employment and wages by industry, ages 35-54**
matriculation certificate only

Jewish Men % of total Wage			Arab Men % of total Wage			Jewish Women % of total Wage			Arab Women % of total Wage		
average			average		6,879	average		7,054	average		4,711
Manufacturing	23.1%	9,255	Construction	28.0%	6,487	Wholesale/retail trade, car/bike repairs	17.0%	6,126	Education	30.1%	5,025
Wholesale/retail trade, car/bike repairs	18.9%	10,182	Manufacturing	17.2%	6,624	Health, welfare/ social work	16.7%	6,221	Health, welfare/ social work	23.7%	3,478
Real estate, rental services, business activities	10.8%	10,481	Real estate, rental services, business activities	16.8%	7,093	Education	11.4%	5,686	Transport, storage & communications	8.5%	4,075
Transport, storage & communications	10.7%	10,652	Transport, storage & communications	11.4%	6,287	Real estate, rental services, business activities	10.6%	7,113	Wholesale/retail trade, car/bike repairs	7.7%	3,512
Construction	7.6%	11,900	Public administration	5.2%	8,871	Manufacturing	10.2%	6,673	Community services, social personal, others	4.6%	
Public administration	6.6%	11,567	Community services, social personal and others	4.6%	8,721	Banking, insurance & finance	7.6%	10,324	Banking, insurance & finance	4.3%	5,853

Appendix Table 2. (continued)

Community services, social personal, others	4.9%	10,713	Real estate, rental services, business activities	4.2%	4,544	Community services, social personal, others	7.3%	6,808	Public administration	4.3%	7,835
Lodging services & restaurants	3.1%	9,895	Health, welfare/ social work	3.8%	7,366	Public administration	4.8%	8,771	Real estate, rental services, business activities	4.2%	5,540
Banking, insurance & finance	3.0%	17,728	Lodging services & restaurants	2.6%	5,245	Transport, storage & communications	4.0%	8,007	Lodging services & restaurants	4.1%	
Health, welfare/ social work	2.8%	7,860	Extra-territorial organizations	2.0%		Domestic help	3.5%	4,091	Manufacturing	3.7%	4,368
Agriculture	2.0%	11,483	Agriculture	1.9%	4,818	Lodging services & restaurants	3.0%	5,701	Construction	3.0%	
Education	1.9%	5,698	Education	1.5%		Unknown	1.3%	7,974	Unknown	1.2%	
Electricity & water	1.9%	13,887	Unknown	0.5%		Construction	1.3%	8,133	Domestic help	0.6%	
Unknown	1.7%	10,524	Banking, insurance & finance	0.4%	9,121	Agriculture	0.7%	5,328	Agriculture	0.0%	
Domestic help	0.9%	4,838	Electricity & water	0.0%		Electricity & water	0.5%	10,668	Electricity & water	0.0%	
Extra-territorial organizations	0.1%		Domestic help	0.0%		Extra-territorial organizations	0.0%		Extra-territorial organizations	0.0%	

Source: Dan Ben-David and Eitan Regev, Taub Center.

Data: Central Bureau of Statistics.

Appendix Table 3. **Distribution of employment and wages by industry, ages 35-54**
BA degree only

Jewish Men			Arab Men			Jewish Women			Arab Women		
% of total	Wage		% of total	Wage		% of total	Wage		% of total	Wage	
average	18,376		average	10,949		average	12,215		average	7,712	
Real estate, rental services, business activities	29.7%	20,757	Education	26.5%	11,132	Education	30.4%	10,295	Education	69.4%	8,026
Manufacturing	15.8%	18,393	Health, welfare/ social work	19.6%	14,869	Health, welfare/ social work	17.7%	12,086	Health, welfare/ social work	17.1%	7,866
Education	9.3%	14,031	Real estate, rental services, business activities	15.9%	8,541	Real estate, rental services, business activities	15.2%	14,347	Real estate, rental services, business activities	3.9%	6,577
Public administration	8.4%	17,909	Public administration	11.2%	11,777	Manufacturing	8.1%	11,409	Community services, social personal, others	2.7%	10,022
Health, welfare/ social work	7.0%	19,509	Wholesale/retail trade, car/bike repairs	10.4%	7,700	Banking, insurance & finance	6.2%	16,390	Banking, insurance & finance	1.5%	10,659
Wholesale/retail trade, car/bike repairs	6.3%	15,664	Transport, storage & com-munications	5.3%	5,055	Public administration	5.5%	14,308	Lodging services & restaurants	1.2%	
Banking, insurance finance	5.9%	22,450	Construction	4.4%	5,959	Wholesale/retail trade, car/bike repairs	5.4%	10,353	Public administration	1.1%	

Appendix 3. (continued)

Transport, storage & communications	4.9%	16,229	Manufacturing	2.2%	15,072	Community services, social personal, others	4.6%	13,338	Manufacturing	0.9%	3,579
Community services, social personal, others	4.4%	15,930	Community services, social personal, others	2.0%	4,600	Transport, storage & communications	2.9%	9,387	Wholesale/retail trade, car/bike repairs	0.8%	8,041
Construction	2.6%	14,948	Lodging services & restaurants	1.1%		Unknown	1.0%	18,011	Unknown	0.7%	
Unknown	2.1%	18,608	Unknown	0.5%	14,078	Domestic help	0.9%	4,185	Transport, storage & communications	0.6%	5,479
Electricity & water	1.8%	18,013	Extra-territorial organizations	0.5%		Construction	0.8%	11,474	Agriculture	0.0%	
Agriculture	0.8%	22,567	Banking, insurance & finance	0.4%	13,733	Lodging services & restaurants	0.6%	7,475	Electricity & water	0.0%	
Lodging services & restaurants	0.7%	6,840	Agriculture	0.0%	12,097	Agriculture	0.4%	10,887	Construction	0.0%	
Domestic help	0.1%	9,833	Electricity & water	0.0%		Electricity & water	0.2%	19,287	Domestic help	0.0%	
Extra-territorial organizations	0.0%		Domestic help	0.0%		Extra-territorial organizations	0.0%		Extra-territorial organizations	0.0%	

Source: Dan Ben-David and Eitan Regev, Taub Center.

Data: Central Bureau of Statistics.

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A Macro Perspective of the Economy and Society in Israel

Eran Yashiv*

Abstract

This chapter surveys macroeconomic developments in Israel during 2011 and discusses the difference between cyclical/temporary problems and structural problems. It also takes an in-depth look at possible solutions to the economy's structural problems. The social protest movement of the summer of 2011 and the Trajtenberg Committee Report placed these problems – which are expected to remain dominant in the foreseeable future – high on the public agenda. The data for 2011 indicate rapid GDP growth, a decline in unemployment to very low levels, and a significant increase in investment; they also point to a reasonable level of inflation. Forecasts for 2012 point to a major slowdown in the wake of global developments. The chapter discusses a possible fiscal policy for distinguishing between temporary and structural problems, and suggests (in accordance with the "Proposal by the Heads of the Taub Center – A New Public Agenda for Israel," Eran Yashiv (ed.) 2011) a number of policy solutions designed to address the structural problems.

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

At the beginning of 2012, Israel, like most of the world's countries, faced a considerable degree of uncertainty. The European debt crisis, the economic slowdown and the conflict over fiscal policy in the United States, China's economic "landing," the fragility of the global banking and financial systems – all of these things occasioned a significant degree of uncertainty and negatively impacted on the Israeli economy.

Israel is not mired in the kind of crisis that has afflicted the southern European countries; most current Israeli indicators paint a positive macroeconomic picture. However, Israel is facing fundamental structural problems, some of which penetrated the public consciousness during the social protest activity of summer 2011, and were addressed by the Trajtenberg Committee Report published in September 2011. This chapter takes up all of these issues.

Section 1 deals with current developments in 2011. Section 2 discusses the differences between cyclical/temporary problems and structural problems, as well as the ramifications of these problems for fiscal policy. The concluding section offers recommendations for addressing the structural problems.

1. Current Developments in Israel's Economy

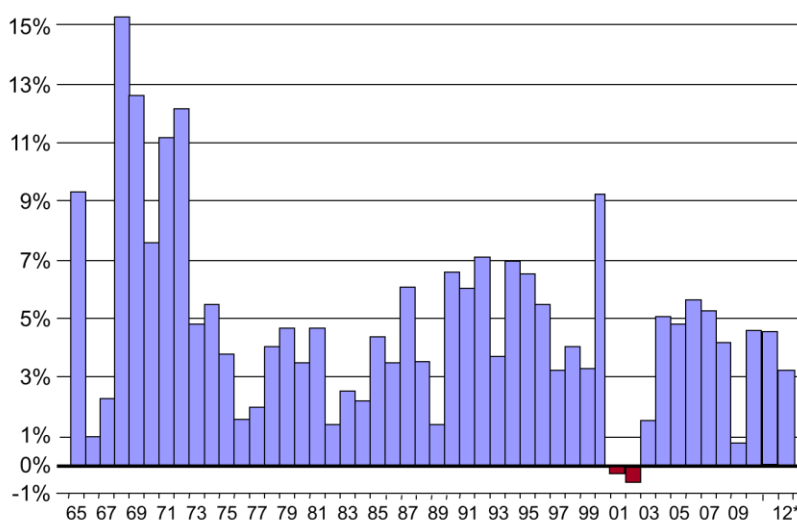
The Israeli economy is highly open to international trade of goods, services and financial capital. In a kind of replay of the events of the global financial crisis of 2008-2009, Israel once again at the end of 2011 faced negative effects of the world economic situation. The main current developments are surveyed below.

Real Economic Activity

As Figures 1 and 2 show, GDP and business sector GDP grew by 4.8 percent and 5.1 percent respectively; the per capita GDP increased by 2.9 percent. A rise in GDP usage this year was reflected in a significant

increase in investment, its proportion of GDP rose from 16 percent in 2010 to 18 percent in 2011. The unemployment rate continued to trend downward, reaching 5 percent by the end of 2011; the overall 2011 average was 5.7 percent. This growth is not expected to continue. The forecast for 2012 calls for growth of slightly less than 3 percent (in the 2.7-2.8 percent range), accompanied by a rise in unemployment to 6.6 percent; the last quarter of 2011 already witnessed a decline in tax revenue and a slowdown in exports.

Figure 1
Annual rate of GDP growth
 percent changes in real GDP, 1965-2012



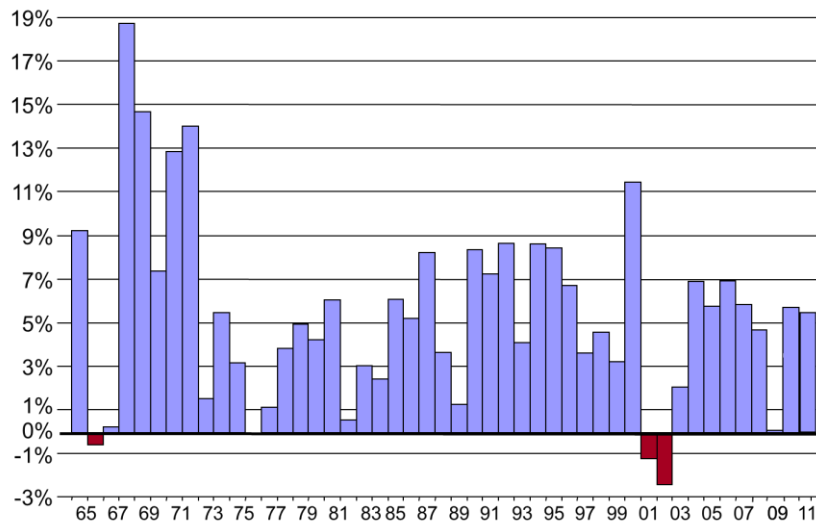
* Bank of Israel estimate for 2012.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, Bank of Israel calculations.

Figure 2

Annual rates of growth in business sector GDP
percent changes in real business sector GDP, 1965-2011

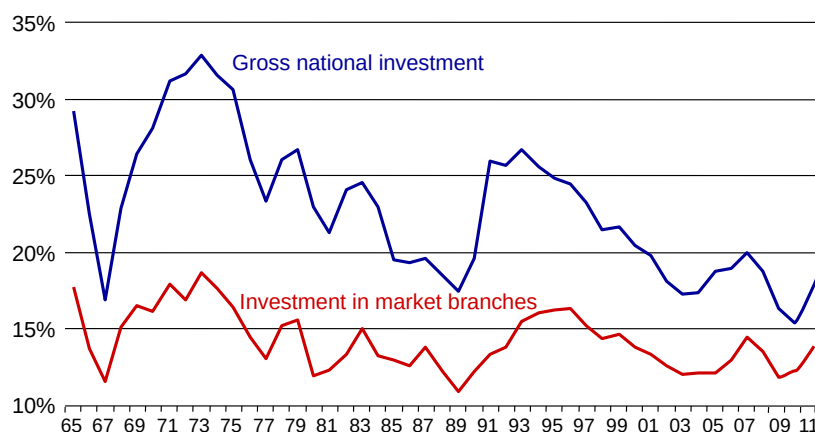


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, Bank of Israel calculations.

Gross domestic investment, reflecting capital purchases (equipment, machinery, buildings, etc.) and construction, is shown in Figure 3. Investment has declined over the years, from 33 percent of GDP in the early 1970s to less than 20 percent; however, the past year's data indicate a rise in terms of percentage of GDP. Investment in market sectors – a variable that excludes construction – is behaving similarly to investment in the aggregate.

Figure 3
Investment
as percent of GDP, 1965-2011

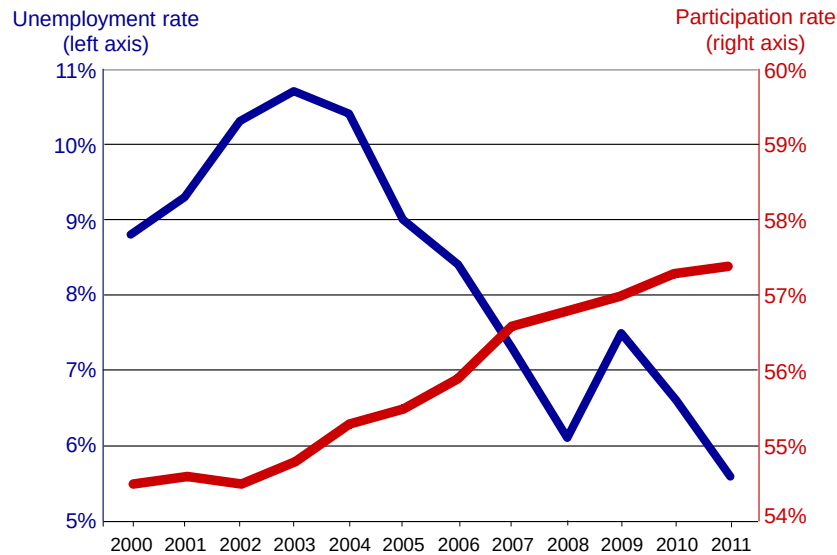


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

As Figure 4 shows, the high rate of growth was reflected in a decline in unemployment from 6.2 percent at the beginning of the year to 5.4 percent during the last quarter of 2011; the average for the year (2011) was 5.7 percent. This is very low in terms of international comparisons; in the wake of the global crisis many European countries, as well as the US, still have unemployment rates of 8-9 percent or more. Israel has also enjoyed another rise in labor market participation rates, and the average real wage per job rose by 2.5 percent during 2011.

Figure 4
Unemployment rate and labor force participation
 2000-2011



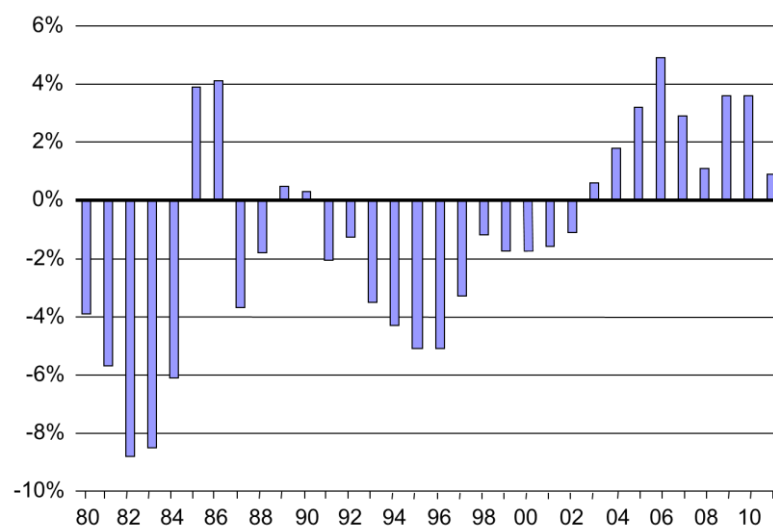
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, Bank of Israel calculations.

Foreign Trade

Figure 5 presents Israel's current account, which represents the total value of exports minus the total value of imports, plus foreign transfers to Israel (e.g., US foreign aid). The account total represents the scope of Israel's foreign trade. Deficits and surpluses in the account presented here represent Israel's total debts and assets relative to foreign economies. The current account has been improving since 2003. This improvement is reflected in a large surplus that reached a level of nearly 5 percent of GDP in 2006. This positive trend is continuing, although the surplus declined to 0.8 percent of GDP in 2011.

Figure 5
Balance of payments, current account
 as percent of GDP, 1980-2011

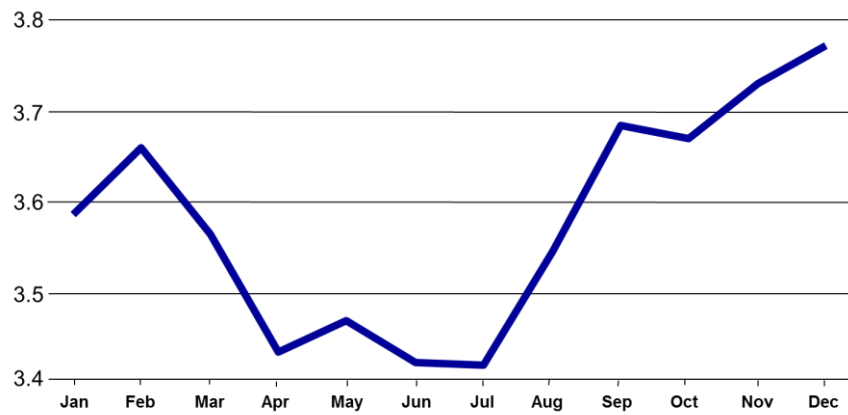


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, Bank of Israel calculations.

Figure 6, which presents the NIS/dollar exchange rate, shows a year split into two halves: the revaluation of the shekel continued until July 2011, due mainly to an interest rate differential favorable to Israel, which incentivized the movement of capital to Israel. From that point on the trend reversed itself: the shekel depreciated from 3.36 shekels to the dollar to 3.76 shekels to the dollar, and capital movement changed direction. This was the result of foreign investment realization in Israel that accompanied the foreign market crises as well as rising concerns over the situation in the Middle East. During this period Israel's default risk premium as reflected in the credit default swaps (CDS) market also rose.

Figure 6
Dollar-Shekel exchange rate, 2011



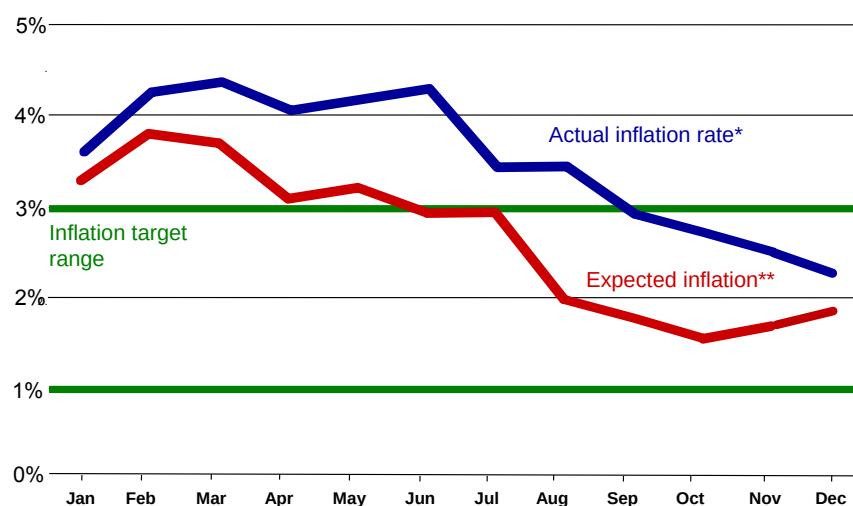
Source: Taub Center for Social Policy Studies in Israel.

Data: Bank of Israel.

Inflation, Interest Rates, and Financial Markets

Israel's inflation rate (Figure 7), which early in 2011 exceeded the target range of 1-3 percent per year reaching an overall annual rate of 4 percent, returned to the target range during the third quarter of 2011. Expectations of inflation derived from the capital market declined even more rapidly than did the inflation rate itself.

Figure 7
Inflation rate, 2011



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

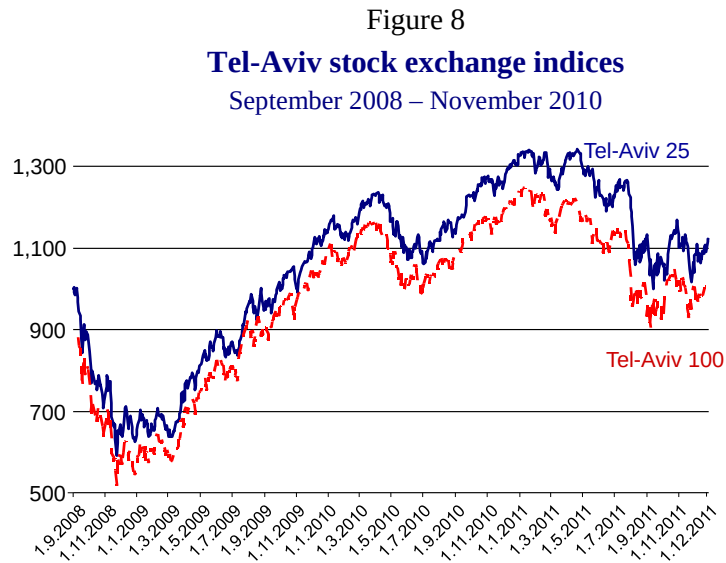
** Expected inflation for the next 12 months (monthly averages).

Source: Taub Center for Social Policy Studies in Israel.

Data: Bank of Israel.

Over time, interest rates declined in a manner consistent with declines in the inflation rate and in inflation forecasts. This occurred in the context of a rise in the Bank of Israel interest rate from 2 percent in early 2011 to 3.25 percent in the third quarter – a restraining measure that caused a drop in inflation. As economic activity slowed, the upward trend came to a halt in October 2011, and the interest rate reductions carried out by the Bank of Israel's new Monetary Policy Committee brought the rate to 2.75 percent by late 2011. The CLA (current linked accounts) interest rate and the 5-year *SHAHAR* (NIS government bond) yield were consistent with the Bank of Israel's interest rate policy.

As the world market crises intensified, major stock market declines occurred; the TA-25 Index dropped by 18 percent over the course of 2011, as may be seen in Figure 8. Foreign influences were thus more dominant that year than were domestic developments (high growth and low interest rates).



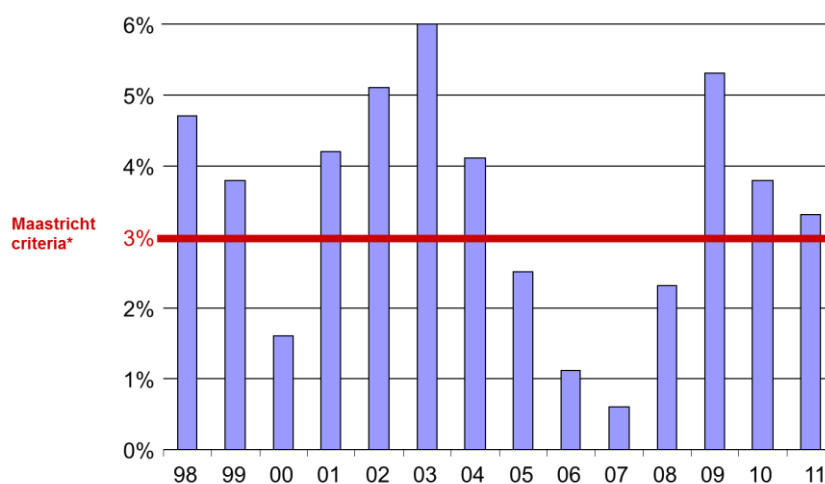
Source: Taub Center for Social Policy Studies in Israel.

Data: Tel-Aviv Stock Exchange.

Fiscal Policy

Figure 9 shows the development of the government deficit. In 2011 tax revenues declined by NIS 2.2 billion, compared with the budget forecast of NIS 214 billion.

Figure 9
General government deficit
as percent of GDP, 1998-2011



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

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, Bank of Israel calculations.

The Trajtenberg Committee recommendations of September 2011 entail budgetary changes that have been under discussion since the recommendations were published. It appears that the recommendations will be partially implemented in 2012, with no change to the budget

framework. In consideration of the slowdown forecast for 2012, the main fiscal policy question for 2012 is whether it will be necessary to raise taxes in order to keep the deficit below the generally accepted 3 percent of GDP ceiling. Overall, 2011 was a year in which fiscal topics rose to the top of the public agenda (for further discussion, see *Proposal by the Heads of the Taub Center – A New Public Agenda for Israel* – Eran Yashiv (ed.) 2011).

To complete the current macroeconomic picture, one may say that, on the positive side, GDP growth was robust, as were the labor market and investment. Inflation, which tended at first to exceed the outer target of 3 percent, declined to within target parameters later on. Housing start figures were relatively high, and the house price index declined somewhat. On the negative side, one can point to a slowdown in economic activity toward the year's end, the emergence of a current account deficit, and a budget deficit increase due to a drop in tax revenues in the wake of the slowdown.

2. Cyclical and Structural Aspects of Fiscal Policy

The financial-economic crisis that began in 2008 continues to reverberate worldwide. Among other things it has produced a new environment for the management of government policy. Within the monetary sphere new issues are being taken up, such as interest rate policy at the zero lower bound,¹ quantitative easing,² macro-prudential policy,³ etc. Fiscal policy,

¹ Zero interest rate policy: a concept describing the inability to set a negative nominal interest rate, such that the central bank is unable to reduce interest rates when they have reached zero.

² Quantitative Easing (QE): When the central bank can no longer reduce interest rates, it can increase the size of its balance sheet by purchasing assets such as bonds. In such a situation the money supply increases with no corresponding drop in interest rates.

³ Macro-prudential policy: While prior to the crisis financial regulation around the world focused on maintaining the stability of each financial institution

for its part, is returning to traditional, Keynesian-style issues of fiscal activism,⁴ while concurrently incorporating new concepts and techniques.

One major issue in the fiscal policy sphere is that of distinguishing between temporary or cyclical changes and structural changes, both in terms of assessing developments in the economy and in terms of the fiscal policy response. Temporary changes or problems may be cyclical or they may be caused by other short-term disturbances. Structural problems are long-term and often related to the structure of the markets, to the institutional environment (regulation, laws and their enforcement, labor unions, etc.) or to demographic processes.

An example of a temporary change in Israel is the tax cut of 2011 following a slowdown in world markets. An example of a structural change in the economy is the emergence of security issues necessitating a permanent change in the defense budget. Differentiating between structural and temporary changes is advantageous in several ways. Firstly, it facilitates the implementation of counter-cyclical policy during a recession (i.e., expanding the budget during a recession in order to stimulate the economy) while taking into consideration the development of the debt-GDP ratio. Secondly, this differentiation makes it possible to determine how structural fiscal changes (e.g., legislation, which affects state spending and revenues) affect the structural budget balance. And thirdly, this differentiation makes it possible to verify that long-term

separately, macro-prudential policy focuses on the relationships between all components of the financial system, including the ramifications of inter-institutional relationships on the financial system's stability and on economic activity as a whole. The topic of macro-prudential policy is currently under development, and consideration is being given to a wide range of tools for managing such a policy, including controls on credit, restrictions on centralization, variable capital requirements linked to the business cycle, etc. (*Bank of Israel Report*, 2010).

⁴ Fiscal activism: Fiscal policy oriented toward market intervention, usually in order to encourage economic activity, GDP growth and employment during times of downturn.

policy is sustainable and compatible with planning as formulated by the decision making echelon.

One accepted means of implementing this distinction is that of the cyclically-adjusted budget balance – the budget balance that would be obtained were the economy on its long-term growth trajectory. The cyclically-adjusted budget balance adjusts for cyclical aspects of economic activity (i.e., the economy's deviations from its long-term growth trajectory due to temporary recessions or booms).

For example, during the current recessionary period, government tax revenues declined due to a drop in economic activity, while government spending increased due to a rise in the number of those eligible for benefits of various kinds. This combination led to an increase in the actual budget deficit. Assuming that the recession is temporary, one must look at the “structural” fiscal picture that would be obtained if there were no recession. This picture is delineated in terms of the cyclically-adjusted budget deficit, which neutralizes temporary recessionary effects on the actual budget deficit. Thus, the cyclically-adjusted budget deficit in this example is more useful than the actual budget deficit, that is, it provides a more accurate fiscal picture that reflects the true long-term state of the economy – rather than the state of the economy at the specific point in time where it is being affected by the recession.⁵

It should be remembered that fiscal policy is subject to numerous constraints: it is bound by fiscal rules such as restrictions on spending, on the deficit, and on the debt-to-GDP ratio; policy is sometimes limited in its ability to implement counter-cyclical measures due to these rules; fiscal policy reacts relatively slowly (this also depends on the length of the budget period and on the legislative arrangements); Israeli policy in

⁵ Formally, a budget balance (deficit or surplus) is defined as:

$CAB = B - C = B - \varepsilon(Y - Y^*)$ where CAB is the cyclically-adjusted budget balance, B is the budget balance and C is the cyclical component; these values are calculated as percentage of GDP. The final component is a function of the GDP gap $Y - Y^*$, representing the actual GDP's deviation from the potential GDP; ε expresses the budget balance's elasticity vis-à-vis the GDP gap.

particular has trouble changing priorities and suffers from inertia; policy is also subject to critique on the part of the markets and the public. Basing policy on a cyclically-adjusted budget balance is one way of contending with these constraints.

The data point to the existence of a significant gap between a cyclically-adjusted budget balance and the actual budget balance. Table 1 presents the actual overall deficit, the same deficit cyclically adjusted by two different methods, and the cyclically-adjusted overall deficit for the OECD countries during the period 2002-2010. The adjustment for temporary influences on the deficit turns out to be significant.

Table 1. **Actual deficit and cyclically-adjusted deficit in Israel and the OECD countries, 2002-2010**

as percent of GDP

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actual total deficit	5.0	5.8	4.0	2.4	1.0	0.2	2.0	5.0	3.4
Cyclically-adjusted total deficit	2.9	3.3	2.2	1.3	1.3	1.1	2.8	4.1	3.1
Cyclically-adjusted total deficit with international classification	4.0	4.4	3.1	2.3	2.4	1.9	3.9	5.1	4.0
Average cyclically-adjusted deficit in OECD countries*	1.5	2.1	1.7	1.3	0.7	0.7	2.5	4.5	4.6

* Without Chile, Estonia and Slovenia.

Source: Bank of Israel, 2010.

Figure 10 presents the cyclically-adjusted deficit data for Israel and the OECD countries during the period 2000-2010, based on a comparable international definition.⁶ As one can see, Israel experienced a continual decline in its structural deficit, from 4 percent in 2000 to 2 percent in 2007; starting in 2004, Israel's structural deficit approached the OECD average. Beginning in 2008, when the present economic crisis erupted, structural deficits increased both in Israel and in the OECD countries, although in 2010 Israel's structural deficit was lower than that of the OECD countries. The meaning of this increase in the structural deficit in Israel and the OECD countries since 2008 is that the recent economic crisis led to a structural worsening of the fiscal picture, beyond the temporary disturbances occasioned by declines in state revenue and increased spending due to the crisis.

Figure 10
Cyclically-adjusted deficit in Israel and OECD countries
as percent of GDP, 2003-2011



Source: Taub Center for Social Policy Studies in Israel.

Data: Bank of Israel.

⁶ The overall deficit was adjusted in this section to conform to the accepted international definition by adding linkage differentials to the local-currency debt (CPI-linked and non-linked), assuming 2 percent annual inflation.

The policy approach taken by Israel's Ministry of Finance in recent years bears similarities to the type of policy described above. During both 2008-2009 and 2011 the actual debt was greater than anticipated, due to cyclical or temporary factors. However, the Ministry of Finance did not change its budget policy – in de facto recognition of the cyclically-adjusted budget deficit's greater relevance for policymaking. Although the Ministry of Finance and the Bank of Israel both perform calculations similar to those described here, this approach has not been officially adopted; indeed, there is broad opposition to its official adoption.

In the wake of the summer 2011 protests and the calls for change in the socioeconomic sphere, the heads of the Taub Center issued a document (*Proposal by the Heads of the Taub Center – A New Public Agenda for Israel* – Eran Yashiv (ed.) 2011) containing proposals for change in Israel's national priorities. Despite the great differences in background, areas of expertise and overall outlook that exist within the Center leadership, there was a broad consensus regarding the main problems – government expenditure, housing, the labor market, education and higher education, health, infrastructure, welfare, market concentration – faced by Israeli society and the Israeli economy, as well as the national priorities to be adopted so that these problems may be systematically addressed.

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The Impact of the Expected Tax Rate Changes on the Middle Class

Ayal Kimhi and Kyrill Shraberman*

Abstract

In light of the current budget situation, the Israeli government decided to raise the VAT by 1 percent as of September 2012, and to impose higher income tax rates and National Insurance payments on higher-earning Israelis starting in 2013. In doing so, the government has gone even further than the Trajtenberg Committee, whose tax recommendations it only partly adopted in late 2011. Although the recent decisions affect all strata of the population, Israel's middle class will feel their impact the least. Nevertheless, it is reasonable to expect additional tax increases and/or budget cuts that will reverse this conclusion.

The Committee for Economic and Social Change, popularly known as the Trajtenberg Committee, was established in August 2011 in response to the social protest movement to recommend to the government steps to ease the economic burden on Israeli households. Within seven weeks of the committee's founding a document was submitted which, in

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its words, outlined a comprehensive and deep change in Israeli socioeconomic policy. The committee recommendations reflect an attempt to maintain fiscal responsibility which opposes any increase in the government deficit; the recommendations thus include measures designed to increase not only state spending, but state revenues as well.

Within the taxation sphere the committee recommended reducing indirect taxes (sales tax, customs and excise duties) and raising direct taxes progressively. In particular, it was recommended that scheduled income tax rate reductions be repealed, that the tax rate for those with especially high incomes be raised, and that employer National Insurance contributions for relatively high wages be raised as well. The committee also recommended raising the corporate tax and the capital gains tax, and according fathers two tax credits per child under the age of three – as a means of easing the burden on working families. Overall these measures were meant to increase state revenue by some NIS 3.3 billion, and to reduce income inequality.

The Law for Change in the Tax Burden, passed by the Knesset in December 2011, adopted the majority of the Trajtenberg Committee's tax recommendations, with a few modifications. The surtax on high incomes was not included in the law, while the tax rate for the third tax bracket (monthly income of NIS 8,880 to NIS 14,430) was reduced by 2 percent. Employer National Insurance contributions were not increased.

The left-hand side of Table 1 presents the income tax rates prior to the Trajtenberg Committee (the "Before change" column), the committee's recommendations, and the actual provisions of the law (the "After change" column). Compared with the Trajtenberg recommendations, the government forfeited potential annual revenues in excess of NIS two billion. Additionally, simulations run in accordance with the Taub Center tax model have shown that full adoption of the Trajtenberg Committee recommendations (the blue bars in Figure 1) would have led to a more equitable distribution of earned income than that which emerged subsequent to the late 2011 legislation. This was primarily due to the 2 percent surtax that would have been imposed on high incomes. In

particular, one can see that the surtax would mainly have hurt Israeli households in the highest decile, with a lesser degree of impact on households in the decile just under it. By contrast, the income share enjoyed by households in deciles 1-7 would have grown. One should note that while the changes presented in the graph relate to the shares of total earned income of the various deciles, the decisive majority of workers would likely have paid higher taxes in absolute terms.

Table 1. **Income tax rates in various policy alternatives**

Suggested tax and actual tax policy in 2012				New decision in 2013	
Tax bracket (NIS per month)	Tax rate			Tax bracket (NIS per month)	Tax rate
	Before change	Trajtenberg	After change		
0-5,200	10%	10%	10%	0-5,200	10%
5,201-8,880	14%	14%	14%	5,201-8,880	14%
8,881-14,430	23%	23%	21%	8,881-14,000	21%
14,431-21,780	30%	30%	30%	14,001-20,000	31%
21,781-41,830	33%	33%	33%	20,000-41,830	34%
Over 41,830	44%	48%	48%	Over 41,830	48%
Over 83,000	---	50%	---	Over 67,000	50%

Source: Ayal Kimhi and Kyrill Shraberman, Taub Center.

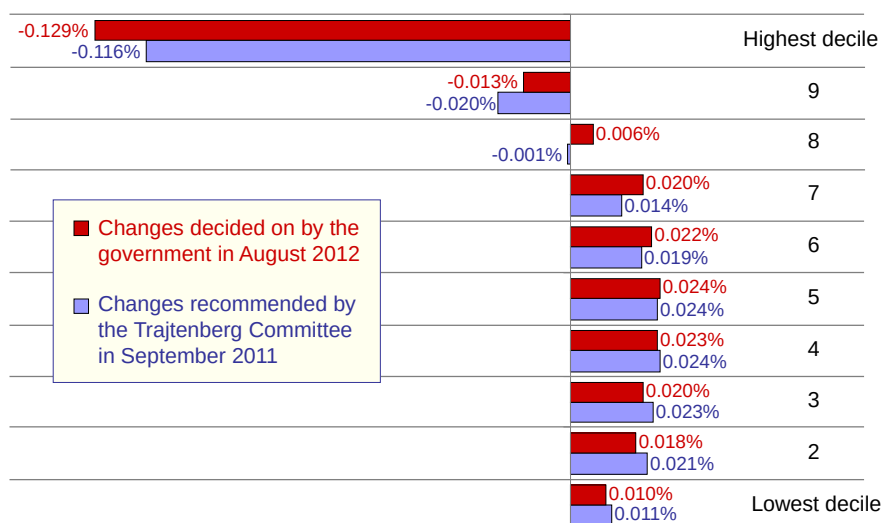
Data: *The Report of the Committee for Economic and Social Change*, 26 September 2011. The Law for Change in the Tax Burden (Amendments to the Legislation), December 5, 2011. Knesset announcement from August 5, 2012 (Knesset website).

The government took several measures to address the budget shortfall that emerged during the first half of 2012 (a crisis whose causes lie beyond the scope of this paper) and the expectation that it will persist in the coming years. Firstly, the government deficit target for 2013 was doubled from 1.5 percent to 3 percent of GDP – equivalent to a total of NIS 14 billion. Additionally, a state spending cutback in a similar amount was announced, and a plan formulated to increase state revenue by over NIS 14 billion, through, among other things, changes in income tax rates.

Within the plan framework that was approved by the Knesset in early August 2012 which will come into effect on January 1, 2013, tax brackets 3-4 were narrowed (meaning that a certain number of workers will be pushed into a higher bracket), the income tax rate for brackets 4-5 (monthly income of NIS 14,000 to 41,830) was raised by 1 percent, and an additional 2 percent surtax was imposed on annual incomes exceeding NIS 800,000 (monthly income of NIS 67,000; right-hand side, Table 1). This is the type of surtax that the Trajtenberg Committee recommended – but the government went even further than the committee, which recommended imposing the tax only on annual incomes above NIS 1,000,000 (monthly income of NIS 83,000). Another Trajtenberg Committee recommendation which the government originally rejected but now chose to adopt was that of increasing employer National Insurance contributions for high salaries (the share of the salary that exceeds 60 percent of the average wage).

Overall, the recent tax rate and National Insurance contribution changes are expected to yield annual revenues of nearly NIS 3 billion. As can be seen in Figure 1 (the red bars), these changes are even more progressive than those proposed by the Trajtenberg Committee recommendations. More specifically, compared with the Trajtenberg Committee recommendations the changes affected the highest decile the most, and are somewhat more favorable to deciles 6-9 – deciles associated with the upper middle class. The outcome is a certain reduction – one might call it a miniscule reduction – in income inequality.

Figure 1
Expected changes in distribution of earned income
 the change from the 2012 situation in each decile's income share*

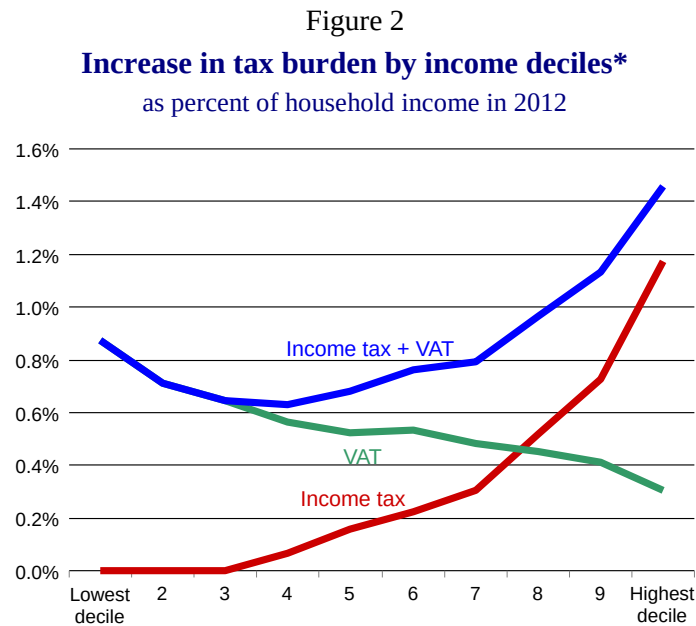


* Zero change (vertical axis) means that the decile's income share did not change.

Source: Ayal Kimhi and Kyrill Shraberman, Taub Center.

Thus, one year after the Trajtenberg Committee recommendations were submitted, the Israeli government has adopted an income tax policy that will increase its revenues and decrease earned-income inequality. However, the new tax policy encompasses an additional element – raising the value added tax (VAT) by 1 percent as of September 2012. The VAT, as an indirect tax, is regressive and mainly hurts the weaker social strata.

Figure 2 shows the increased tax burden to be borne by Israeli households by per capita income decile. One can see that the income tax burden increases along with income, while the VAT burden actually decreases as income rises.



* By household per capita income decile.

Source: Ayal Kimhi and Kyrill Shraberman, Taub Center.

Adding up the two tax burden additions – the VAT and income tax increases – one finds that most of the burden falls upon the three highest deciles, due particularly to the surtax. The impact on deciles 3-5, i.e., the lower middle class, is the smallest.

It should be remembered that the new policy relies on billions of shekels in revenue from sources that at this point exist solely on paper, such as tax payments on “trapped profits,” intensified tax collection and a war on shadow economy activity. If these revenues are not received in full, additional state budget cuts will have to be enacted – cuts that are also likely to hurt the lower socioeconomic strata and the middle class. Thus, although Israel’s tax policy for 2013 includes some elements of good news for the relative position of the middle class, there is an ultimate lack of clarity over which population segments will be more negatively affected by the government’s economic policy as a whole.

II. EMPLOYMENT AND INCOME

Labor Market Trends: Employment Rate and Wage Disparities

Ayal Kimhi*

Abstract

Israel is characterized by exceptionally low employment rates of men and by high wage gaps amongst the working population. Over the past few decades, the decline in male employment was concentrated amongst the less educated, while the rise in female employment has been attributed almost entirely to the rise in the level of education of the younger generations. These trends are especially pronounced in the Arab sector. The growing importance of education in the Israeli labor market is expressed also in the fact that the wage gap between more and less educated workers has not narrowed in the past decade despite the large growth in the share of educated workers. An examination of the changes in wages by occupational group indicates a relative growth in demand for educated workers in specific occupations, something that has brought about a rise in wage gaps in those particular occupations. The conclusion is that employment gaps and wage gaps in Israel are, to a large degree, correlated with education. The skills that workers with no more than 12 years of schooling have do not allow them to integrate in a satisfactory way into the modern labor market.

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I wish to thank Kyrill Shraberman for his tremendous help in organizing the data and in its analysis.

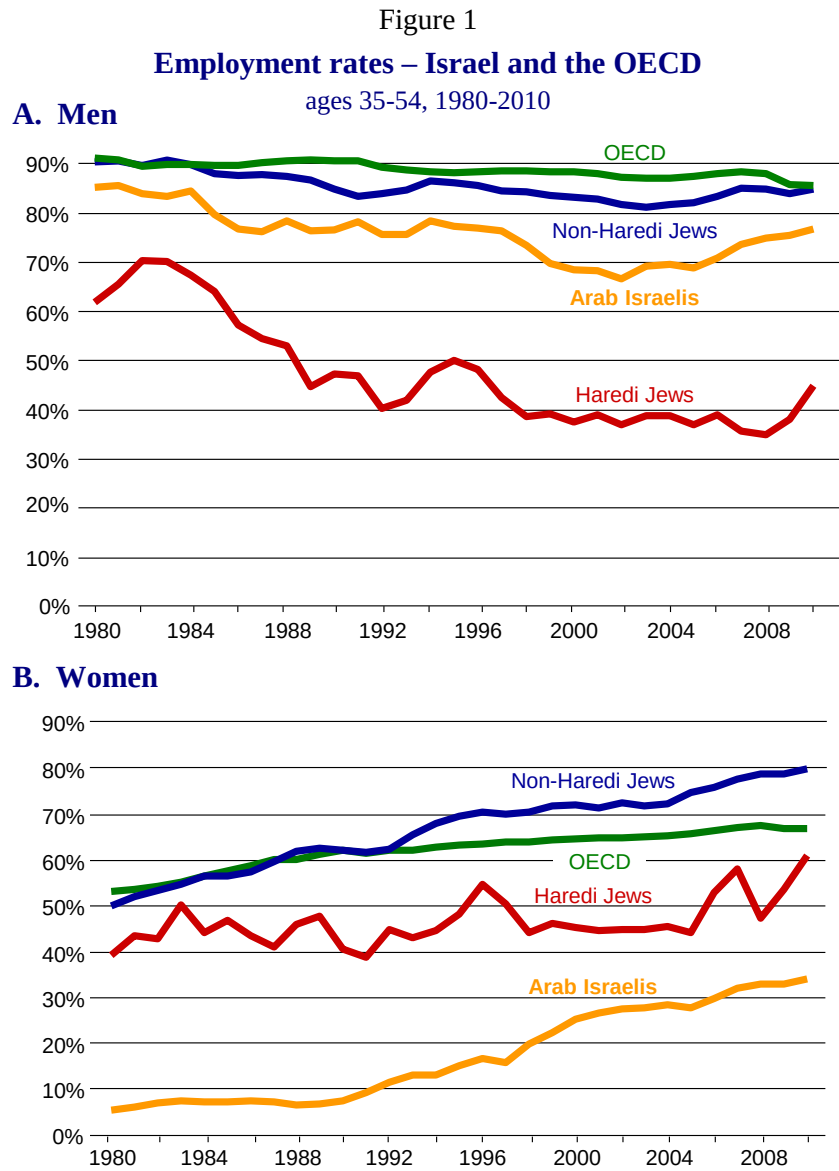
The wave of social protests in the summer of 2011 raised public awareness of the large socioeconomic disparities between different population segments in Israel. In the past it was common to focus on the distress of the weaker segments of society and to propose solutions, such as welfare payments, geared mainly toward addressing the symptoms rather than the disease. However, it is now clear that the feelings of distress characterized much broader segments of the population, including young adults and those belonging to the middle class; hence the need for comprehensive solutions that tackle the root causes of the problems. The Taub Center's recent annual *State of the Nation Reports* have devoted considerable attention to the widening gaps in income, education and healthcare. For example, the 2010 report (Kimhi 2011, pp. 138-140) showed that income disparities stem primarily from employment rate gaps and wage gaps which, in turn, are largely rooted in educational disparities. Recent OECD studies (2011) widely accept the approach that the labor market is the main arena in which the war on inequality should be fought. This chapter will expand on these issues and address them in depth.

1. Trends in Employment Rates

Recent decades have witnessed unprecedented changes in Israeli employment patterns. Among males of prime working age (35-54), the employment rate declined from 91 percent in 1979 to 82 percent in 2010. By contrast, among women from the same age group, employment rates rose during this period from 44 percent to 70 percent. These trends are also prevalent in other countries; however, the rate of change in Israel, for both men and women, has been more rapid than in the OECD countries (Ben-David 2010, pp. 230-240). Similar trends can be identified among broader age groups as well.

The employment rate changes were not uniform across the various population segments. Figure 1A presents employment rate trends since 1980 for men in three different population segments: non-Haredi (non-ultra-Orthodox) Jews, Haredi (ultra-Orthodox) Jews and Arabs.¹ Throughout the period in question there were employment rate differences between these three segments, with the non-Haredi Jewish sector exhibiting the highest employment rate (though one still lower than the average employment rate in OECD countries), while the Haredi sector had the lowest employment rate. Up until a decade ago, employment rates were in decline, primarily among the ultra-Orthodox, while the differences between the three segments continued to widen. At the start of the millennium, with the beginning of an emergence from the deep recession (a recession that hit Arab Israeli businesses especially hard), the employment rate of the Arab sector began to switch direction with a 10 percent increase by 2010. It is reasonable to assume that the deep cuts in welfare benefits had much to do with this change. Two years later, the non-Haredi Jewish employment rate also began to rise, though at a more moderate pace, such that the employment rate gap between the two sectors narrowed slightly. The past two years have also seen a significant rise in the male Haredi employment rate, although this increase has brought the segment's rate to only some 45 percent. It remains to be seen whether these positive trends will continue in the coming years.

¹ The terms Arabs and Arab Israelis are used interchangeably to refer to the same population.



Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics, OECD.

Among women, employment rates show the opposite trend – a continuous rise (Figure 1B). In the non-Haredi Jewish sector, the employment rate of women of prime working age rose steadily, from 50 percent in 1980 to over 80 percent in 2010. Although the Arab sector displayed a similar increase of some 30 percent, the relative impact of this change was much greater, as Arab women's employment rates rose from just 5 percent in 1979 to 34 percent in 2010. After two decades of relative employment rate stability, rates for Haredi women of prime working age began to rise in the middle of the last decade, reaching a rate of 60 percent in 2010. Significant disparities still exist between the various segments in terms of women's employment rates.

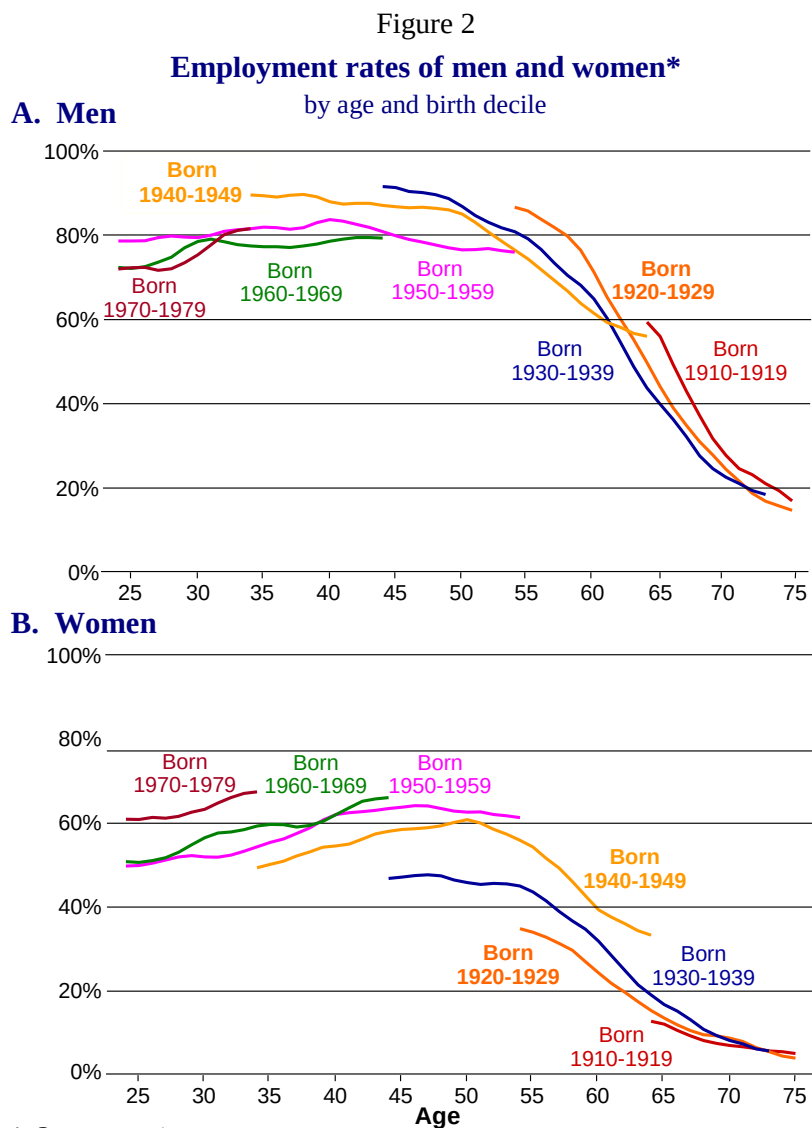
Changes in employment rates over a long period of time can stem from changes in worker employment patterns over the life cycle or from differences in employment patterns of workers from different generations. This must be taken into account when analyzing the factors contributing to employment rate changes, particularly in light of the demographic changes that have taken place over the years in the population of potential workers. The age composition of the potential labor force has changed, with a decline in average worker age. Dividing the population of males and females of prime working age (ages 35-54) into four age groups spanning five years each shows that the relative proportion of the youngest age group grew between 1980 and 2010 (Appendix 1). In order to distinguish changes in employment rates across the life cycle from intergenerational differences in employment patterns, one can analyze the changes that have taken place over time in the employment rates of cohorts defined by year of birth, as an alternative to age group. To keep the cohort population as consistent as possible, the analysis excluded new immigrants.

Figure 2A presents the employment rates of males in different cohorts as a function of age. A rise in male employment rates for all of the relevant cohorts up until age 40 is evident, from which point the rates decline. However, the age at which employment rates begin to decline has also been trending upward. For those born between 1940-1949, the

maximum employment rate is reached at age 38, while for those born during 1950-1959 the maximum employment rate is at age 40, and the age for those born between 1960-1969 is 42. On the other hand, the later the cohort (in terms of birth year), the lower the employment rate. For the 34-36 age group, the employment rate of those born during 1940-1949 approaches 90 percent, while the rate for those born during 1950-1959 is slightly more than 80 percent for the same age group, reaching a maximum of 84 percent at age 40. This trend continues for those born in the 1960-1969 cohort as well; the employment rate at ages 34-36 for this group is 78 percent, reaching a maximum of 80 percent at age 42.

This translates into a decline in employment rates among later cohorts at earlier ages. At the same time, there were changes in the employment patterns of older age groups. Figure 2A shows that the employment rates of those in the 1920-1929 birth cohort are 5 percent lower on average between the ages of 65-75 than those of the 1910-1919 birth cohort at the same age. The employment rates of the 1930-1939 birth cohort are also lower by 5 percent or more than those of the previous cohort (1920-1929) at ages 55-60, although this gap declines with age and disappears completely by age 72. This phenomenon repeats itself in the case of the 1940-1949 birth cohort which reaches the employment rates of its predecessor (the 1930-1939 cohort) by age 62, and in the case of the 1950-1959 cohort, whose employment rates reach those of the preceding cohort (1940-1949) by age 54.

The conclusion is that the trend for men is one of a “flattening” of the employment profile as a function of age, with later cohorts both exhibiting lower employment rates during the prime working years and reaching higher employment rates at later ages. Continued employment at later ages could be the result of improved health status and a rise in life expectancy. Figure 2A shows that the decline in employment rates among males of prime working age is stronger than the rate seen in the later age groups, such that, the male employment rate has been trending downward over the long term. (This is also seen in the aggregate employment rates presented in Figure 1A.)



* 3-year moving average.

Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

Israeli women's employment rates have developed in an entirely different way. Figure 2B shows that the later the cohort, the higher the employment rates are for women. For example, at age 44 the employment rate of those born during 1930-1939 is 47 percent; for the 1940-1949 cohort, the rate is 58 percent; for the 1950-1959 cohort, the rate is 64 percent; and for those born during 1960-1969, the rate is 66 percent. The latest cohort in the graph, those born from 1970-1979, reaches an employment rate of 68 percent by age 33, and it may be assumed that the employment rate of these young women will continue to rise over the coming decade, and perhaps beyond.

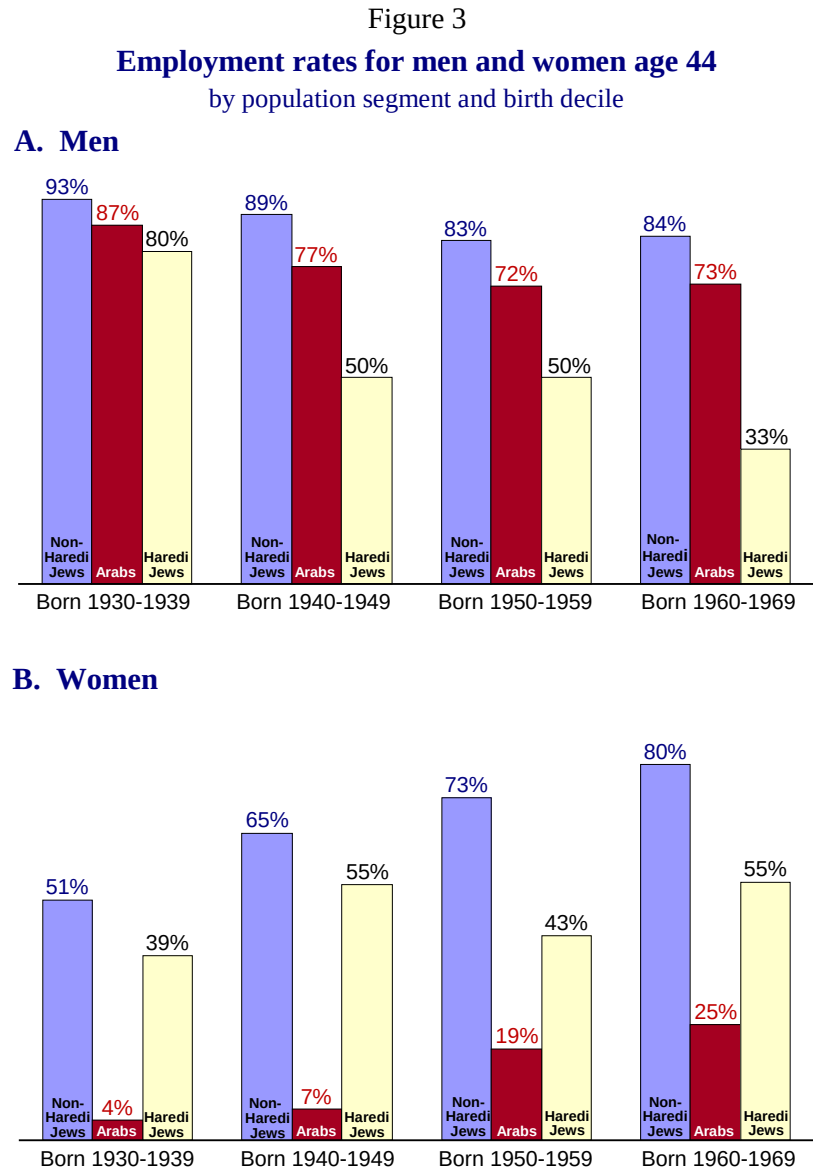
On the other hand, for the three "oldest" female cohorts a tendency for employment rates to decline more rapidly at the more advanced ages is found. In numerical terms, this phenomenon is still negligible compared with the rise in employment rates among those of prime working age from later cohorts; this explains why the aggregate data point to a rise in women's employment rates over the years (Figure 1B). Moreover, the employment rates of those born during 1950-1959 decline more slowly between the ages 50-54 than for those born during 1940-1949, while the employment rates of those in the 1940-1949 cohort decline at a slower rate at ages 60-64 than do those of women born in 1930-1939. This phenomenon may indicate a "flattening" of the female employment profile, similar to the trend that is seen more clearly among men. If these changes in women's employment patterns persist, it is likely that the aggregate employment rates for women will continue to rise over the years, and to approach the aggregate employment rates for men.

Figure 3 illustrates the changes that have occurred in the employment rates of the various cohorts; it presents the employment rates of 44-year-old women and men from several cohorts, by population segment (non-Haredi Jews, Arabs and Haredi Jews).² There is a narrowing in the employment rate gender gap; the rate for men declines while the rate for women rises (although not uniformly for Haredi women) in all population

² The choice of age 44 is to a great extent arbitrary and does not significantly influence the results. Around this age employment rates are the highest.

groups the later the birth cohort. Among men, the non-Haredi Jewish employment rate is the highest while that of Haredi Jews is the lowest. The gap between the employment rates of non-Haredi Jews and Arabs grew from 6 percentage points among those born during 1930-1939 to twice that among the 1940-1949 birth cohort (during the first half of the 1980s), and it has remained stable since then. The gap in employment rates between non-Haredi and Haredi Jewish men was 13 percentage points for those born during 1930-1939. Due to a very sharp decline in the employment rate of Haredi men born during the 1940s, the employment rate gap has tripled to 39 percent. The steep decline in employment among Haredi males reappeared within the 1950-1959 cohort and the 1960-1969 cohort (during the first half of the previous decade), and the employment rate disparity between non-Haredi and Haredi Jewish males grew to 51 percentage points.

Employment rates for women were also the highest for Jewish non-Haredi women aged 44, while the employment rates of Arab women were the lowest. Non-Haredi Jewish women had the greatest rise in employment rates between the 1930-1939 cohort and the 1960-1969 cohort (29 percentage points). Nonetheless, the increase in the employment rate of Arab women is also quite impressive (from 4 percent among those born from 1930-1939 to 25 percent among those born in 1960-1969). The major portion of this rise took place between the 1940-1949 and the 1950-1959 cohorts (during the first half of the 1990s). Haredi women's employment rate rose between the 1930-1939 and the 1940-1949 cohorts (during the first half of the 1980s), and has remained at the same level among those born during 1960-1969.



Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

2. The Importance of Education to Employment Rate Trends

One of the most impressive changes to have taken place in Israel over the last few decades is the increased accessibility to higher education (Shavit and Bronstein 2011, pp. 287-296; see also Appendix 2 to this chapter). As worker education is considered to be a primary factor in labor productivity, one might expect it to also have a significant impact on employment. Ben-David (2010, pp. 253-258) has shown that the decline in male employment rates between 1970 and 2008 was more moderate among those with more education. Similarly, the rise in women's employment rates was positively correlated with their number of years of schooling. It is thus worth considering to what degree the changes in employment patterns noted are linked to changes in education.

Figure 4 compares the employment patterns of men with more than 12 years of schooling with those of men with less than 12 years of schooling. It is evident that the differences in employment rate between the various cohorts are greater among the less-educated. Also, the decline in employment rate with age is steeper among the less-educated, and this difference increases with later cohorts. For example, employment rates among those born in 1930-1939 are similar across the two education groups at age 45 (92 percent), while at age 60 the employment rate of those with more education is 80 percent and that of the less-educated is 61 percent.

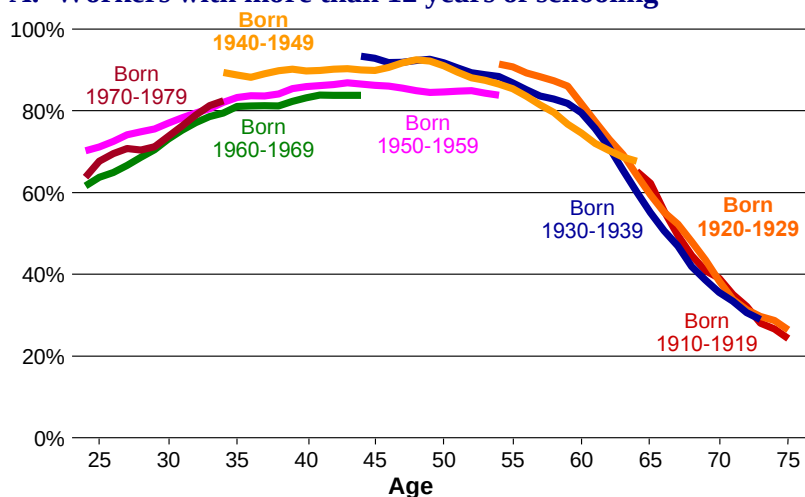
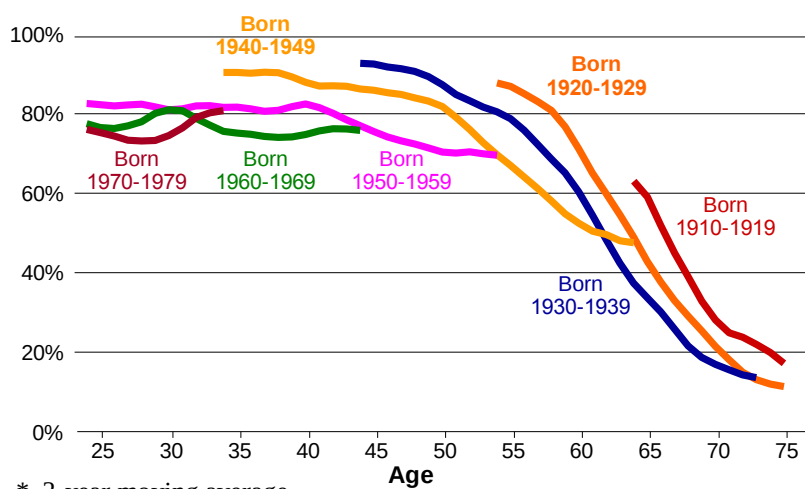
Among those born from 1940-1949 employment rates are similar at age 39 for both groups (90 percent), but they decline more steeply afterward among the less-educated; at age 60 the employment rate of the more-educated is 73 percent, while that of the less-educated is 52 percent. Among those born from 1950-1959, employment rates are similar for both groups at age 34 (81 percent); however, the employment rate of the more-educated continues to rise to 87 percent and remains at 83 percent to age 54, while the employment rate of the less-educated declines to 68 percent at age 54.

The conclusion is that employment rate disparities between the more-educated and the less-educated widen with age. Less-educated men find it hard to remain employed as they get older, and this problem intensifies with age. This may be related to the fact that less-educated men tend to be employed in physical labor, and their decline in physical fitness over time affects their ability to work. Another possible reason is that the demand for less-educated workers has been declining over the years, making it difficult for such workers to keep jobs or to find different jobs when necessary.

Figure 4

Employment rate for men*

by education, age and birth decile

A. Workers with more than 12 years of schooling**B. Workers with 12 years of schooling or less**

* 3-year moving average.

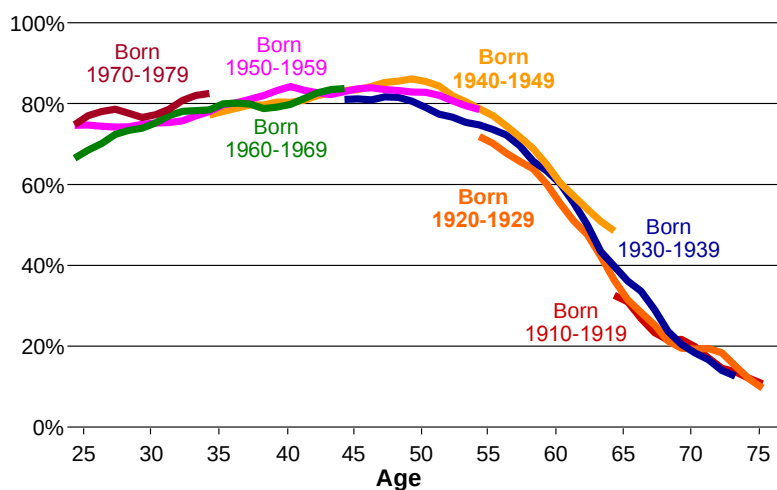
Source: Ayal Kimhi, Taub Center and Hebrew University.**Data:** Central Bureau of Statistics (*Labor Force Surveys*).

For women the picture is completely different (Figure 5); the differences in employment rate between the more- and less-educated are evident from the earliest ages of employment. The employment rate of women with more education is over 80 percent between the ages of 35-50 for all birth cohorts, while the employment rate of less-educated women ranges from 40 percent to 50 percent within the same age range. The increase in the employment rate among the later cohorts is virtually not seen for women when they are divided into groups by education level.

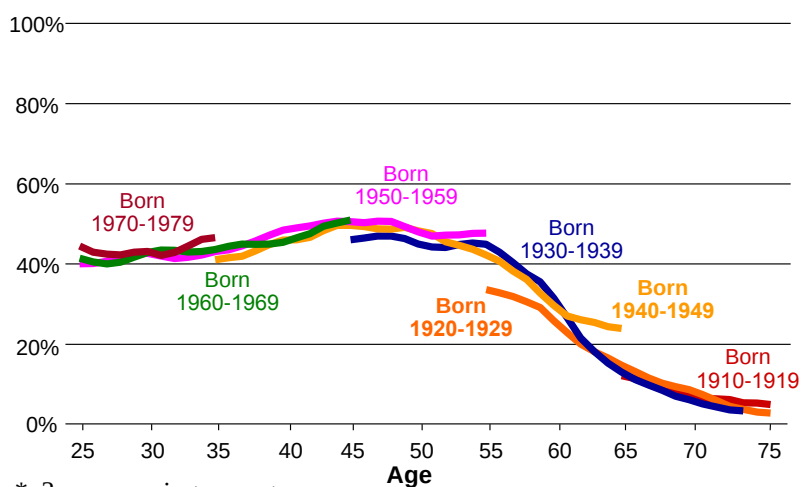
The conclusion is, therefore, that the rise in employment rate among women in the later cohorts is due primarily to the fact that these women are also better educated (Appendix 2). This conclusion may support an approach that would place a major emphasis on education in any policy package aimed at encouraging employment, particularly women's employment. Interestingly, when comparing Figure 4 and Figure 5 one finds that the differences in employment rates between men and women are not large for those with more than 12 years of schooling, meaning that the major portion of the disparity between men and women can be found among those with less than 12 years of schooling.

Figure 5
Employment rate for women*
 by education, age and birth decile

A. Workers with more than 12 years of schooling



B. Workers with 12 years of schooling or less



* 3-year moving average.

Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

Figure 6 illustrates the distinct effects of education and age on employment rates for men and women focusing on one representative cohort – those born in 1950-1959. The data show that the employment rates of non-Haredi Jewish males and Arab males at all educational levels are quite similar at around age 30 (82-84 percent). Beginning at this age, though, differences begin in employment rates between the more- and less-educated – a disparity that widens with age.

Among the more-educated men, up until age 36 the Arab employment rate rises faster than the Jewish employment rate; however, from this age onwards it drops, while the employment rate of non-Haredi Jews continues to rise until about age 40. Starting at age 44, when the employment rate for men in both educated population segments is 90 percent, the employment rate of more-educated Arab males starts to decline rapidly, while that of non-Haredi educated Jewish males drops only slightly, by a few percentage points, meaning that the gap between the employment rates of more-educated Jewish males and more-educated Arab males widens with age.³

Among the less-educated, the employment rates of non-Haredi Jewish men and Arab men are quite similar until age 36 (80-82 percent). From this age onwards the employment rate of less-educated Arab men starts to decline, a trend that intensifies after age 40, such that the employment rate gap between less-educated Jewish and Arab men widens greatly with age (to a greater degree than the gap between educated males in the two population groups). It should also be noted that the employment rate of Haredi men is significantly lower than all other population groups. Despite fluctuations (stemming in part from the relatively low

³ Achdut and Gera (2008) found that the decrease in employment rate with rising age is in part caused by declining health. It is interesting to find out if this is a more significant issue in the Arab sector. No significant differences were found between the occupational distributions of educated Arabs and non-Haredi educated Jews.

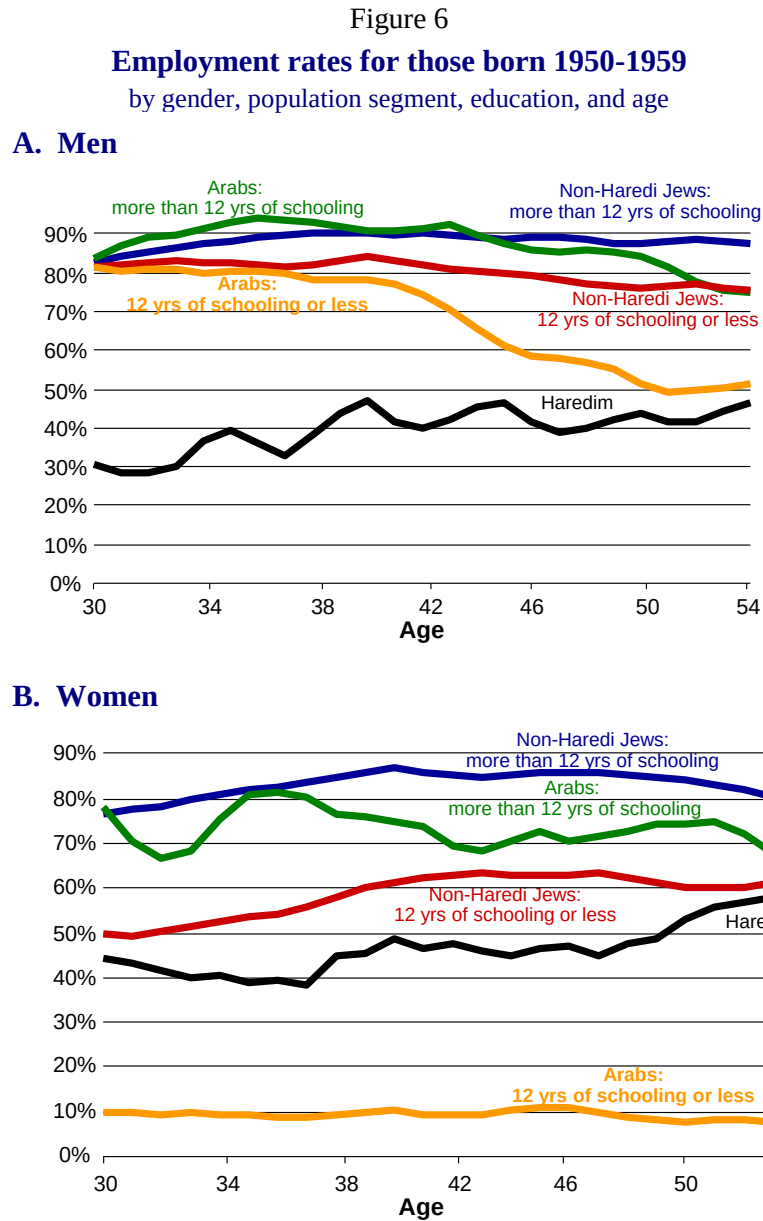
representation of this population group in the sample), it stabilizes at around 40-47 percent from the late 30s to age 54.⁴

As in Figure 5, the employment rate disparities between more- and less-educated women are much greater than those between men. This difference is particularly evident in the case of Arab women, among whom only 10 percent of the less-educated are employed, compared with 70-80 percent of the more-educated.⁵ The more-educated, non-Haredi Jewish women's employment rate rises with age to 87 percent at age 39 then declines to 80 percent at age 54. At its peak, the employment rate for these women is only slightly lower than that of more-educated, non-Haredi Jewish men. More-educated Arab women also exhibit an employment rate that is only 10 percent lower than that of their male counterparts.

The employment rate of Haredi women is slightly lower than that of less-educated non-Haredi Jewish women at age 30; however, while the employment rate of less-educated non-Haredi Jewish women rises until age 44, that of Haredi women declines until age 38, due, perhaps, to the larger number of children that they bear. The employment rate of Haredi women rises between the ages of 38 and 42 or so, and remains stable between the ages of 42 and 48, when it again rises until achieving near parity with the employment rate of less-educated non-Haredi Jewish women. The relatively low employment rate of Haredi women appears to be largely related to their family structure; only when they pass their childbearing years, and/or as their children get older, do their employment rates increase.

⁴ Haredim were not broken down by level of education due to their relatively low numbers. Almost all Haredi males born between 1950-1959 had more than 12 years of schooling, while amongst women the rates are lower although still greater than 50 percent.

⁵ The small number of educated Arab women in each age group led to their greater employment rate fluctuation.



Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics, OECD.

To conclude, it could be said that the employment rate gaps between non-Haredi Jews and Arabs are concentrated largely among the less-educated. Employment rate disparities are wider among women, and one may attribute nearly all of the impressive rise in women's employment rates over the years to the greater prevalence of higher education among women. Among men, employment disparities by education level widen with age, primarily among Arabs.

3. Trends in Wages

Between 1998 and 2010, the monthly income of full-time salaried workers (employed at least 35 hours per week) rose by 7.5 percent more than the rise in the consumer price index (Table 1). A similar wage increase is found when one calculates the average hourly wage for these workers. By contrast, the average hourly wage of part-time workers declined by over 9 percent. It is interesting to note that while in 1998 the average hourly wage of a part-time worker was nearly 11 percent higher than that of a full-time worker, in 2010, it was nearly 7 percent lower. The average hourly wage of all salaried workers rose by 3.1 percent during the same period. By comparison, the cumulative per capita GDP growth rate between 1998 and 2010 was slightly more than 20 percent in real terms, meaning that, regardless of the method used to calculate the wage increase, the situation of salaried workers in the Israeli economy worsened during this period relative to those with other forms of income (e.g., the self-employed and the independently wealthy).

When examining wages for men and women separately, one finds that the monthly income and average hourly wage of salaried women employed full-time grew at a much higher rate than the same wages for men. The average hourly wage of salaried women employed part-time decreased between 1998 and 2010, although at a lower rate than that of the decline in the average wage of males employed part-time. As a result, the wage gap between men and women employed full-time decreased by

4.5 percentage points, versus a nearly 13.5 percent decline in the wage gap between salaried men and women employed part-time. Ultimately, since only about a tenth of salaried men work part-time while over a third of women work part-time, the average hourly wage of all salaried women increased less than that of men, meaning that the wage gap between men and women widened by slightly more than 1 percent.

The male-female wage gaps indicated by Table 1 are dwarfed by the wage gaps that exist between workers of different education levels (Figure 7). If the gap in hourly wage between men and women is around 17 percent (Table 1), the wage gap between workers with over 12 years of schooling and workers with less than that is 67 percent.⁶ The disparity is wider among men than among women (75 percent versus 64 percent) and it is of particular interest to note that the wage gap between men and women of the same education level rises as education level rises (from 18 percent among those with less than 12 years of schooling to 26 percent among those with more than 12 years of schooling). It appears that, compared with their male counterparts, a greater number of more-educated women are not reaching their full earning potential – whether by choice (e.g., due to the difficulty of balancing their role in the labor market with their role in the home), or due to problems in climbing the wage ladder. Since the rate of higher education among working women is greater than that of working men (the share of the more-educated in the total number of men's work-hours rose from 42 percent in 1998 to 52 percent in 2010, while the share of the more-educated in the total number of women's work-hours rose from 52 percent in 1998 to 62 percent in 2010), education level is insufficient to explain the male-female wage gap.

⁶ This refers to the average disparity in 1998 and in 2010.

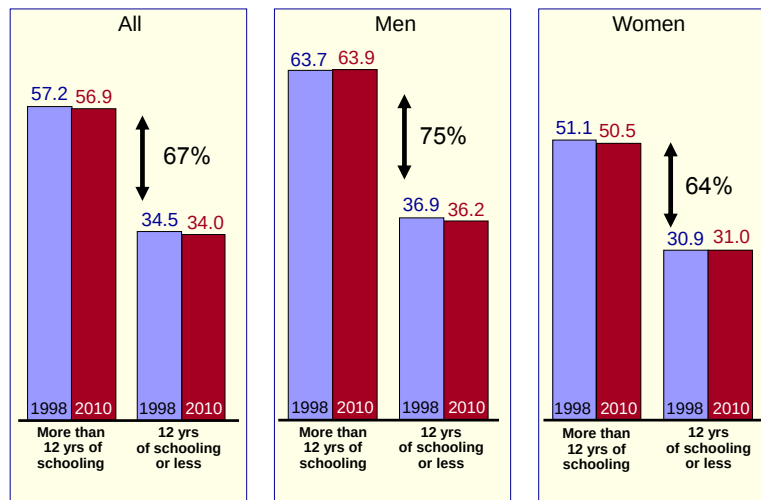
Table 1. **Changes in wages**
NIS, 2010 prices

	1998	2010	Percent change
All salaried workers			
Gross monthly income of a full-time salaried worker	8,691	9,345	7.50
Gross hourly wage of a full-time salaried worker	44.38	47.73	7.60
Gross hourly wage of a part-time salaried worker	49.21	44.69	-9.20
Gross hourly wage	45.59	47.00	3.10
Men			
Gross monthly income of a full-time salaried worker	9,750	10,444	7.11
Gross hourly wage of a full-time salaried worker	47.66	51.07	7.15
Gross hourly wage of a part-time salaried worker	57.69	48.03	-16.70
Gross hourly wage	48.77	50.69	3.90
Women			
Gross monthly income of a full-time salaried worker	6,812	7,752	13.80
Gross hourly wage of a full-time salaried worker	38.55	42.89	11.30
Gross hourly wage of a part-time salaried worker	46.58	43.47	-6.70
Gross hourly wage	41.88	43.10	2.90
Gaps			
Hourly wage gap between men and women – full-time salaried workers	23.60%	19.10%	
Hourly wage gap between men and women – part-time salaried workers	23.90%	10.50%	
Hourly wage gap between men and women – all salaried workers	16.40%	17.60%	

Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics (*Income Surveys*).

Figure 7
Gross wage per work-hour for salaried employees
 by gender and education, NIS per hour, 2010 prices



Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics (*Income Surveys*).

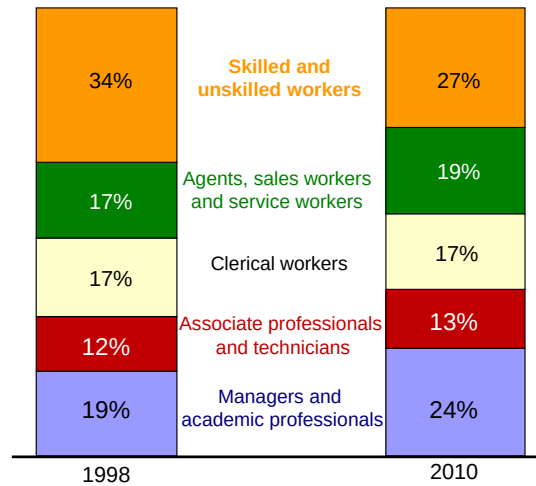
It is interesting to note that within the education-level and the gender/education-level groups, the wage changes between 1998 and 2010 are quite small. This indicates that the rise in average wage that took place during that period (Table 1) was due solely to a rise in the proportion of workers with more education. If the labor market is thought of as composed of two sub-markets divided by worker education level, this means that the changes in demand for all types of workers and in worker supply cancelled each other out in terms of their impact on wages. In other words, because, relatively speaking, the number of more-educated workers rose, then if the demand for educated workers had grown at a lower rate (compared with the demand for less-educated workers), the wage gap between the more- and less-educated would have

been lower over time. And vice versa: if the demand for more-educated workers had grown at a faster rate, then the wage gap between the more-educated and the less-educated would have grown over time. Since the wage gaps remained nearly unchanged, it may be concluded that the rise in demand for more-educated workers compared with less-educated workers was identical to the relative increase in the supply of educated workers.

In an earlier study (Kimhi 2011), the wage gap increase by education level was attributed to relative growth in human-capital-intensive industries and in occupations associated with these industries. The present discussion will provide a more in-depth analysis of changes in the structure of demand for workers and the relationship between these changes and changes in wages. Figure 8 presents the distribution of work-hours within the economy, and the changes that have occurred to this distribution by occupation. The figure shows that, during the period 1998-2010, work-hours increased more in the occupation group of managers and academic professionals than in other groups; their share in the economy's total number of work-hours grew from 19 percent in 1998 to 24 percent in 2010. By contrast, the share of skilled and unskilled workers, who accounted for over a third of the economy's total work-hours in 1998, declined to 27 percent in 2010.⁷

⁷ The total number of work-hours in the economy grew by more than 30 percent in each occupation group; the occupation groups are distinguished, though, by the amount of the increase.

Figure 8
Distribution of work-hours in the economy
 by occupational group, 1998 and 2010



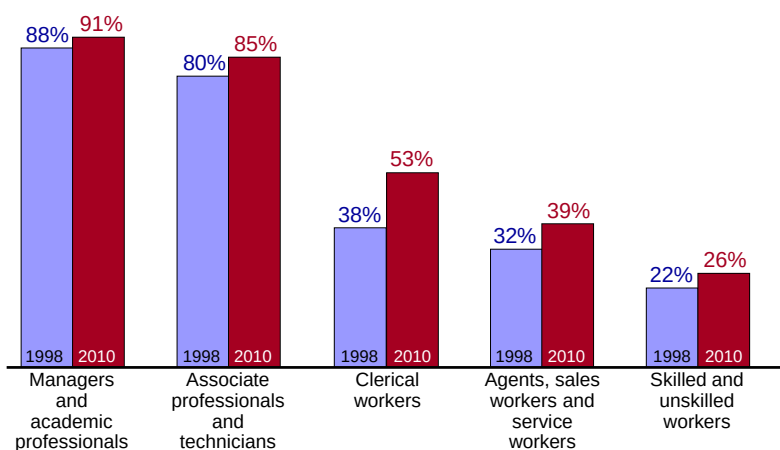
Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

In terms of distribution by education (Figure 9), it is evident that more-educated workers are concentrated in two occupational groups. Some 90 percent of the work-hours of managers and academic professionals were supplied by those with more than 12 years of schooling during the period 1998-2010, as well as over 80 percent of the work-hours of those in the associate professionals and technicians group. In the remaining occupational groups, the share of workers with post-secondary educational backgrounds is less than half; most prominent among these are skilled and unskilled workers, only a quarter of whose work-hours were supplied by those with a post-secondary education. Regarding changes in work-hour distribution by education level, it appears that in all occupational groupings there has been a rise in the

proportion of work-hours of more-educated workers. In other words, all occupations have become more education-intensive. However, it may be noted that levels of education-intensiveness increased more in those occupations that had been previously less education-intensive in 1998 (particularly clerical workers), meaning that the mix of more-educated and less-educated workers became slightly more equal across the various occupations during the years 1998-2010.

Figure 9
**Fraction of work-hours for employees
with more than 12 years of schooling**
as percent of total work-hours within
the occupational group, 1998 and 2010



Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics (*Labor Force Surveys*).

The narrowing of the education-intensiveness gap between the various occupations can be accounted for by a fairly straightforward technical explanation, namely, that the proportion of highly-educated workers among the managers, associate professionals and technicians, and academic professionals was quite high to begin with and could not increase significantly. The rise in percentage of the highly-educated within the labor force related primarily to those occupations that had not previously been education-intensive. However, this explanation is inconsistent with the fact that in those occupations that are least education-intensive (skilled and unskilled workers), the rise in education-intensiveness was quite low (4 percentage points).

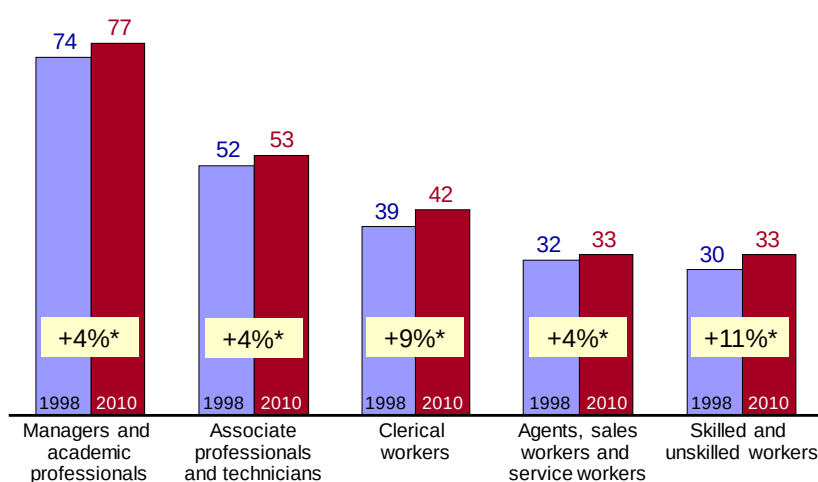
Other factors exist that have distinct effects on the demand for educated workers in the various occupational groups. For example, the office-computerization revolution, which enabled clerical workers to get more done in less time, increased the demand for more-educated clerical workers capable of handling more complex and sophisticated tasks. In order to grasp the relative changes in demand for workers in the various occupational groups, one must also look at changes in wages by occupation. This kind of approach will shed light on the issue of whether the rise in education-intensiveness in a given occupation indicates a true increase in worker productivity, or whether these more-educated workers are performing tasks that less-educated personnel could be carrying out with the same degree of efficiency.

A wage comparison for the various occupations (Figure 10) suggests that wages are largely commensurate with education level. Nevertheless, the wages of managers and academic professionals are significantly higher than those of associate professionals and technicians, despite the fact that the percentage of those with higher education in both groups is quite similar. It would seem that the two occupational groups differ in other ways that are not reflected by education level, like entrepreneurship, leadership and the like. By contrast, no wage difference was found between the agents, sales and service worker group and that of the skilled and unskilled worker group, despite the fact that

the percentage of educated workers in the latter group is significantly lower. It may be that skilled and unskilled workers earn wages that are relatively high for their educational background due to their willingness to engage in physical labor; moreover, higher education may not provide a high rate of return in the agent, sales and service fields. Between 1998 and 2010, the greatest wage increase (a rise of 11 percent) was found among skilled and unskilled workers – those located at the bottom of the wage scale. Clerical worker wages also exhibited a relatively large increase during this period, one that may be explained by the sharp rise in the proportion of the more-educated among those employed in this occupation group (Figure 9).

Figure 10

Gross wage per work-hour of salaried employees
by occupational group, NIS per hour, 2010 prices, 1998 and 2010



* Increase in wage from 1998 to 2010.

Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics (*Income Surveys*).

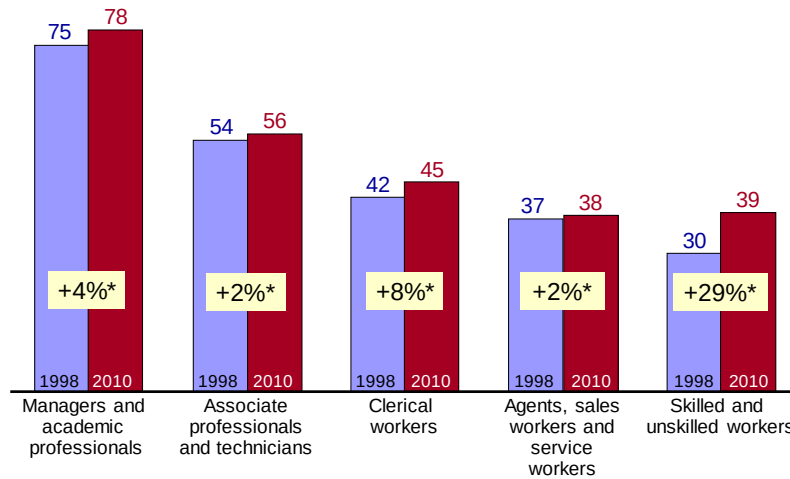
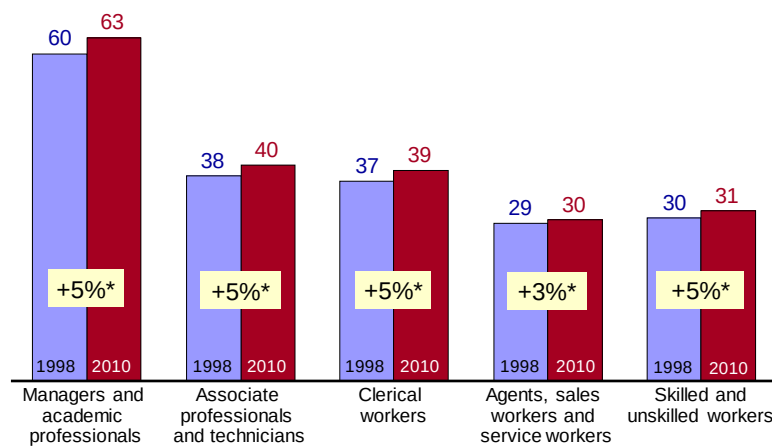
In order to understand the relationship between the rise in wages and the rise in the percentage of more-educated workers in the various occupations, Figure 11 compares changes in worker wages by education level and by occupation. Several major insights emerge from this comparison. Firstly, the wages of less-educated workers rose at similar rates across all occupation groups. By contrast, wage increases for the more-educated differed by occupation. While the percent wage increase of highly-educated workers in the managerial and academic professions, in the associate professional and technician group of occupations, and in the agent, sales and service occupations was similar and perhaps even slightly lower than the percent wage increases of less-educated workers in the same fields, the wages of educated workers in the skilled and unskilled worker occupations jumped by 29 percent during the period 1998-2010. In addition, the wages of educated workers in the clerical occupations increased by 8 percent during the same period. This degree of wage increase may be an outcome of technological advancement and the resultant relative rise in the value of education in these fields – a phenomenon that has been documented in other developed countries as well (Van Reenen 2011). Beyond this, changes in the public-sector wage-agreement structure may have been particularly favorable for the more-educated employees in these occupations. It may also be that privatization and a weakening of regulation facilitated wage increases for more-educated workers in jobs whose salaries had been exceptionally low prior to privatization. Until proven otherwise, the conclusion is that there has been a relative rise in demand for more-educated workers in both of these occupational groups. Given that the percentage of educated workers among the clerical-worker population has grown at a much higher rate than in the other occupations (Figure 9), the most likely scenario is that the supply of more-educated clerical workers adjusted itself to the change in demand. Thus, the percent increase in the wages of these workers was relatively modest, while the supply of more-educated workers within the skilled and unskilled occupations was insufficiently elastic, resulting in a sharp wage increase for them. It is also interesting

to note that in 1998 there was no wage gap between more-educated and less-educated employees within the skilled and unskilled worker occupation groups, while in other groups the gap ranged from 15 percent among clerical workers to 44 percent among associate professionals and technicians. From this one may conclude that the sharp wage increase for the more-educated employees within the skilled and unskilled worker groups led to a situation in which the wage gap between the more-educated and less-educated workers in these groups reached 24 percent in 2010, a larger gap than that in the clerical worker group (17 percent).

Figure 11

Gross wage per work-hour of salaried employees

by education and occupational group, NIS per hour, 2010 prices, 1998 and 2010

A. Workers with more than 12 years of schooling**B. Workers with 12 years of schooling or less**

* Increase in wage from 1998 to 2010.

Source: Ayal Kimhi, Taub Center and Hebrew University.**Data:** Central Bureau of Statistics.

It is interesting to examine whether the more elastic supply of more-educated clerical workers is related to an increase in the labor supply of educated women, as discussed previously. Figure 12 presents the percentage of women in each of the occupational groups. It turns out that a large majority of clerical workers (over 70 percent) are women, while an even larger proportion (over 80 percent) of skilled and unskilled workers are men. Based on this, the following scenario may be drawn: during the period in question there was a relative increase in demand for more-educated workers in both of these occupational groups (which experienced the steepest wage increases for educated workers), that of skilled and unskilled workers and that of clerical workers. Since most skilled and unskilled workers are men, whose employment rate declined during the period in question, the rise in demand was reflected more in a wage increase for these workers than in a rise in their number of work-hours. By contrast, since most clerical workers are women, whose employment rate increased during the period 1998-2010, there was no difficulty in increasing the number of educated women employed as clerical workers, meaning that their wages did not increase at the same rate.

Figure 13, which presents changes in work-hour distribution by gender and education level for all of the occupations, supports this picture. Amongst clerical workers, a turnover of more-educated for less-educated workers did indeed take place primarily among women, while, by contrast, within the skilled and unskilled worker population the turnover took place solely among men. Moreover, the turnover in clerical workers was more intensive (took place at a higher rate) than in the skilled and unskilled worker population.

It is also interesting to see that, among managers and academic professionals, more-educated women replaced more-educated and less-educated men, while among agents, salespeople and service workers, more-educated men and women replaced less-educated men.

Figure 12
Fraction of work-hours of women
 by occupation group, 1998 and 2010

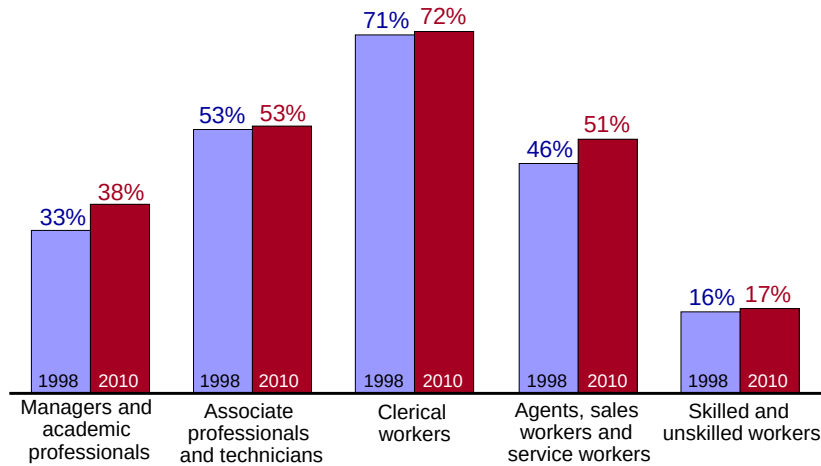
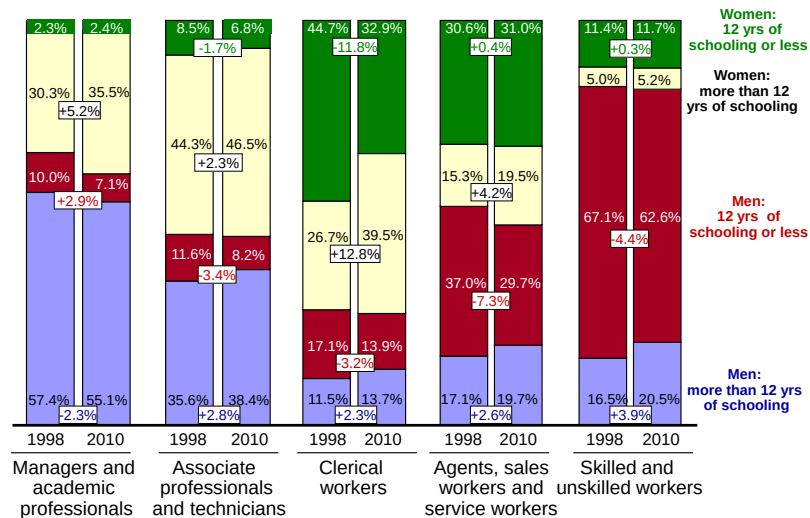


Figure 13
Distribution of work-hours in occupational groups
 by gender and education, 1998 and 2010



Source for both figures: Ayal Kimhi, Taub Center and Hebrew University.
Data for both figures: Central Bureau of Statistics (*Labor Force Surveys*).

4. Conclusions and Policy Implications

The education level of the labor force is the primary factor that explains employment and wage gaps among workers. There has been a global trend toward rapidly increasing demand for educated workers, at a time when the supply of such workers, though growing, has been doing so at a more limited pace.⁸ The Israeli data indicate that the employment rate of each new generation of men has been lower than that of the preceding generation, while each new generation of women tends to work more than its predecessor. These trends are observable in all population segments.

Among women, the change in work patterns stems primarily from the fact that women from the later birth cohorts tend to be better educated; this is particularly evident among Arab women. Among men, employment rates in the younger age range are not influenced by education level; however, as men age, the tendency is for the less-educated to drop out of the labor market. This phenomenon particularly stands out in the Arab sector. Generally speaking, gender and sector employment rate gaps for workers with more than 12 years of education are quite low. Nevertheless, there has been a relative decline in the employment rate of educated Arab men who have passed their mid-forties.

The wage gaps between more-educated and less-educated workers did not widen significantly between 1998 and 2010, but neither did they narrow. It appears that the increase in the number of educated workers moderated the wage increases that might have been expected to result from a relative rise in demand for more-educated workers. The breakdown by occupation shows that the most significant increase in real wages (29 percent) was enjoyed by skilled and unskilled workers with more than 12 years of schooling; educated clerical workers also

⁸ Lutz et al. (2008) claim that raising education levels is possible for the most part amongst the young; the rise in the average level of education of workers as a response to demand for more-educated workers is, indeed, gradual.

experienced a relatively impressive wage increase (8 percent). These two occupational groups can be distinguished by several major attributes. Firstly, most skilled and unskilled workers are men, while most clerical workers are women. Secondly, the number of jobs for skilled and unskilled workers suffered a relative decline during 1998-2010, while the number of jobs for clerical workers grew at precisely the same rate as that of job creation in the economy as a whole. Moreover, the share of educated workers in the clerical occupation group grew significantly, while the share of educated workers in the occupation group of skilled and unskilled workers grew much more moderately. Given that the rise in education level of the labor force was much more pronounced among women than among men during the period in question, and given that the overall employment rate for women rose while the rate for men declined, these data point to the following possible scenarios:

- Demand for educated workers in the two occupational groups in question, clerical workers and skilled and unskilled workers, grew relative to other occupations.
- Since clerical workers are for the most part female, and given the growing supply of more-educated women in the labor force, the rise in demand was reflected in a rise in the influx of educated women into clerical positions. This increased supply of educated clerical workers balanced, to some degree, the increased demand for such workers; as a result, the wages of educated clerical workers rose only moderately.
- Since skilled and unskilled workers are mostly male, and given that the rise in supply of more-educated men was lower than the corresponding rise in supply of more-educated women, the increased demand for educated workers in this sphere did not lead to a significant increase in the employment of such workers. Since the rise in demand was not accompanied by a corresponding increase in supply, the wages of more-educated workers in this occupational group increased sharply.

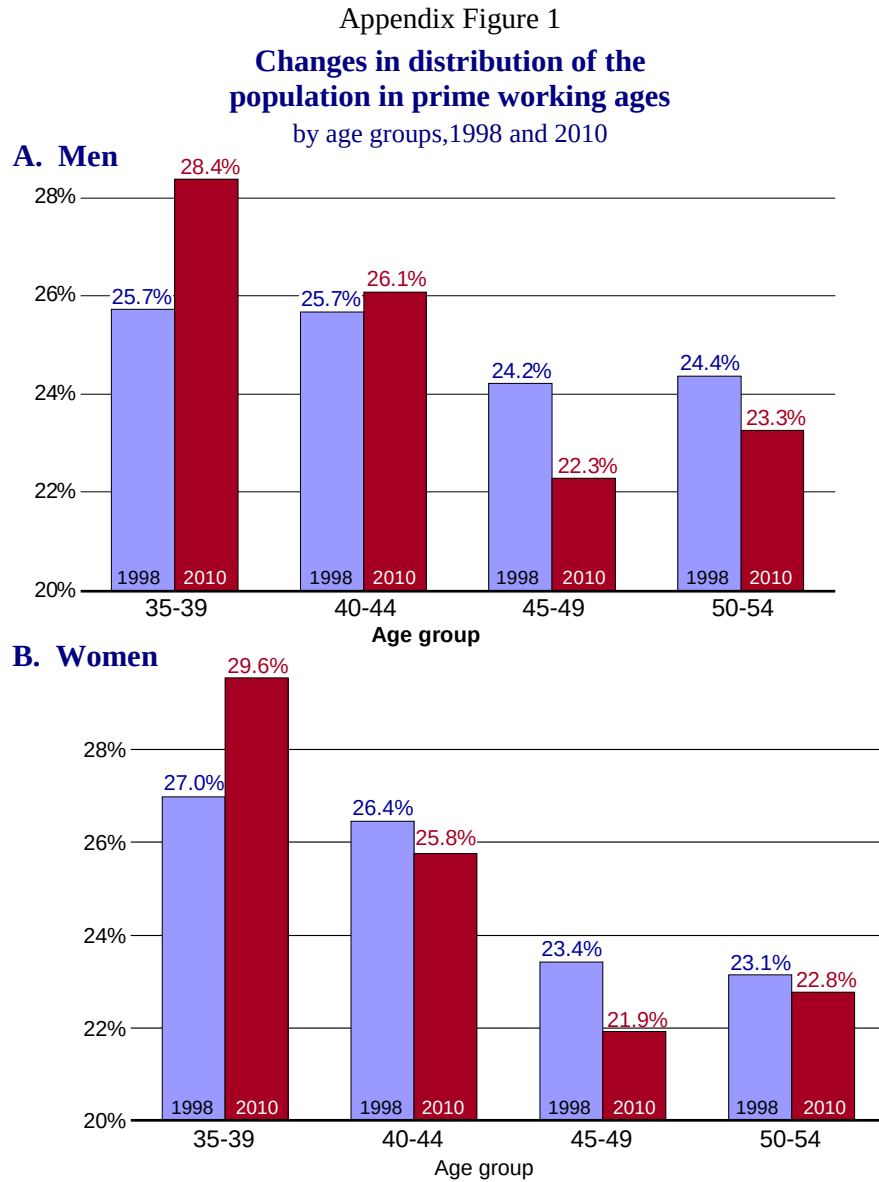
These findings indicate the need for further research in order to determine whether this scenario, which is based on the assumption of a free labor market in which employment and wages are affected by relative changes in the demand for, and supply of, workers of various types, does indeed account for the data observed. Otherwise, alternative explanations, based on other forms of labor relations, like those that exist in Israel's public sector and in other sectors dominated by organized labor, should be sought.

It appears that a policy of encouraging the pursuit of higher education is the key to reducing employment and wage gaps, but one should refrain from such an unequivocal conclusion because this, in and of itself, will not necessarily result in the desired outcomes. Without a sufficient increase in the number of jobs available, a rise in the percentage of the more-educated with their increased tendency to enter the labor market may make it harder for the less-educated to find jobs and remain employed. On the other hand, creating new jobs without increasing the number of educated workers is another situation that does not necessarily help eradicate wage gaps, since the new jobs created may be at the low end of the wage scale. An integrated policy of encouraging higher education and creating jobs may succeed; however, higher education on its own is not sufficient to ensure success in the labor market. Success depends on the education system's ability to teach work skills that are suited to the demands of the modern labor market. Since these demands are changing rapidly, the education system is faced with the task of training workers with highly adaptive skills.

Finally, one should not forget that, in any case, not all workers will be highly-educated and since those lacking higher education will find it increasingly difficult to succeed in the labor market, ways must be found to cultivate the skills taught in high school, so that those with secondary education can support themselves adequately. Beyond this, if the barriers to higher education are socioeconomic background, then it is the state's duty to remove these barriers and to ensure that all pupils enjoy equal opportunity to pursue higher education.

Appendix

These two figures show a rise in the population shares of people aged 35-39 relative to those aged 40-54.



Source: Ayal Kimhi, Taub Center and Hebrew University.

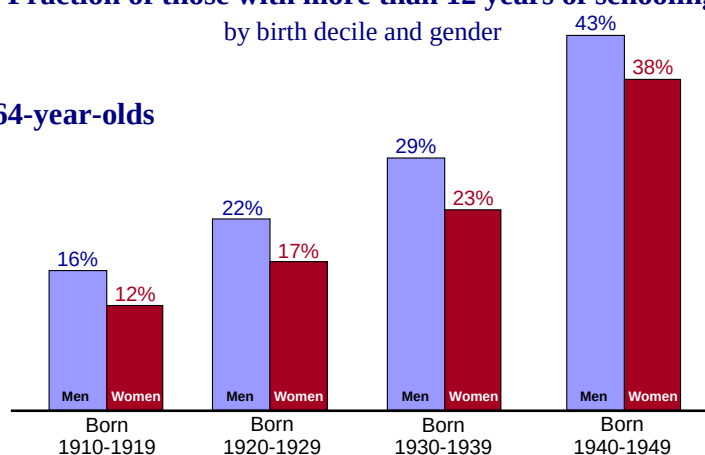
Data: Central Bureau of Statistics.

These two figures show an increase in the population shares of those with more than 12 years of schooling in later age cohorts which is more pronounced in women. For those born before 1960, the share of those with more education amongst men is higher than amongst women, while for those born after 1960, the situation reverses.

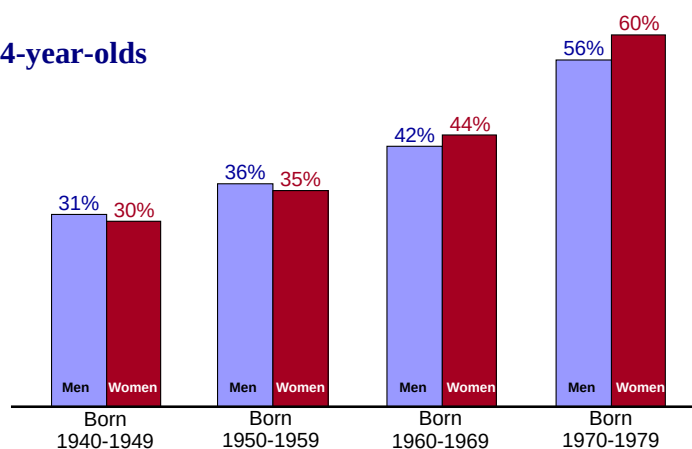
Appendix Figure 2

Fraction of those with more than 12 years of schooling
by birth decile and gender

A. 64-year-olds



B. 34-year-olds



Source: Ayal Kimhi, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

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The Economic Background of the Social Protest of Summer 2011

Michael Shalev*

Abstract

The social protest of summer 2011 was largely one of younger Israeli-born Jews. The centrality of this group in the protests may be explained by trends in their socioeconomic position. Analysis of the period between 1995 and 2010 shows that in the five years prior to the summer of 2011, the income of the typical working family headed by a young Israeli-born Jew, relative to all Israeli households, declined to unprecedented levels. The main cause was wage erosion among young adults. This decline also occurred among those with higher education, and their chances of attaining an income in the highest quintile fell substantially, especially among women. Among young Arabs and ultra-Orthodox Jews, both individual wages and household income – already very low in earlier years – declined even further. Of all the population groups, only Russian-speaking immigrants improved their relative income position. Overall in the period studied, there was a decline in the value of those advantages that previously assisted young families in Israel to attain a middle-class standard of living: higher education, two working partners, residence in the Tel-Aviv area, and being an Israeli-born Jew. At the same time, the rising cost of housing has made income erosion a bigger problem. The proportion of young adults living in their parents' homes increased, and the share of young home-owning families fell.

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Summer 2011 was an exceptional time in Israeli history. What began as a “tent protest” focused on housing costs expanded quite quickly into profound criticism of public policy in education, health, taxation, transportation, and more. Central to the protest leaders’ demands was the reshaping of social priorities in order to reduce economic inequality in Israel. At the same time, the protests appeared to be indicative of economic hardship among younger Israelis, especially in the middle class. These young people as well as their parents expressed frustration, anger, and disappointment at their inability to meet the rising cost of living and a growing sense that the State of Israel had abandoned them.

This chapter examines changes in the living standards of young Israeli adults (aged 25-34) from the mid-1990s to the present. The analysis is based on two main variables that reflect standard of living: income and housing. Income is measured both by individual earnings and household income; and the housing indicators relate to individual living arrangements (e.g., with parents vs. independent) as well as the question of home ownership (versus rental) among young families.

The results consistently point to declining living standards among younger individuals and families. Some of the measures indicate a steady long-term decline whereas in others the decline is more recent, yet all analyses show a clear decline in the year or two preceding the protest. Moreover, a major impetus for the protest was the sense that economic hardships had reached the mainstream of Israeli society. This widespread sense is confirmed by the results, which show that the decline has affected even those young Israelis who are relatively advantaged – Israeli-born Jewish university graduates from central Israel – a fact likely to explain their intense involvement in the protests.

1. *Data and Measures*

This study is based on the annual income surveys conducted by the Central Bureau of Statistics (CBS) between 1995 and 2010. Each annual survey samples about 6,000 individuals and 1,300 young families (with “families” defined as households consisting of a married couple with children,¹ “young families” as families headed by an individual aged 25-34). In addition to having a wide sampling that allows breaking the population down by separate variables, the income survey includes individual income information within households allowing an analysis of within household incomes. Since the income information on the self-employed was not included for the first years of the income survey, all of the empirical analyses in the chapter relate to salaried employees only – for both individual and household incomes (i.e., only families headed by a salaried employee were included).²

Social and political cleavages within Israeli society influenced individuals’ degree of participation in the social protest. The protest was largely driven by secular, Israeli-born (non-immigrant) young people. Public opinion polls (Haber, Heller, and Hermann 2011) indicate that members of certain groups – Arabs,³ Haredim (ultra-Orthodox Jews), immigrants from the former Soviet Union (FSU) – expressed reservations about the protest despite these groups’ relatively limited access to economic resources.

¹ The information collected in the income survey does not enable identification of cohabiting couples with children or same-sex relationships.

² Samples since 1997 have ranged from 5,500 to 6,400 individuals and from 1,200 to 1,400 families (rounded to 100s). The 1995 and 1996 surveys were more limited, sampling only 3,000 individuals and 700 families. Data for East Jerusalem residents are missing for certain years and therefore excluded from this study.

³ The terms Arabs and Arab Israelis are used interchangeably to refer to the same population.

Most of the following analyses will distinguish between Israeli-born Jews, Arabs, and immigrants from the FSU. In addition, Israeli-born Haredim will, for the most part, be treated as a separate group.⁴ Young immigrants who were not part of the mass wave of immigration from the FSU have not been included in the study due to their heterogeneity.

Table 1 shows the relative size of the groups at various points in time. As the data indicate, the population of non-Haredi Israeli-born Jews has declined in relative size due to growing numbers of immigrants and Haredim, although it still constitutes nearly 60 percent of the younger population.

Table 1. **Major groups in Israel's young population (ages 25-34)**

	1995-1996	2002-2003	2009-2010
Israeli-born Jews (not including Haredim)	63.9%	60.9%	58.9%
FSU immigrants	11.0%	13.4%	13.1%
Haredim	4.4%	4.7%	5.9%
Arab Israelis	17.8%	16.8%	16.8%
Other immigrants	2.8%	4.2%	5.2%

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

⁴ The CBS data underlying this study do not make it possible to identify Haredi individuals with certainty. Included in this category were all people living in a household in which at least one male member's last educational framework was a yeshiva. Because the population of FSU immigrants barely includes Haredi Jews, no distinction was made between Haredi and non-Haredi individuals within that population.

This study's reliance on CBS income surveys presented several challenges. First, some variables were not included in the survey, or were included but only partially. An example of a variable not available in the surveys is current educational status, without which employed students could not be distinguished from employees who had already graduated. Two examples of variables for which only partial information is available in the surveys are Haredim and household living arrangements.

Another difficulty was that over the research period, some 15 years, a variety of changes occurred: in the sample, the variables included in the questionnaire, and their definitions (details are provided later in the chapter, when appropriate). In addition, even though the samples are relatively large, breaking down the findings by age, education, survey year, and other variables could decrease the accuracy of results with regard to the total population. For this reason, the study's findings are best approached cautiously, with an eye to general trends rather than detailed findings for specific years. To minimize the effects of sample errors and technical changes on long-term trends, in most comparisons the annual results have been grouped into sub-periods.

2. Preliminary Findings and Division into Sub-Periods

The approach adopted here assumes that the degree to which individuals experience satisfaction or a sense of deprivation in relation to their income depend on two variables: relative attainments and purchasing power. People judge themselves relative to others and are sensitive to the purchasing power provided by their income, relative to their aspirations and expectations. Expectations are not studied here directly, although towards the end of the chapter the issue of housing – which figures heavily in young people's complaints about the cost of living in Israel – is examined. The main part of the study deals with changes in individual and family incomes relative to the total population, making it possible to

assess differences between groups of young people as well as where each group is situated in the overall income distribution of the population.

The relative income position of young working families was calculated in two stages. In the first, the typical young family was identified, defined as the household with the median income relative to all young families. In the second stage, this median income was located in the income distribution of all Israeli households. For these purposes, all households (excluding pensioners) were divided into one hundred equal groups according to their income. The method is similar to that used in creating income deciles except that in this case, percentiles are created. In 2010, for example, the median income of young families was NIS 5,917. In the same year this level of income was in the 47th percentile of all families (the income of the families found in this percentile ranged from NIS 5,871 to NIS 5,979). As in other studies of household income inequality, all calculations were adjusted for family size by calculating standardized per capita income.⁵

To illustrate the importance of a relative perspective in understanding trends in young working family incomes in Israel, Figure 1 compares the trends obtained using our preferred measure (“relative income”) with the standard approach, based on average real income in shekels (“absolute income”). The method used in this research replaces the average with the median, since the mean is always skewed upward by those with high earnings, thereby failing to reflect typical group members. In addition, the proposed method (based, as noted, on relative calculations) takes into consideration the possibility that even if a given group enjoys a rise in income that exceeds the inflation rate, satisfaction with income is determined by gains relative to other groups.

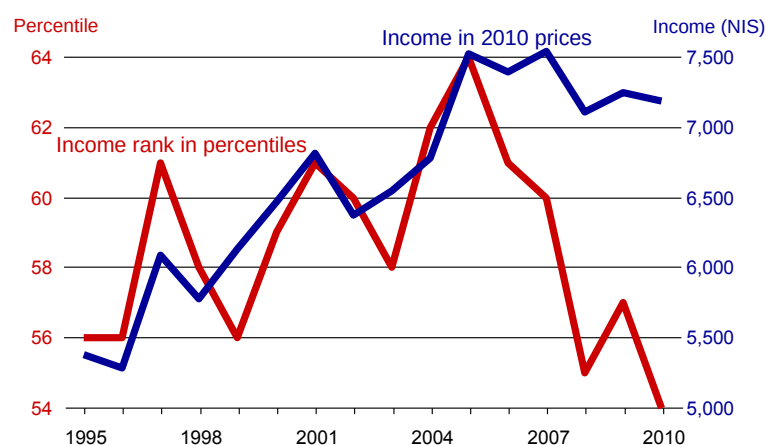
The analysis in Figure 1 relates to Israeli-born Jews and does not include Arabs, FSU immigrants or Haredim. Comparison of the trends that are found using each of the two income measures reveals strikingly

⁵ The OECD’s equivalence scale has been adopted in this study, in which the standardized number of persons per household is the square root of the actual number.

divergent results over the past few years. Since 2005 the real income of younger families has remained stagnant followed by a slight decline, whereas their relative income over the same time period fell dramatically – by ten percentiles – to a level previously unseen in the series.

In contrast to the moderate decline indicated by the absolute measure, Figure 1⁶ shows that in relative terms the incomes of young Israeli-born Jewish families eroded. It follows that on average, the incomes of the rest of the population were rising faster than consumer prices.

Figure 1
**Real income versus relative ranking –
young working families**
non-Haredi Israeli-born Jews, 1995-2010



Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

⁶ In this figure and in all additional tables and charts in this chapter “young” refers to ages 25-34. Data relating to household income represent disposable income per standard person (as noted, using the equivalence scale of the OECD). The data refer to households consisting of a married couple with at least one child, in which the head of the household is a salaried employee between the ages of 25 and 34. Total income by percentile was ranked relative to all Israeli households headed by an individual under age 65.

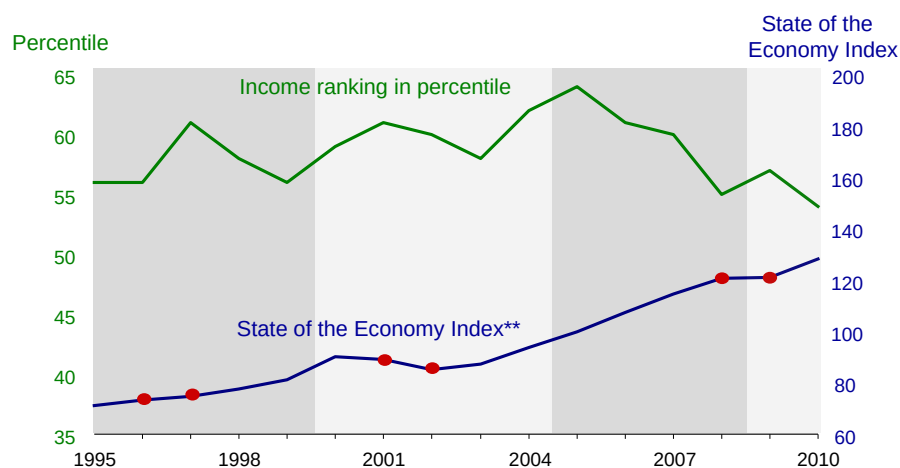
Most of the families that did better than the young families analyzed in Figure 1 belonged to older age groups, although as will be shown later in the chapter, one segment of the younger population – immigrants from the FSU – were able to improve their relative position significantly. It is important to emphasize that the erosion in the incomes of young Israeli-born Jews relative to the rest of society occurred in a period characterized, according to their claims, by particularly steep increases in the prices of products and services relevant to young families, especially – and most sensitively – in housing (a subject that will be looked at more closely later in the chapter).

Another component of the method of analysis that is worth noting is the division of the 16 years into time periods. An important element in this division is not to give undue weight to years of economic plenty or scarcity, which naturally can affect the relative achievements of the younger population.

Figure 2 reproduces the trend over time in the relative income (in percentiles) of young families, but with the addition of the composite State of the Economy Index calculated annually by the Bank of Israel. This measure (shown in the lower portion of the figure) is an indicator of economic activity in Israel.

In the chart substantial differences can be seen in changes in the relative income of young families in the first two and last two periods (1995-2004 versus 2005-2010). The first two periods are characterized by short-term fluctuations (probably induced by recessions, indicated in Figure 2 by red dots) but a rising trend. Despite cyclical declines, between 1995 and 2005 the relative position of young families rose from the 56th percentile to the 64th. The third period (2005-2008) is characterized by the steep erosion noted earlier, and cannot be explained by macroeconomic factors, whereas the final two years (2009-2010) show no change. By 2010, the year before the social protests erupted, the relative income position of young families had reached an all-time low, and stood at the 54th percentile.

Figure 2
Changes in the income of young working families
 income of Israeli-born Jews*, in national percentiles, 1995-2010



* Not including Haredim.

** Red dots signify years of economic recession.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

3. *Developments in Individual Wages*

For most young working parents, the main determinant of the household standard of living is their income from work.

According to the Bank of Israel, in the course of the last two decades, the real wages of Israelis rose steadily between 1993 and 2001, then fell sharply as a result of a recession.⁷ Since 2002, average real wages have

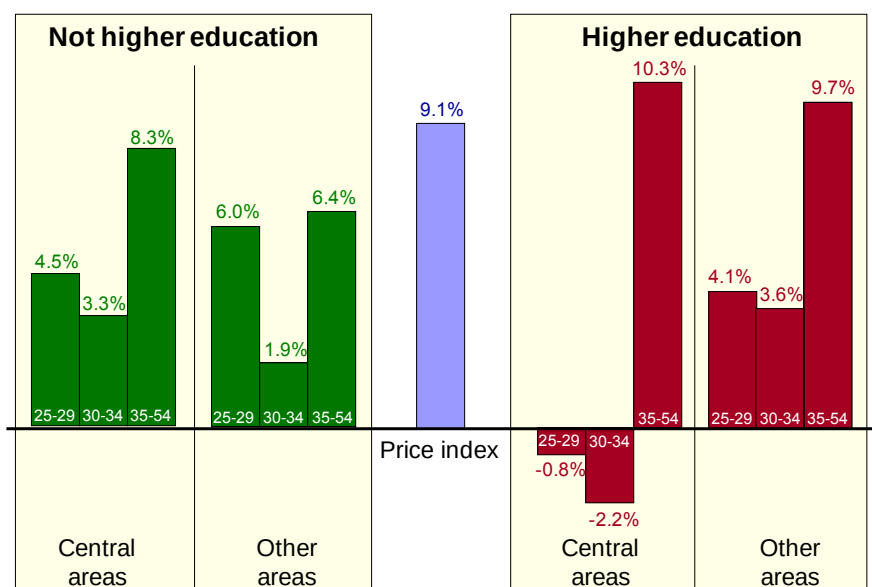
⁷ Bank of Israel, *2011 Annual Report*.

remained unchanged, except for minor cyclical fluctuations. How did the wages of young people fare in this situation? To see the complete picture, factors that influence wages in Israel – like education and geographic location (Tel-Aviv and the center where nearly half of young households are found, versus other areas) – must be considered.⁸ The analyses that follow encompass all wage earners, including those employed part-time (common among mothers and students). Consequently, the calculations therefore refer to hourly wages.

Figure 3 presents the rate of change between the two last periods of the study (2005-2008, 2009-2010) in two variables: nominal earnings per hour and actual inflation. It shows clear indications of erosion of the wages of young people – in particular those with higher education in the center of the country, whose nominal earnings actually declined by a few percentage points at a time of significant price rises (9 percent). In contrast, among older workers (35-54 years-old), the average rise in wages was similar to the price rises in all areas. Also amongst those without a higher education there is a gap between generations, although more moderate, and the value of the earnings of young people eroded more than that of the older groups. It should be noted that if the changes are calculated from an earlier point (starting in 2000; results not shown) a similar picture emerges, although it is even clearer. While the cumulative inflation rate went up by some 17 percent, only the hourly wage rate of those with higher education between the ages of 35-54 rose at a similar rate – while the earnings of all other groups declined. It is reasonable to assume that this changed the relative position of young people in the wage structure.

⁸ Individuals with higher education are defined as ones who attended an accredited institution of higher education and completed at least 15 years of study. The reason for this indirect definition is that not all income surveys included a detailed question about the highest diploma acquired. Central Israel was defined as including the following districts: Sharon, Petach Tikva, Ramla, Rehovot, Tel-Aviv, Ramat Gan, and Holon.

Figure 3
Recent trends in wages and prices
 hourly wages of salaried employees,
 percent change 2005-2008 to 2009-2010

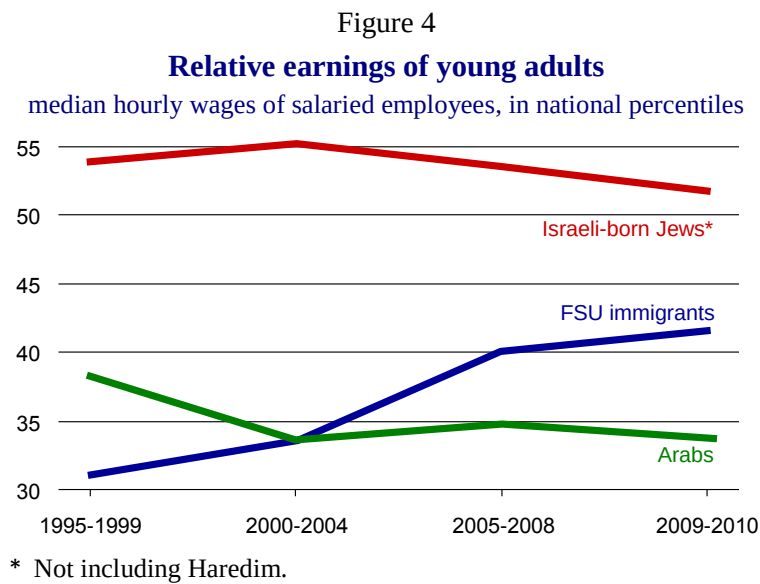


Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

The position of the typical young wage earner in the overall hierarchy of hourly wages can be estimated using the same approach used earlier to evaluate the position of the typical young family. The income of the typical younger worker is defined as the median income of young workers. This median is compared with the incomes of other Israelis divided into percentiles. The division into years and population groups is the same as before, with one exception: since the sample did not include enough young Haredi wage earners, this group was not included in the current comparison.

Figure 4 shows that young Jews who are not immigrants or Haredim have the highest position in the national wage hierarchy and Arabs are positioned lowest. Over the last decade, these two sectors experienced little change in their relative position: the situation of Arabs remained fairly constant, while the highest group experienced a measure of erosion (by three percentiles) but remained in a relatively high percentile. At the same time, the hourly wages of young FSU immigrants increased substantially – their position on the earnings scale rose by 11 percentiles.



Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

Alongside the findings in Figure 4, it should be remembered that every sector is comprised of many parts, and individual education is highly important for wage levels. Figure 5 separates the data for each group of young people (with the above-noted exception of Haredim) by education level (with or without higher education) and by gender. The

overall trend is clear. Over the fifteen years examined, Israeli-born Jews and Arabs at all education levels and of both genders experienced declines in their relative wages. In contrast, immigrants from the FSU, especially those with higher education (about one-third of this group), experienced the opposite trend. Whereas in the late 1990s the wages of FSU-born men and women with higher education were lower by 20-30 percentiles than those of their Israeli-born counterparts, two decades later the gap had nearly closed, falling to 4-5 percentiles.

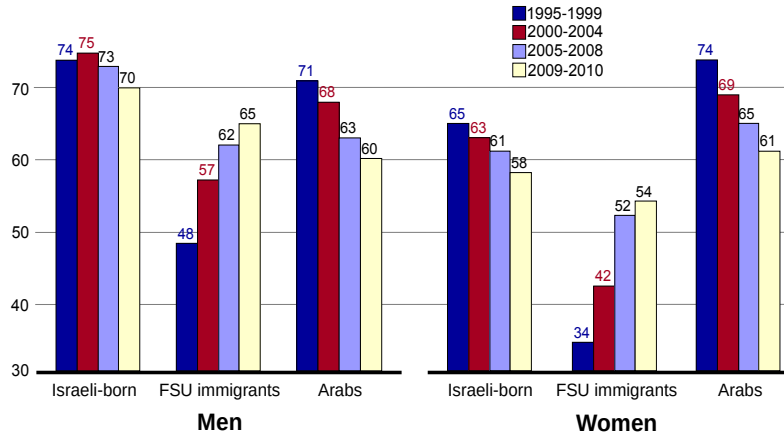
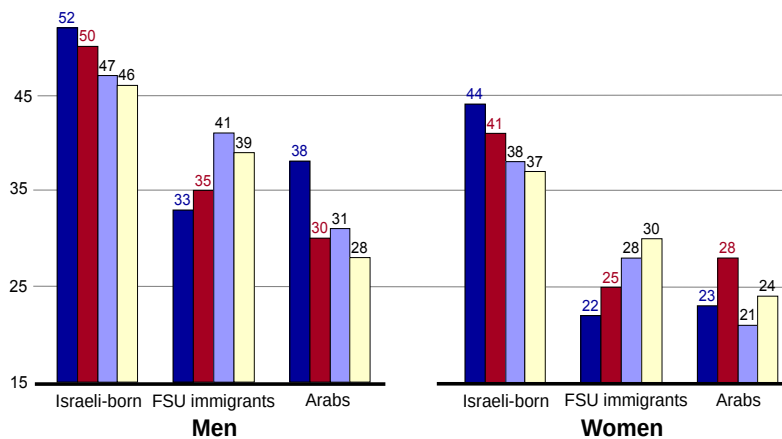
What does the data reveal about the Arab minority? Here the results are very different for those with and without academic studies. In the first period, the academically-trained group was very small and selective (less than 10 percent in the first five-year period) and presumably had the advantage of filling senior positions. As a result, this group began at a similar or even higher relative position than Israeli-born Jews. Since then, however, Arab professionals of both genders suffered a steeper decline than their Jewish counterparts, although among women with higher education, Arabs still enjoy a slight advantage over Jews. Meanwhile, Arabs without higher education have always been located far below Jews in the wage hierarchy.

Returning to immigrants from the FSU, what can explain their remarkable advances, so exceptional against the general background of declining relative incomes among young people?

Figure 5

Earnings rankings – ages 25-34

per work-hour, percentile of median person, by gender and sector*

A. With higher education**B. Without higher education**

* Not including Haredim.

Source: Michael Shalev, Taub Center and Hebrew University.**Data:** Central Bureau of Statistics.

The 1990s wave of immigration from the FSU included many academically educated individuals. In addition to employment difficulties stemming from language deficits, many immigrants were employed in occupations in their country of origin that were unsuited to the needs of the Israeli economy. Others with more compatible occupations (like doctors) were often relegated to less attractive segments of the Israeli labor market (Sussman and Zakai 1998). Many had to undergo occupational retraining to find employment, while others resigned themselves to less lucrative jobs for which they were overqualified (Raijman and Semyonov 1998). For these reasons and others (for example, the fact that many immigrants from the FSU resided in geographically peripheral areas), many immigrants, regardless of gender or education, began low on the wage scale but had ample potential to improve their position once they had mastered the language and become better acquainted with the local labor market.

Note, however, that rather than following the members of one age cohort over time, the current analysis examines the same age group (25-34) in different periods. Since the relevant age group spans ten years while each sub-period spans only two to five years, the study population at any given time consists of individuals from several consecutive cohorts. The findings therefore reflect the characteristics of new cohorts, as well as processes of immigrant absorption experienced by members of earlier cohorts.

It is fair to assume that cohort succession had a positive effect on the wage attainments of young immigrants from the FSU. Earlier cohorts, whose members arrived in Israel as adults, and thus were Russian-speaking and Russian-educated, were replaced over time by later cohorts whose members arrived at a younger age and were partly raised and educated in Israel. By the mid-2000s, most academically-educated immigrants aged 25-34 had studied in Israeli high schools or universities or colleges. In addition, by that time many immigrants had moved away from the periphery, increasing the percentage of FSU immigrants living

in the country's central regions from 38 percent in 1995-1999 to 48 percent in 2009-2010.

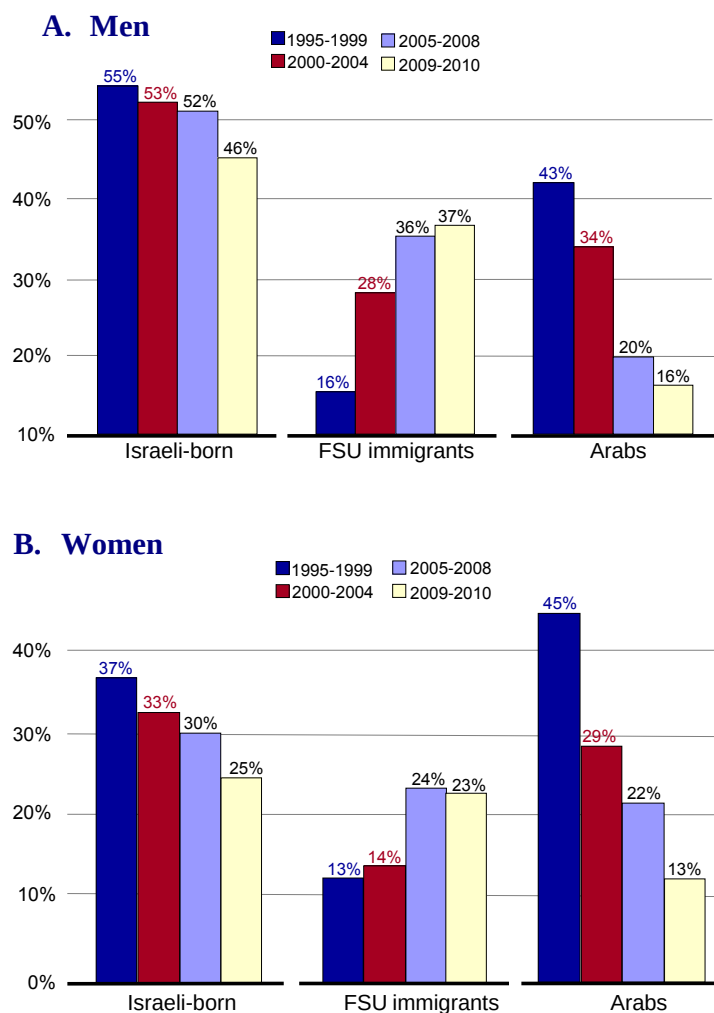
This analysis of the percentile rank of the typical wage-earner in each group is based on the median young person's salary. However, changes in the median do not necessarily reflect what is going on with all members of a group. Theoretically, it is possible that the median earnings of Israeli-born Jews fell mainly because of the growth of low-wage employment, leaving the more advantaged members of this group undisturbed. To find out whether high-achievers also suffered a decline in their relative wage, the percentage of young adults whose hourly wages are high enough to be included in the top 20 percentiles (the top quintile) of all employees is examined. This analysis is limited to those best positioned to succeed: those with higher education, aged in their early thirties (i.e., old enough to be on the road to success).

Figure 6 shows trends in the position of those aged 30-34 in different population sectors, for men and women separately. The most striking results pertain to well-educated Arabs: there was a tremendous decline in the proportion of young Arabs in the top wage quintile, especially among women (from one out of two to one in eight). Israeli-born Jews experienced a much more moderate but still significant decline throughout the survey period, which became more severe in the last two years of the study, just before the social protests. By contrast, immigrants from the FSU experienced sharp increases. This rising trend stopped recently, but without turning into a decline.

Figure 6

Young adults with higher education in the top quintile of hourly wages

as a percentage of all those aged 30-34*



* Not including Haredim.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

Even more striking are the gender-related aspects of the results. Not only did the percentage of women making it to the top quintile decline in each successive period (with the exception of Arab women over some of the periods), but the decline was steeper for women than for men. (In the case of immigrants from the FSU, women's advance to the top quintile was slower than men's.) The decline experienced by Israeli-born Jewish women was double that of their male counterparts; and similarly, the increase enjoyed by male FSU immigrants was almost double that of their fellow female immigrants. At least for those women born in Israel, this result may help explain their central role in the social protests.

The differences between sectors are especially striking in the case of Arabs and immigrants from the FSU. Among Arabs, the decline is explained in large part by the contrast between the rapid growth in the percentage of academically educated individuals and the fact that job opportunities are largely restricted to the Arab communities, increasing competition among educated applicants and causing some (especially men) to accept relatively low-paying jobs offered by Jewish employers. By contrast, the higher education acquired by immigrants from the FSU increased in value over time, among other reasons because they now have a better range of opportunities, because they face less discrimination than their Arab counterparts and because more of them now live in the center of the country.

Several factors may explain the decline in the relative earnings of young professionals in their early thirties (Shwed and Shavit 2006). First, the doubling of the percentage of young adults with higher education means that some of these individuals have less ability and motivation than in the past. In addition, a growing proportion are now educated at colleges whose degrees confer less value in the labor market than do those of universities. Second, over time some occupations (e.g., primary school teachers) now require degrees, without experiencing comparable increases in relative pay. Third, as there are more educated workers in the labor force, competition is likely to drive down their wages. Fourth, since age at graduation and the age at which stable careers begin have

both risen, members of more recent cohorts are likely to have less work experience and tenure. Finally, simply having a diploma no longer meets the requirements of an advanced economy. It is possible that some graduates of colleges and universities suffer from a mismatch between their skills and those sought by employers.

4. Developments in Family Income

The findings presented early in this chapter revealed that there has been serious erosion in the relative earnings of young working families over time. For several reasons it is important to focus on the situation of families when analyzing the young population. First, young adults with their own families constitute the largest group in Israel's young population, totaling 51 percent (on average over the 15-year period). Second, based on past trends, most young adults who have yet to start families of their own are likely to do so in the future. Third, this group is the most homogeneous. It is more difficult to analyze the earnings of all households headed by a young person because of their heterogeneity – there are households of singles, cohabitants, couples without children, single parents, and more (for further details see Section 5). Fourth, focusing on this group is of paramount social importance because they are likely to be the most economically vulnerable. As the social protests underlined, difficulties of coping with the cost of housing and education are likely to be especially pronounced for families with young children.

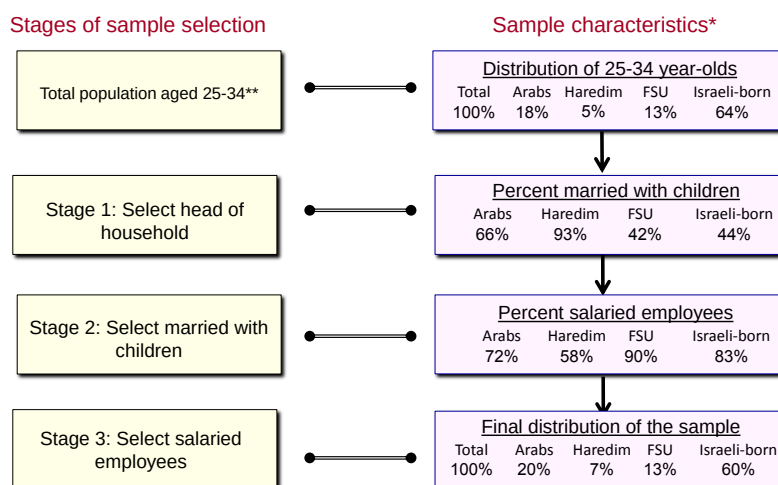
This section provides additional information on how the young families included in the survey were identified in practice. It also introduces several important factors – in addition to wages that were analyzed in the previous section – which determine the incomes of young households.

The young working families included in this survey were selected using a three-stage process (left-hand side of Figure 7). First, all households headed by a young adult (aged 25-34) were identified.⁹ Second, only households headed by a married individual with children were selected. Finally, only households headed by currently employed salaried employees were selected. This excluded from the survey young families headed by non-salaried members of the labor force (including the self-employed).

The right-hand column of Figure 7 presents key characteristics of the sample (divided by sector) at different stages of the selection process. The results show that Haredim (and to a lesser extent Arabs) were disproportionately included in the final sample because they tend to start families at younger ages. Nevertheless, they were also more likely to be excluded because of their low rates of employment for the head of household, especially among Haredim. In the end, the share of Arabs and Haredim in the sample was higher than their initial share while the share of Israeli-born Jews was lower and the share of immigrants from the FSU was proportionate to their share in the population.

⁹ In households with a married couple, the head of the family is usually defined by the Central Bureau of Statistics as the higher-earning spouse, regardless of gender.

Figure 7
Selection stages and characteristics of the sample of young working families



* Averages for 1995-2010.

** Not including immigrants who were not from the FSU.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

Table 2 provides data on some important determinants of family income. The analysis presented in the previous section focused on the earning power of individuals, but earning power is only one determinant of the earnings of families with children. The data in the table relates to several additional features of households that may influence their earnings. First it relates to total working hours which depends primarily on whether both spouses work or not. Second, since household income is adjusted for family size, having more children in the family dilutes the earning power of the parents. Finally, gainful employment is not the only

potential source of household income. For most families, transfer payments from the government are the most likely additional source.

Table 2. **The attributes of different sectors of young working families***

Characteristics	Israeli-born	FSU**	Haredim	Arabs
Working partner	67%	69%	21%	17%
Median number of work-hours (per couple)	72	75	36	51
Mean number of children	1.9	1.5	3.5	2.5
Transfer payments as percent of household income	9%	12%	33%	13%

* Averages for 1995-2010.

** Immigrants from countries other than the FSU.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

The figures show that the incomes of both young Israeli-born families and FSU families benefit from their relatively low number of children and high likelihood (more than two-thirds) of being dual-earner households. The opposite is true of young Haredi and Arab families (they have relatively large families and both spouses are less likely to work) and serves to drive their family incomes down, although to some extent this is compensated (mainly among Haredim) by enhanced transfer payments.

Trends in the Relative Income of Young Families

This section presents trends in the incomes of young working families relative to disposable household income in the total population (in percentiles). Household income is defined as total income from all sources, after tax and other mandatory deductions, divided by the standardized number of persons in the household. The analysis begins by comparing trends in wages and trends in household income for each of the four population groups included in the study.¹⁰

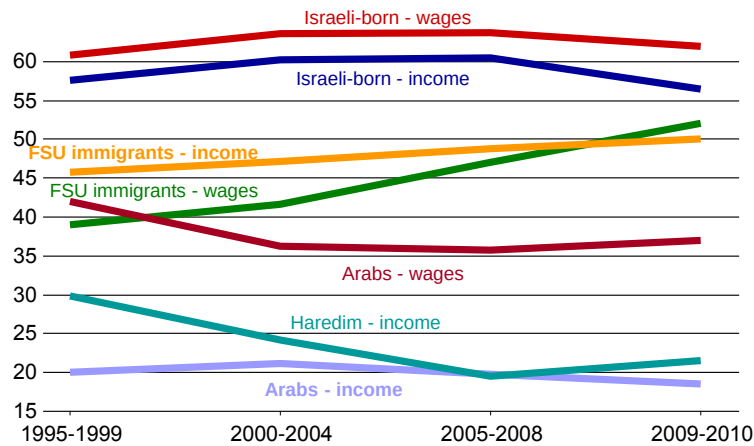
As Figure 8 shows, the relative position of young Israeli-born Jewish families in the household income hierarchy is six percentiles lower than the relative position of heads of household from the same group in the individual wage hierarchy. Nevertheless, the two indicators exhibit a very similar trend of moderate increases followed more recently by decline.

In contrast, until recently the relative incomes of young FSU-immigrant families were superior to the relative wages earned by the heads of these families. During the 2000s, however, this superior position was undermined; as a result, the rapid labor market advances made by young FSU immigrants are only modestly reflected in their relative household income.

¹⁰ Due to a limited number of cases, the analysis excludes Haredi wage earners. To make wage and household income data commensurable, the present analysis (unlike the previous analysis of wages) does not include all wage-earners aged 25-34, only those who are household heads.

Figure 8

Relative earnings and family income among young people
median individual and household in each sector, in national percentiles

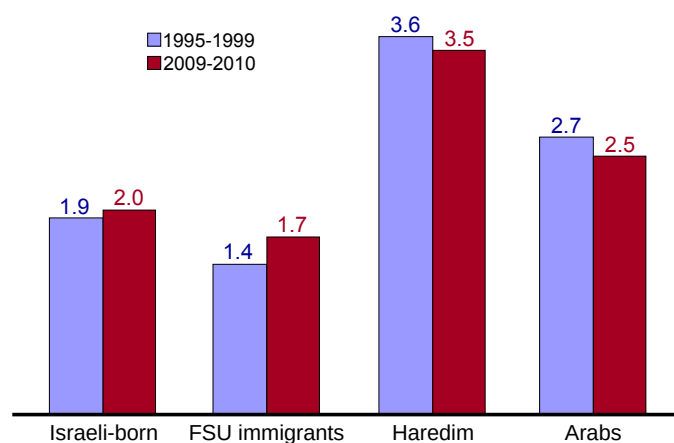
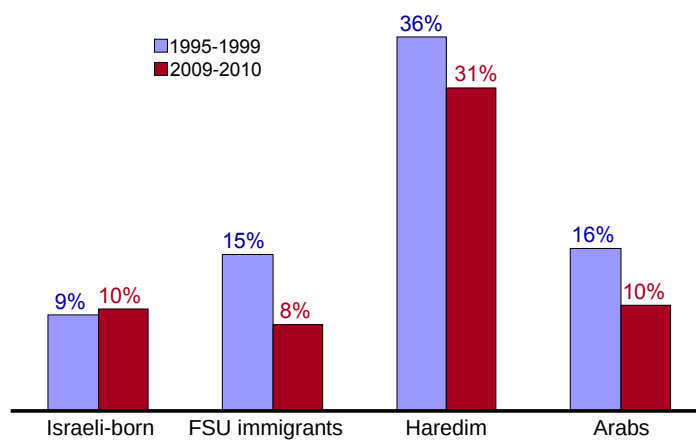


Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

The data in Figure 9A-9D may help clarify this trend. On the one hand, as more FSU-immigrant households moved to the center of the country and continued to work long hours, one could expect their family income to increase. On the other hand, changes in the other two determinants of family income caused that income to fall. First, the number of children in households headed by an FSU immigrant increased. Second, the percentage of FSU immigrants eligible for special benefits earmarked for new immigrants fell over time, shrinking household income from transfer payments among this group.

Figure 9

Characteristics of young working families, by sector**A. Average number of children****B. Transfer payments, as a percent of disposable income**

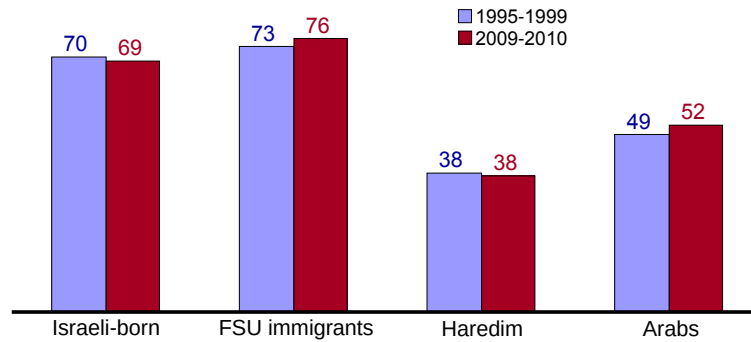
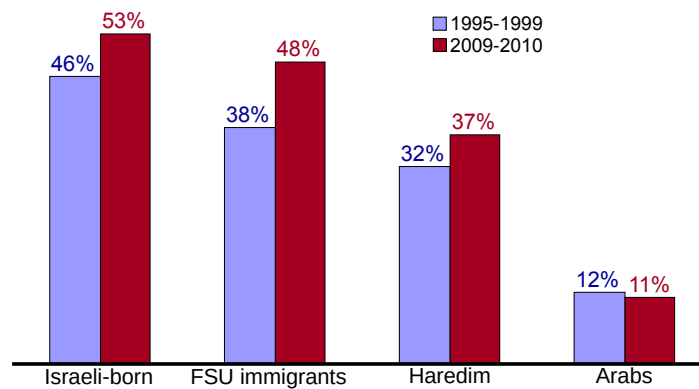
Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

Figure 9 (continued)

Characteristics of young working families, by sector**C. Average number of working hours per week**

both partners work

**D. Residence in center of country, as a percent of all working young families****Source:** Michael Shalev, Taub Center and Hebrew University.**Data:** Central Bureau of Statistics.

Among the two economically disadvantaged sectors, Arabs and Haredim, relative household income has been much lower than relative wages.¹¹ This has been the combined effect of their low percentage of dual-earner households and their high birthrates. The two groups also differ, however, in several important respects. As Figure 9A shows, members of Haredi households work considerably fewer hours than their Arabs counterparts, and their families are significantly larger. Had it not been for the very substantial contribution of transfer payments, household income would be much lower for working Haredi families than for their Arab counterparts.

Turning now to trends in the household income of young working families, Figure 8 shows that over the last 15 years, young Israeli-born Jew and FSU immigrants experienced continuous improvements, though this trend was reversed in the two years prior to the social protest of 2011. However, since the long-term improvement was greater for FSU immigrants and the recent erosion smaller, the gap between this group and (non-Haredi) Israeli-born Jews fell from 12 percentiles in the late 1990s to only 8 percentiles in 2009-2010. Far below both of these groups in the household income hierarchy are the Arab and Haredi populations, which occupy similarly disadvantaged positions. Whereas Haredim started out significantly higher in the late 1990s, young Arab families experienced remarkably little change.

Figures 9A to 9D illustrate the many contrasts between the four population sectors with respect to the various determinants of household income (other than wage levels): average number of children per household, transfer payments as a share of total family income, total hours worked by the spouses, and place of residence in Israel. As already noted, some of these determinants changed over time. An interesting question remains: would the four groups still differ in terms of income

¹¹ As already noted, estimated hourly wages are not shown for Haredim due to small sample sizes. However, data for the two most recent periods (when samples were more representative) place Haredi employees (many of whom are female teachers) 7-10 percentiles higher than their Arabs counterparts.

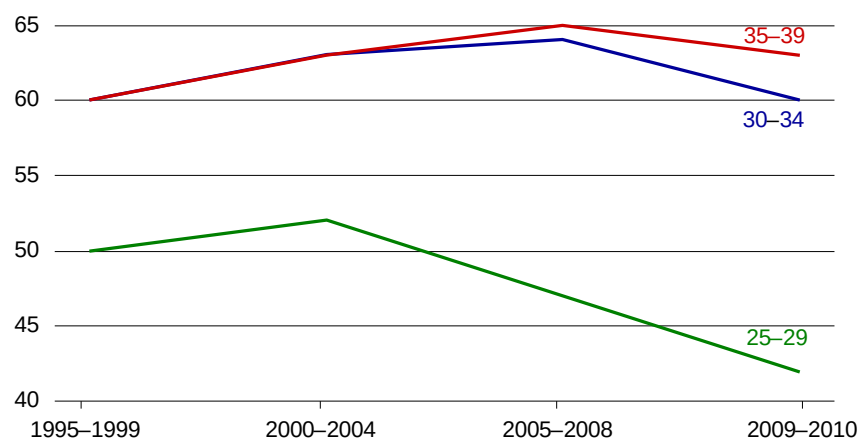
and relative ranking if they all shared the same characteristics except wage levels? This will be the final topic of the present analysis after an examination of several important issues relating to changes in the earnings of young working families over time.

Is Declining Income Limited Mainly to the Youngest Families?

In choosing to define “young” as ages 25-34, this research may have exaggerated the situation of most young families, which are headed by persons in the upper levels of this age range. Due to the tendency for age at marriage and at the birth of a first child to rise, by 2009-2010 fewer than 30 percent of the heads of young working families were under the age of 30. Declines were especially large among Russians and Arabs; among Israeli-born Jews the fall was less severe (from 28 percent to 24 percent) and among Haredim there was actually an increase. In view of the numerical importance of young families headed by Israeli-born Jews, if the economic situation of the very young families in this group has been deteriorating faster than in the older age group, this might be responsible for the overall decline found in the 25-34 year-old age group as a whole.

To assess this possibility, trends in the relative position of young (non-Haredi) Israeli-born Jewish families were measured separately for the 25-29 and 30-34 age groups, and compared with the next age group (35-39). As Figure 10 shows, the decline in family income began earlier and was much steeper for families in the youngest age group. In all three age groups, family income increased between the first and the second periods and fell between the second and the third, but only the 25-29 age group suffered a dramatic decline: a fall of 10 percentiles since 2000-2004. This important finding may imply that most (though not all) of the rising economic vulnerability of very young families is actually a temporary setback, which becomes much less severe after the heads of these households reach their thirties. To test this possibility requires following cohorts of new families over the course of the life cycle.

Figure 10
Relative income of young working families by age groups
 median Israeli-born Jewish family*, in national percentiles



* Not including Haredim.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

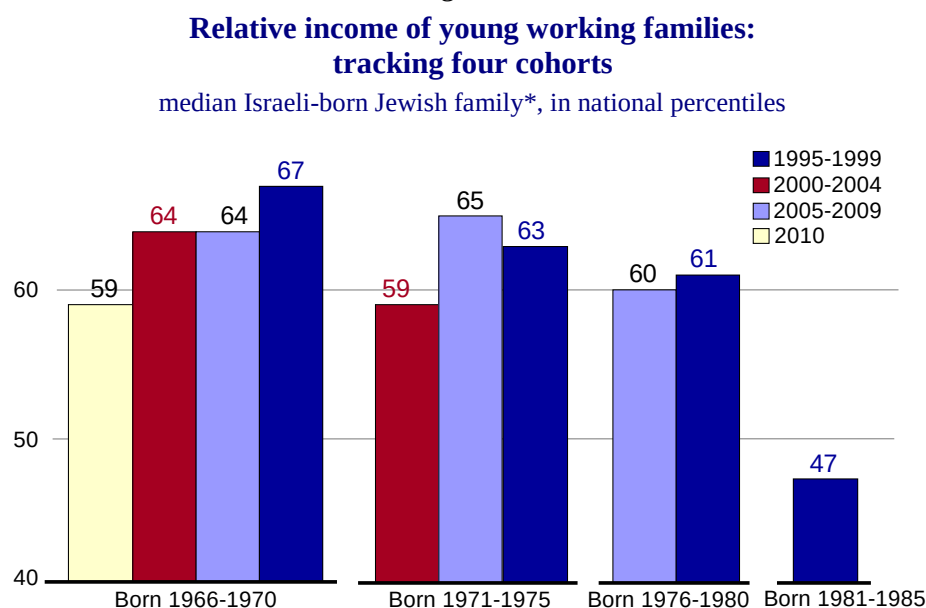
Does the Relative Income of Young Families Improve as They Get Older?

Because the sample of families investigated in the income surveys changes each year, it is not possible to follow the same members of a cohort as they age. But a good indication can be obtained by tracking adult family members from the same birth cohort in different survey years. Starting in 1995 (the first year of the study), in each five-year period all those aged 25-29 in the first year constitute a birth cohort, and so on – making for a total of four cohorts, the first one of which is observed in all 15 years and the last one (those who were 25-29 years-old in 2010) only in the final year. The only population group which is large enough for this to be technically feasible is Israeli-born Jews (excluding Haredim). For the purpose of this analysis the selection of households was based on identifying young families by the age of the female spouse.¹²

¹² In order to increase the number of cases per cohort and minimize “contamination” of cohorts over time by the addition of couples who married and had children after the first year in which the cohort was observed, instead of selecting households in which the head was aged 25-29 the selection was based on wives in the same age range, whether or not the wife was classified as the household head. (Note however that the results of a parallel analysis based on household heads were substantively similar to those reported here.) This procedure takes advantage of the fact that most women marry at a younger age than men. As a result both spouses in the selected households tended to be older than those who would have been obtained by selecting according to the age of household heads. This in turn raised the household income level, mainly for newly-observed cohorts which would otherwise have been composed of younger individuals. In an attempt to avoid the aforementioned problem of “contamination,” in principle households were only selected if the couple was already married in the first year the cohort was observed. However, due to the way year of marriage is grouped in the source data, the desired restriction could only be fully implemented for the first and last cohorts. The cohort that joined in 2000 includes newly married members through 2003, and the 2005 cohort includes them through 2006. The analysis is based on roughly 400-600 cases per year, except for the most recent cohort observed in 2010, with only 245 cases.

In order to understand Figure 11, consider the four bars indicating household income for households in the first cohort of females aged 25-29 in 1995 (meaning they were born in 1966-1970). The bar on the left (in pale yellow) shows that the median income of these households during the first observation period (1995-1999) was in the 59th percentile of all Israeli households. The bars to its right show that in later periods the median income of these households climbed to higher percentiles, probably as a result of higher pay due to more experience and, possibly, additional formal training.

Figure 11



* Not including Haredim. Young families were selected on the basis of the age of the woman in the household.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

A similar pattern is observed for the next cohort (born 1971-1975), although the observation period was of course briefer. The two most recent cohorts that also have shorter observation periods displayed worse income trajectories for young families. Strikingly, the initial relative income position of the most recent cohort (born 1981-1985, observed in 2010 only) was 12-13 percentiles lower than those of all three preceding cohorts at the same stage.¹³ In addition, the second-to-last cohort (first observed in 2005) did not enjoy the same surge in relative income that earlier cohorts experienced between their first and second periods of observation.

Only time will tell whether future cohorts of young families will continue to suffer from lower initial incomes and less improvement over their life cycle compared with young families started before the 2000s. In the worst-case scenario, the economic opportunities facing successive cohorts of young families will continue to decline, without being offset by improved attainments over time.

Is There Less Room at the Top for Young Middle-Class Families?

A good deal of the public discussion started by the social protests of 2011 centered on what many defined as a crisis of the middle class. The focus of this chapter so far on the condition of the median young family fits a literal definition of “middle.” An alternative approach is to focus on two characteristics often associated with the middle class: higher education and relatively high incomes. Accordingly, this section evaluates changes over time in the success of young families in reaching the highest income quintile, distinguishing between those with and without higher education. As explained earlier, any such analysis must take into account the fact that Israelis tend to complete their higher education relatively late in life.

¹³ This finding should be treated as tentative due to the relatively small number of cases on which it is based.

Figure 12 compares the percentage in the highest income quintile of families headed by 30-39-year-olds and of families headed by 40-49-year-olds, with and without higher education. As the figure shows, among (non-Haredi) Israeli-born Jews, the percentage of young academically educated families in the highest quintile fell by 12 percent – from 51 percent in 1995-1999 to 39 percent in 2009-2010 (Figure 12A).

By contrast, among immigrants from the FSU, the percentage increased over the same period by 11 percent – from 18 to 29 percent in 2009-2010 (Figure 12B). Half of the decline among Israeli-born Jews occurred in the final period observed, the same period during which families headed by older individuals (in their 40s) improved their condition. Among immigrants from the FSU, more of the younger families reached the highest income quintile than older families, supporting the claim that younger FSU immigrants are more likely to have enjoyed the advantages of growing up in Israel.

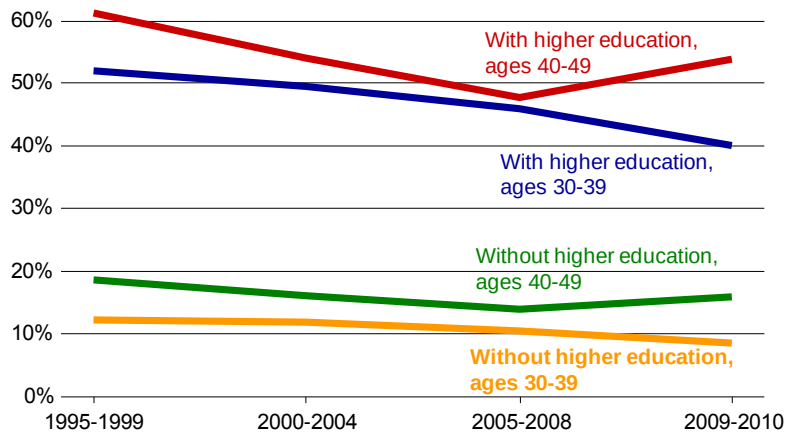
Not surprisingly, in both of the aforementioned sectors, only a small minority of families headed by an individual without higher education reached the top income quintile. Here again, however, the attainments of Israeli-born Jews deteriorated while those of immigrants from the FSU improved, leading to near-convergence between the two groups.

What of the two other population groups? Since among Haredim only women generally participate in higher education, and at comparatively low rates, Haredim were not included in the present analysis. Detailed results for Arabs are not presented, as they may not be accurate due to small samples of young families with an academically-educated head. Yet the broad picture is unmistakable. The proportion of young educated Arab families reaching the highest quintile is estimated to have fallen from 22 percent in 1995-1999 to only 3 percent in 2009-2010 – when 40 percent and 29 percent respectively of their Israeli-born and Russian counterparts enjoyed these high incomes. The rate of high-achieving families among Arabs lacking higher education is almost zero.

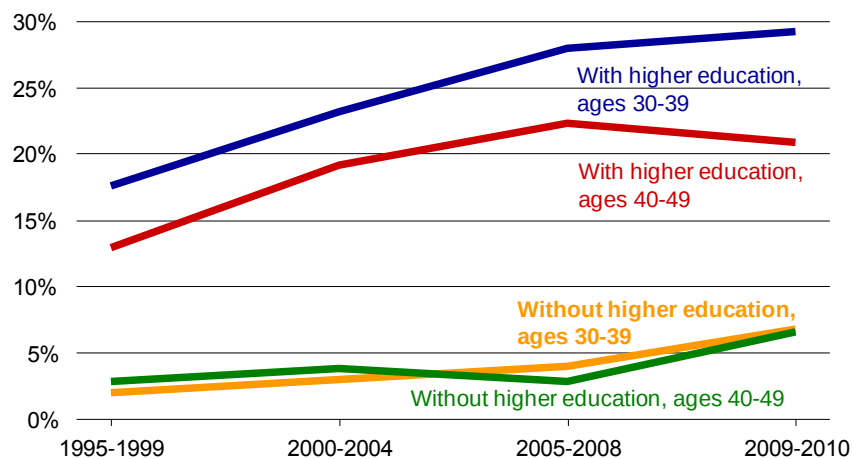
Figure 12

Young working families in the top income quintile
as a percent of all young households, by age and education of head

A. Israeli-born Jews*



B. FSU immigrants



* Not including Haredim.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

In sum, the chances of young families joining the (upper) middle class have fallen sharply among Israeli-born Jews and catastrophically among Arabs. At the same time, the chances of successive cohorts of Russian-speakers have improved substantially over time. Compared with the trends in median income discussed previously, those presented in Figure 12 are quite dramatic. This suggests that declining economic opportunities for young Arabs and Israeli-born Jews have had the most impact on families with the greatest income potential. Some of the reasons were mentioned earlier – erosion in the value of higher education due to its expansion and to inflation of job requirements. In addition, younger workers are the most likely to suffer from “insider-outsider” arrangements that effectively discriminate against them.

Would Differences Between Population Groups Be Smaller if They Were More Alike in Their Characteristics?

The evidence shows that young families from different backgrounds have experienced quite different trends in their economic wellbeing, as measured by relative income. At the same time, the background data presented earlier in Figures 7 and 9 shows that the four sectors analyzed here differ substantially in attributes that shape family incomes. Since family income depends even more on labor market earnings, it is important to consider sectoral differences in the determinants of wages, especially education and work experience (which is usually related to age). This section reports, in a non-technical way, the results of a statistical analysis which estimated what differences in incomes would have been expected if all young families – regardless of their background – had the same characteristics as the average young family. The goal is to simulate what would happen if the main sources of group advantages and disadvantages were eliminated.

The method used can be explained by way of a simple example. For convenience, suppose that families are equally split between single- and dual-income households. Further suppose that the average income of

dual-income households is located ten percentiles higher than that of single-income households. To make all households equivalent, the incomes of single-earner households must be adjusted upward by five percentiles while dual-earner households must be adjusted downward by five percentiles. The statistical analysis offered here makes this adjustment simultaneously for several determinants of family income, taking into account the fact that the same determinant may have a different impact in different time periods.¹⁴

The analysis was carried out in two stages. In Stage 1, all four population groups were assigned average values of the most critical determinants of the ability of households to obtain income from paid work: the age and education of household heads, whether the spouse also works, and the extent of local opportunity (measured by whether the family lives in the Tel-Aviv region). In other words, for purposes of this calculation the between group-differences on these variables were removed, and the value for each group was based on the overall mean.

Not surprisingly, income gaps between the sectors in real life (Figure 13a) are larger than they would have been under the simulated conditions (Figure 13b). However, several differences between the real and simulated results are of interest. For the Israeli-born veterans, the simulated trend is one of steady erosion instead of what happened in reality – small improvements in the middle two time periods followed by recent decline, resulting in similar findings for the first and the last periods. The reason is that their educational level – the single most

¹⁴ The results were calculated in SPSS using ANOVA (Analysis of Variance) to estimate the mean response for each factor adjusted for all other variables in the model. All independent variables were categorical except for working hours, transfer payments and number of children, which were entered as covariates with effects calculated at their mean values. The model includes interactions between time period and all other variables. Note that because ANOVA is based on the calculation of averages, there are small differences between the results shown in Figure 12A (without controls) and those presented earlier which were based on the median rather than the mean household.

important influence on earnings – was relatively high to begin with, and improved rapidly. Had Israeli-born Jews been identical to the average young family in terms of education, that is, lower than they actually were, their income would have declined more steeply. In addition, as the earlier analysis of the earnings of men with higher education indicates (Figure 6), the effect of education on earnings decreased over time, especially in recent years. In effect, those belonging to this group find themselves going up the down staircase.

For immigrants from the FSU, the simulated results were also worse than their actual attainments. The percentage of FSU immigrants with the four advantages that are held constant in the simulation did not go down relative to the national average, and in two cases (residence in central Israel and average age) it even increased. This explains the improvement experienced by FSU immigrants in reality, even (though more moderately) in the recent difficult period which preceded the social protests of 2011.

In contrast to the two sectors just discussed, Arabs and Haredim would have vastly improved their attainments had they taken on the characteristics of the majority, since in nearly all cases their income-generating abilities are well below the average. In the late 1990s, adjusting these characteristics to the average would have placed both Arabs and Haredim at the same level with FSU immigrants, far above their true position in the income hierarchy. But while the simulated earnings of FSU immigrants increased over time, those of Arabs and Haredim fell sharply. Consequently, by the end of the survey period the gap between these sectors and FSU immigrants is estimated at 13-14 percentiles – still only about half of the real-world gaps.

Nevertheless, it would be a mistake to exaggerate the similarities between the Arab and Haredi sectors. Despite common features that set both of them apart from the other groups, there are also important differences. For young Haredi families, the biggest handicap observed is the very young age of the head of households (with the proportion under 30 exactly double their percentage in the general population). In

addition, the percentage of Haredi head of households with higher education is well below average. For Arabs, the latter problem constitutes the main difficulty. Despite recent increases in education levels, only a small minority of young heads of households have academic degrees. Both groups also suffer from their tendency to reside in regions with limited economic opportunities.

Specifically, in the last period observed (2009-2010) the percentage of young heads of households with higher education was 20 percent among Haredim and 16 percent among Arabs, in both cases well below the national average of 36 percent. The percentage of families residing in central Israel was 37 percent among Haredim and 11 percent among Arabs, compared with a 43 percent national average.

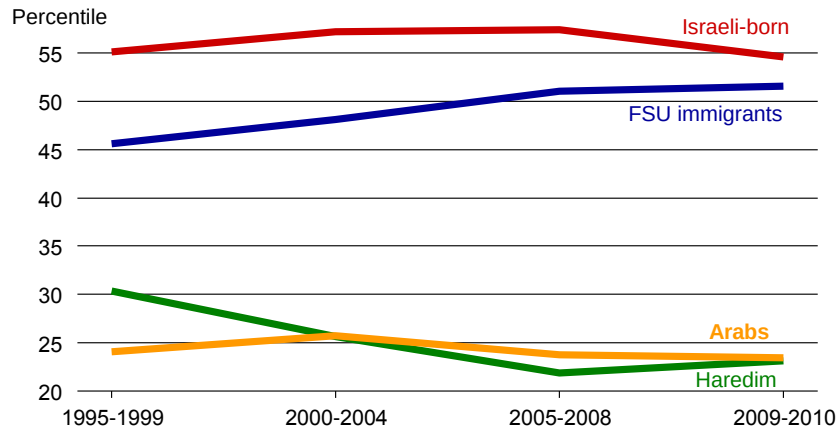
The second stage of the analysis demonstrates additional differences between Haredim and Arabs in the factors underlying their low average incomes. This stage takes into account three factors that directly determine income: hours worked by both spouses; transfer payments; and number of children (the latter being important since income is adjusted for family size). Comparing Figures 13B and 13C shows that the relative income of Arab families hardly changes when these additional factors are taken into account. In contrast, in all the four periods observed, the simulated income of Haredi families (Figure 13C) is about 10 percentiles higher than in the previous less comprehensive simulation (Figure 13B). This is especially significant given the adjustment for transfer payments in the second stage of the simulation, which, in itself, would have caused the simulated income of Haredim to fall considerably. This expected decrease is further offset by the opposite effects of two other characteristics unique to young Haredi families: an especially large number of children and limited work hours by the parents. Inter-sector differences with respect to these variables over time can be observed in Figures 9A to 9C.

As for the other two sectors, (non-Haredi) Israeli-born Jews and FSU immigrants, the second stage of the simulation yields similar results to the first. The decline experienced by Israeli-born Jews remains unchanged because this group is similar to the national average with respect to the three variables added to the simulation. Among immigrants from the FSU, the more comprehensive simulation yields lower results than the less comprehensive one, although the difference is stable and quite small (about two percentiles). This stems from the fact that the members of this group have stable advantages (relative to the average) of the variables added to the simulation.

Figure 13

Comparing income percentiles of young working families

before and after simulations

A. Average income (without equalized characteristics)**B. Simulated income with equalized characteristics:**

age, education, number of wage earners and place of residence

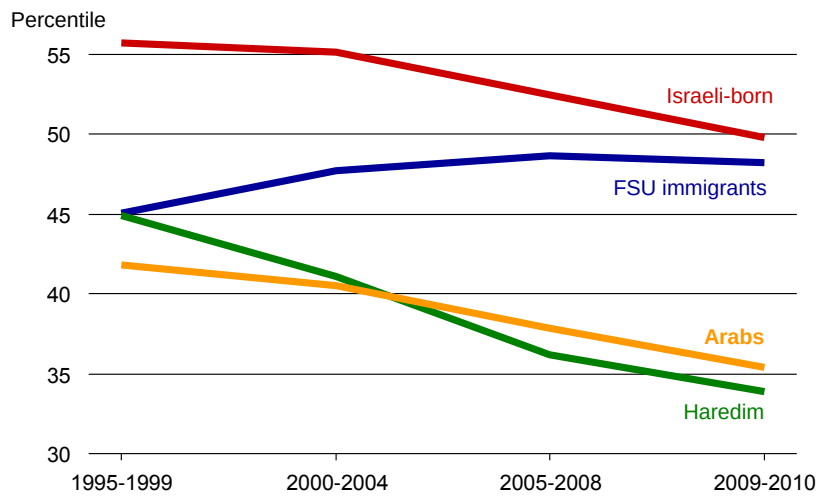
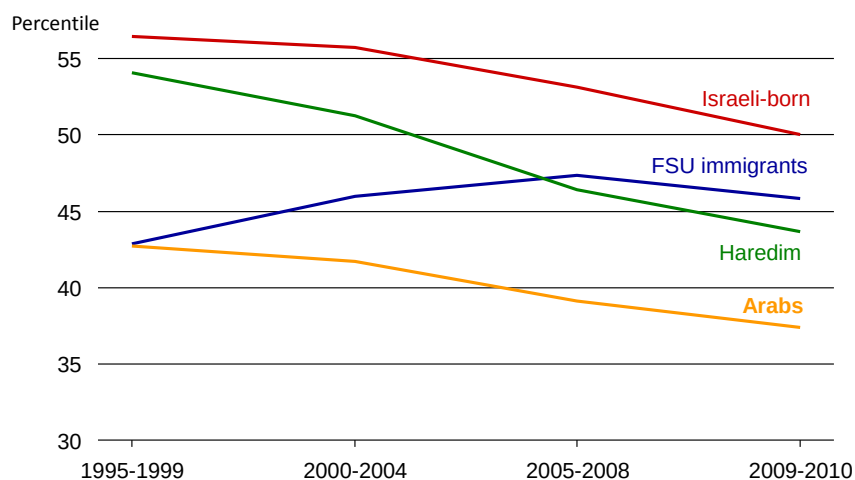
**Source:** Michael Shalev, Taub Center and Hebrew University.**Data:** Central Bureau of Statistics

Figure 13 (continued)

C. Simulated income with equalized characteristics:
variables from previous simulation + hours of work, transfer
payments and number of children



Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

In sum, the findings indicate that sectoral differences in the level and trends of the relative incomes of young families would indeed have changed had the groups been more alike in terms of their earning power, hours of work, and the other determinants of family income. The decline in the incomes of the largest and strongest group – non-Haredi Israeli-born Jews – would have been more pronounced, and the improvement experienced by FSU immigrants would have been less dramatic. Under full (second-stage) simulated conditions, Haredi Jews would have enjoyed the same starting point in the late 1990s as non-Haredi Israeli-born Jews, while Arabs would have started at the same income percentile as FSU immigrants. Later in the 2000s, both groups would have joined the non-Haredi Israeli-born Jews in experiencing a decline over time.

What, finally, does this analysis tell us about the changing situation of new cohorts of the middle class? On the basis of the full (second stage) simulation model it is possible to calculate the underlying effect of key variables that in the past facilitated a middle-class standard of living for families with children. These can be divided into three: (1) Factors shaping the earning power of individuals – education and work experience (the latter proxied by age). (2) Whether both partners participate in the paid labor market. (3) The earnings opportunities associated with a favorable location (living in the Tel-Aviv area) and family background (captured here by the distinction between Israeli-born Jews and all other groups). These influences are assessed in Table 3.

Table 3. **Income differences (in percentiles) associated with “middle-class” advantages among young working families, 1995-2010 (simulation results)**

	1995- 1999 Period A	2000- 2004 Period B	2005- 2008 Period C	2009- 2010 Period D	Difference between Periods A and C	Difference between Periods C and D
Higher education	19.2	18.2	17.1	15.6	-2.0	-1.5
Age (30+)	4.5	4.0	5.9	4.9	1.4	-1.0
Dual earners	15.0	14.1	12.5	11.0	-2.5	-1.5
Israeli-born Jews	7.5	7.1	6.6	5.8	-0.8	-0.8
Residence in central region	1.5	3.0	4.1	3.4	2.6	-0.7

Source: Michael Shalev, Taub Center and Hebrew University.

As these results show, the value of the three most important advantages – a head of household with higher education, a dual-earner household, and an Israeli-born Jewish head of household – declined continuously and considerably over time. The value of being 30 or over and of living in the Tel-Aviv area increased until 2009 but declined thereafter. (Note that these calculations hold constant the effects on family income of all other variables in the simulation.) It is worth noting that while Israeli-born Jews still enjoy a net advantage of almost 6 percentiles over the average young family, the value of that advantage has also declined.

To summarize, the economic value of all of the advantages which traditionally contributed to young families' ability to attain middle-class incomes has declined over the last 15 years, especially in the most recent period leading up to the 2011 protests. This represents a structural change which has undermined the attainments of both new and existing cohorts of young families. Moreover, the decline has continued in recent years, with the value of all five advantages falling sharply between 2005-2008 and 2009-2010.

5. Housing Trends Among Young Adults

The relative income of young people is an informative general indicator of their economic position in society, but it does not necessarily reflect their purchasing power. Young people face a number of start-up costs that are not shared to the same extent, if at all, by people at later stages of the lifecycle. The largest such cost is typically incurred when young people make the transition from living in the parental home to living independently and, subsequently, to purchasing their own homes.

The lack of affordable housing for young people was what sparked the initial social protest on the boulevards of Tel-Aviv and continued to be central to the wider protest movement. There is no doubt that housing prices rose steeply in the years preceding 2011. After a decade of stable

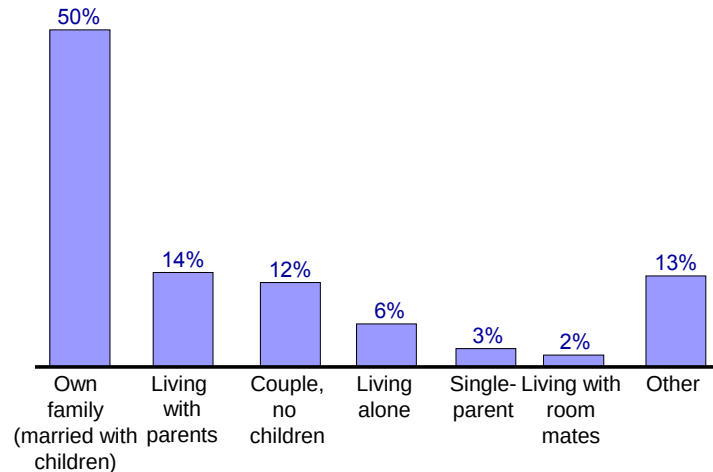
or falling prices, inflation-adjusted housing prices rose by nearly 40 percent in 2009 and 2010. More fine-grained data show that in Tel-Aviv and other areas of high demand prices began to rise earlier, in the mid-2000s (Sayag 2010).

This section of the chapter is based on data on living arrangements and home ownership collected in the same surveys used earlier to analyze wages and incomes. The goal is to see if there are indications of growing housing difficulties among young people aged 25-34.

Changes in Living Arrangements

The first analysis addresses changes in the prevalence of different living arrangements among young people. It is based on assigning individuals to six household types: independent households, living with parents, cohabiting without children, single-parent households, single-person households, shared apartments (roommates), and all other (Figure 14).

Figure 14
Types of young households
 as a percent all young people, average 1995-2010



Source: Michael Shalev, Taub Center and Hebrew University.

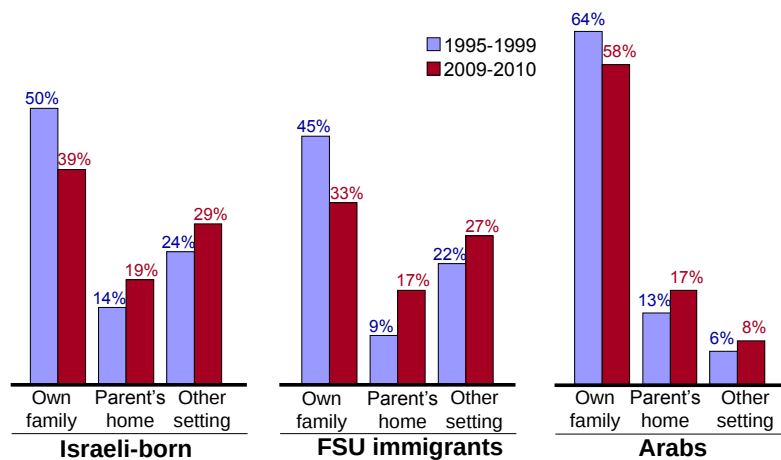
Data: Central Bureau of Statistics.

As can be seen, during the surveyed period half of those aged 25-34 had started their own families and were living in independent households while the remainder were organized in a variety of different living arrangements. About one-eighth of the participants in the sample were classified as “other” due to insufficient information or because of specialized arrangements, such as living with siblings or grandparents. (For further information on the categories see the Appendix.)

Since different population sectors display different housing patterns and have different access to economic resources, the analysis must be disaggregated by sector. As previously shown in Figure 7, the percentage of young people starting their own families is especially high among Haredi Jews; in other sectors, as Figure 15 indicates, the rising age of first marriage and parenthood has resulted in lower percentages of young people living as independent families, with the lowest percentages among non-Haredi Israeli-born Jews, followed by FSU immigrants and finally by Arabs. An obvious question is whether postponement of marriage and parenthood in these three sectors has led to changes in living arrangements among the growing number of young adults under 35 who are not married with children. And in addition, given the cost of making the transition to various forms of independent living, do these young adults tend to stay longer in the parental home?

Figure 15 shows that the percentage of young adults living with their parents has increased in all three sectors, particularly in recent years. Comparing the starting and ending figures shown in the charts, it has risen by 8 percentage points among Russians and 5 points among both Arabs and Israeli-born Jews (the increase among Haredim was only 2 points).

Figure 15
Types of young households*
 as a percent of all young households in the sector



* Among Haredim there almost no changes between periods and so they are not included in the figure.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

With the rising rate of young people who are not starting families, independent living has also become more common. Among non-Haredi Israeli-born Jews, about 50 percent of young adults without families of their own live independently and about 30 percent live with their parents,

with the remaining 20 percent living in other arrangements.¹⁵ One major trend is the rising percentage of young couples, married or unmarried, who live together before having children (5 percent increase among both Israeli-born Jews and FSU immigrants). It is worth noting, however, that in most cases marriage and parenthood are only temporarily delayed; if past trends continue, the vast majority of young adults in Israel will marry and have children. This helps explain why concern about the high costs of home ownership (and of having children) is so widespread among young adults in Israel, including those who are still single.

An indication of the influence of cost considerations can be obtained by comparing the living arrangements of young adults who have higher and lower economic resources. Figure 16 shows trends in the prevalence of two types of living arrangements: new families (independent households headed by a young married couple with children); and unmarried young adults living with their parents. Separate results are presented for individuals with relatively high hourly earnings (those in the top two quintiles) and all others. Due to the high proportions of new families among Haredim and Arabs, the analysis is limited to veteran Jews and Russian-speaking immigrants.

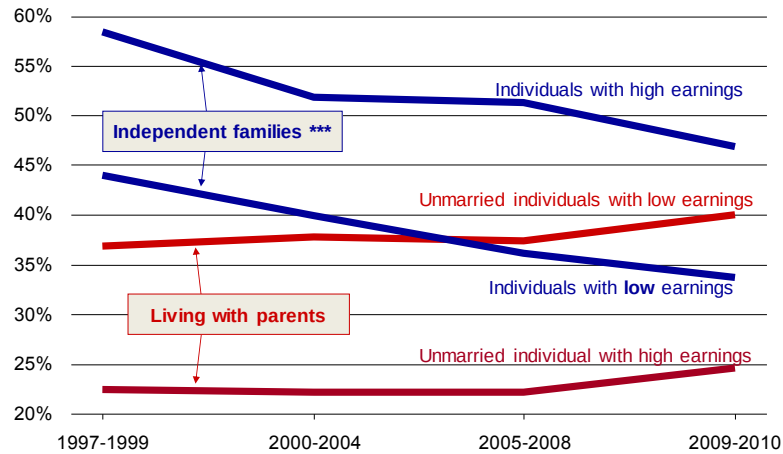
In both population groups, young adults with higher earnings are much more likely to establish families of their own (compare the top two blue lines in Figures 16A and 16B). By the same token, unmarried young adults with higher earnings could be expected to be less likely to live with their parents. This, however, turns out to be true of Israeli-born Jews but not of FSU immigrants. While among Israeli-born Jews the percentage of young adults living with their parents is 15 percentage points lower if they are high earners, among FSU immigrants the percentages are almost the same.

¹⁵ Some of those living with their parents may have returned after a period of independent living, either because they could not afford to continue or because their parents needed economic or other assistance.

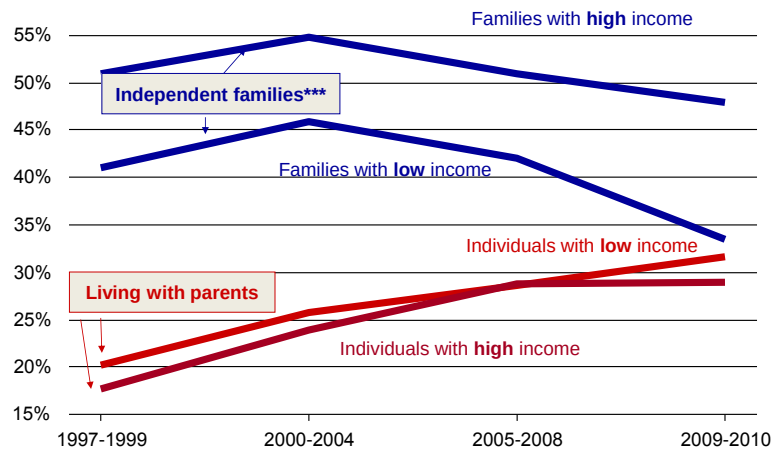
Figure 16

Changes in types of households of young people
by income level*, as a percent of all households in the sector

A. Israeli-born**



B. Born in FSU



* High earnings using top two quintiles of hourly wages.

Low earnings using bottom three quintiles of hourly wages.

** Not including Haredim.

*** Independent families are young families with children and who own a home.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

Over time, if the cost of family formation has risen it could be expected that the increased burden would have been relatively heavier for those with lower earnings. If this was the case, the gap between low and high earners living in independent households with families of their own would have increased. In fact, this is true only of FSU immigrants and only in recent years.¹⁶

These results may indicate that changes in living arrangements among young people have been influenced as much by changing social norms as by economic constraints. Yet the findings do not rule out the possibility that rising housing and other costs have put pressure on young adults to stay longer with their parents and postpone starting their own families.

Much of the frustration reflected in the social protests of 2011 was expressed by young adults with middle-class backgrounds, including those with relatively high incomes, who claimed that it is increasingly difficult to attain the same living standards they experienced in their parents' homes. If the cost of maintaining a middle-class lifestyle (including home ownership) has increased as steeply or even more steeply than the costs incurred by lower-class families, this would explain why even relatively advantaged young adults have been staying longer with their parents and postponing starting their own families. This issue is discussed in the next section.

The Decline in Home Ownership Among Young Families

Data on home ownership are available since 2001. The most important trends are presented in Table 4. Home ownership has declined significantly among non-Haredi Israeli-born Jews, and to a much lesser extent among Haredim and among FSU immigrants living outside of central Israel. Arabs constitute a special case, with at least 90 percent of young Arab families owning their own homes.

¹⁶ Among immigrants from the FSU, the percentage of young adults starting their own families was previously 9-10 percent higher among high earners than among low earners and rose to 14 percent higher in 2009-2010.

Table 4. **Changes in home ownership rates among young working families**

	2001-2004 Period A	2005-2008 Period B	2009-2010 Period C	Difference between Period C and A
Israeli-born Jews	74%	67%	62%	-12
FSU immigrants:				
Tel-Aviv	37%	42%	47%	+10
Other	65%	56%	61%	-4
Haredim	73%	71%	61%	-5
Arabs	90%	93%	93%	+2

Source: Michael Shalev, Taub Center and Hebrew University.

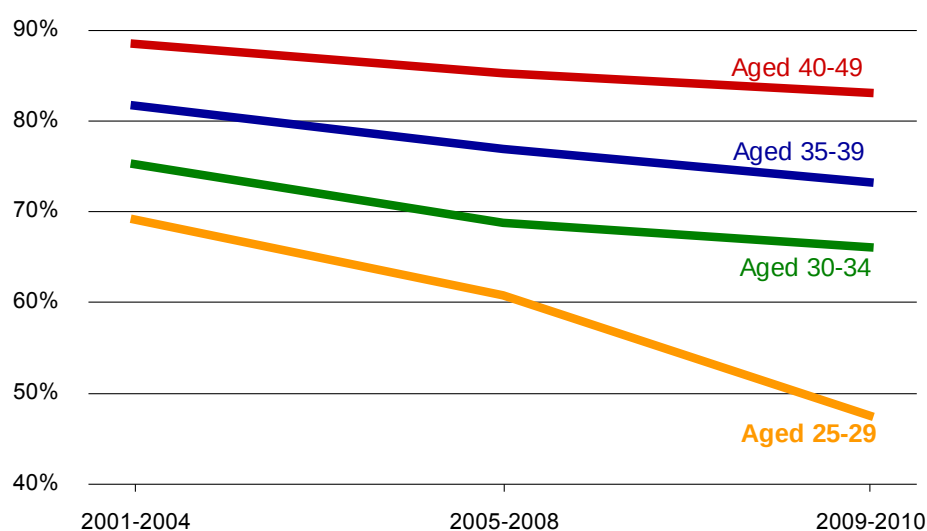
Data: Central Bureau of Statistics.

Unlike other groups, the housing situation of young families headed by an FSU immigrant is greatly influenced by where they live. The ownership rate today among those living outside of the Tel-Aviv region is similar to that of the Israeli-born group. But for those living in the center the rate started out very low and has been rising quite rapidly. In the early years many immigrants preferred or were encouraged to find cheaper housing outside of the central area of the country. The growing minority living in the Tel-Aviv region have difficulty buying their own homes, partly because of their parents' limited ability to assist them in paying for the expensive housing offered in that region.

To examine whether the sharp decline in home ownership among young Israeli-born Jews differed from home ownership trends for older cohorts, Figure 17 disaggregates home ownership data into detailed age groups. Home ownership has declined in all age groups, though less so among families headed by individuals in their forties (5 percent) than among those headed by individuals in their thirties (8-9 percent). The most dramatic decline has been in the 25-29 age group, where the rate of home ownership plunged in 2009-2010 from 61 percent to 48 percent.

Figure 17

Home ownership rates among working families
Israeli-born Jewish households*, by age of head of household



* Not including Haredim.

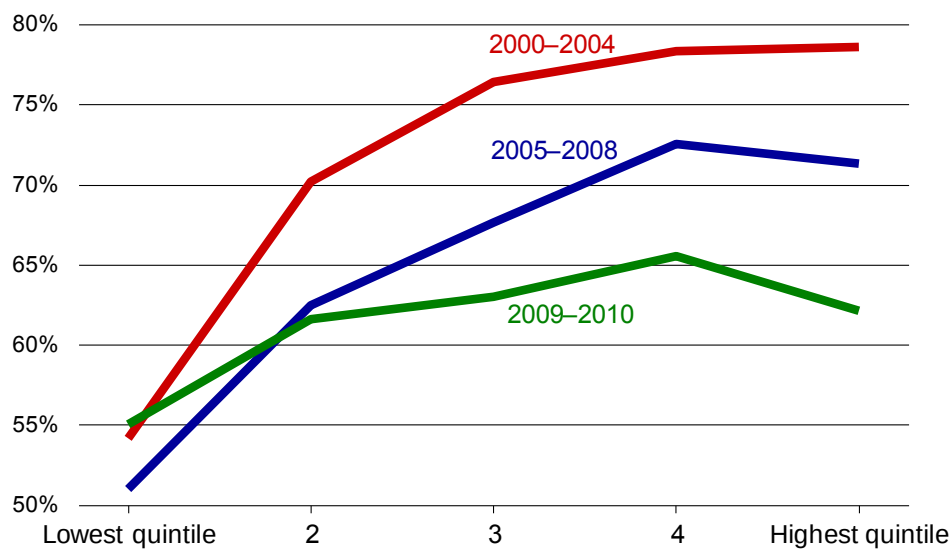
Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

Finally, it should be asked whether the trend towards declining home ownership varies between young families with different economic situations. Is it more pronounced among those with lower income, who may have more difficulty coping with rising prices? Figure 18 presents rates of home ownership rate broken down by the household's position in the income distribution (in quintiles).

Figure 18
Home ownership rates among young working families, by income quintiles

Israeli-born Jewish households*



* Not including Haredim.

Source: Michael Shalev, Taub Center and Hebrew University.

Data: Central Bureau of Statistics.

It is not surprising that in all periods home ownership rates are the lowest among young people in the lowest quintile. However, this is a small group that includes only one tenth of the young families surveyed here. More significant is the fact that home ownership has declined in all other quintiles as well, with the decline more intense the higher one climbs in the income hierarchy. This trend is discernible throughout the last decade, but especially over the last few years.

What can explain the fact that home ownership has contracted the most (by over 20 percent) among the most economically advantaged young families? One possible explanation is that as a result of changing values, affluent young couples have come to prefer a more flexible lifestyle that does not involve “settling down” in a permanent home. In addition, given their high earnings and high likelihood of having relatively affluent parents, such couples may actually own an apartment for investment purposes rather than for their own accommodation.¹⁷ Another possible explanation is that the housing standards to which young adults aspire have risen to a greater extent among advantaged young adults than among other groups. It is possible, for example, that advantaged young adults are able to rent but not yet to buy apartments in the most desirable cities and neighborhoods. It is worth noting in this respect that CBS data for the population as a whole show that in recent years the estimated value of owner-occupied homes rose much faster at higher levels of family income.¹⁸ Given that the burden of rising housing costs increases as one moves up the income distribution, it is quite possible that even affluent young families increasingly refrain from purchasing homes simply because they cannot afford to.

¹⁷ Unfortunately, CBS surveys do not provide information on home ownership other than concerning the household’s current domicile.

¹⁸ From 2008 to 2010, the value of homes (unadjusted for inflation) rose by 23 percent for households at the median income, by 27 percent for households in the eighth decile, and by 39 percent in the tenth (top) decile. Data are from the CBS *Household Expenditure Survey* for 2010, Table 21.

6. Summary and Conclusions

This chapter began by documenting the fact that since 2005 the earnings of the typical working family headed by an Israeli-born Jew aged 25-34 fell almost continuously relative to those of all other Israeli households, to a level unprecedented in the period covered by this research (1995-2010). The most important factor underlying changes in relative family income is the extent to which couples' earnings from paid work keep up with inflation. Since older workers were more successful in sustaining their real wages, the position of younger workers in the national wage hierarchy declined. This erosion in the wages of young people has been widespread, affecting men as well as women and those with as well as without higher education. (Immigrants from the FSU are a dramatic exception and will be discussed separately.) Even young adults at higher levels of the income hierarchy have been affected. Young workers with higher education are far less likely to be in the top hourly wage quintile now than they were in 1995. This is especially true for Jewish women and for Arabs of both genders.

The findings indicate that the massive expansion of higher education has had its disadvantages, including lower selectivity (not all graduates of institutions of higher learning are as talented or as highly motivated as in the past), greater incompatibility between job requirements and academic training, and increasing competition among those with an academic education for high-paying jobs. In addition, changes in institutional arrangements in the labor market have worked against many young professionals. Outsourcing and other wage-cutting practices, especially in the public sector, have lowered the incomes of many academically educated professionals, most notably in social services. Older workers in these professions have often managed to retain at least some of the privileges denied to the members of new cohorts.

Half of all young adults in Israel are married with children, and most others are likely to start families of their own once they reach their mid-thirties (the upper bound of the age group studied here). Any discussion

of the economic circumstances of young adults must therefore focus on families with children. In addition, since more than 90 percent of such families are headed by salaried employees, the appropriate focus is on what has been referred to here as young working families. The earnings of such families depend not only on the earning power of the head of the household but on other factors as well. Income is significantly higher in dual-earner families, a category that includes 70 percent of all households headed by a young adult who is a (non-Haredi) Israeli-born Jew or an FSU immigrant, but only 25 percent of all young Arab and Haredi families. This is the main (though not the only) explanation for the fact that the position of families from the latter two groups in the household income hierarchy is dramatically lower than the position of the heads of these families in the individual wage hierarchy. In Haredi families this is offset for by a relatively high level of transfer payments, although the exceptionally large number of children in such families has the effect of decreasing their income after adjustment for family size.

Since this study is concerned with trends over time, the most important finding regarding young Arab and Haredi families is that in the course of the 2000s there was almost no change in their typical position in the national income hierarchy. It remained very low, roughly in the twentieth percentile. As for non-Haredi Israeli-born Jews, the typical young family from that sector was in the 60th percentile of the national family income hierarchy until the last two years of the decade, when its relative position fell by 4 percentiles.

By far the largest group of young families in Israel, this group is still the main source of middle- and upper-class households in Israel and its members are still relatively well-off economically, although as the study shows, even they have experienced economic difficulties. First, the decline in real wages significantly decreased the percentage of such families in the highest income quintile of Israeli households, especially during 2009-2010. The statistical analysis which was conducted as part of this study shows that had their level of education not risen so rapidly and had their work hours decreased, members of this group would have

suffered an even steeper decline in relative income. In fact, most of these families could be described as engaged in a struggle to find their place in the middle and upper-middle classes. This struggle has become progressively more difficult because the advantages which have always been crucial to attaining middle-class incomes and living standards have gradually declined in value. This is especially true of the two major cornerstones of middle-class success, higher education and two incomes, although recently the economic value of other characteristics (residence in central Israel, and a later age at marriage and parenthood) has declined as well.

It is reasonable to assume that even in the absence of the above advantages, Israeli-born Jews would still tend to enjoy superior incomes because they “know the system” better and have more valuable social capital. The statistical analysis shows, however, that the net value of being part of the Israeli-born Jewish majority has also been in decline. Furthermore, although it is difficult to predict how today’s young families will fare in the future, the trends of the last 15 years suggest a weakening of the tendency of relative earnings to rise as the parents enter their late thirties and early forties.

In the meantime, rising housing costs have made income erosion an even greater problem for young families headed by Israeli-born Jews. This is probably one reason for the rising percentage of young adults who continue to live with their parents and for the rapidly falling home ownership rate among young families. Surprisingly, the decline in home ownership has been especially significant among the more affluent young families. Between the first half of the 2000s and the last two years of the decade, the share of owner-occupiers among young households in the highest income quintile fell by 17 percentage points. At the same time, housing prices rose most steeply at the upscale end of the housing market. This may explain why concern about housing costs has been shared by relatively advantaged young families and individuals. These income and housing trends may also explain why so many younger middle- and

upper-middle-class individuals (and their parents) became involved in and expressed support for the social protests of 2011.

In almost every respect, young immigrants from the FSU are a striking exception to the trends reviewed thus far. In the labor market, members of this group – especially those with higher education – have increased their earning power after a low starting point. Increasingly, young adults born in the FSU have received their education in Israel. Others, who had arrived with a profession, experienced downward mobility in Israel but improved their language skills and integration into the local labor market. Consequently, while the relative earnings of all other groups of young people declined over the last fifteen years, the average hourly wages of young FSU immigrants rose dramatically among those with higher education (up by about 20 percentiles for both men and women) and moderately but still significantly among the less educated.

The entry of large numbers of highly trained young FSU immigrants into the labor market, largely into low-paying positions, almost certainly contributed to wage erosion among members of other population groups with whom they competed for jobs. Because they started so low in the wage hierarchy but faced fewer barriers to upward mobility than did their Arab and their Haredi counterparts, younger FSU immigrants have gradually moved toward converging with the earnings of non-Haredi Israeli-born Jews. Thus, although most of the decline in the relative wages of young workers is probably due to the gains of older Israelis, some of the erosion reflects the progress of young FSU immigrants.

The income of households headed by FSU immigrants started much higher on the national hierarchy than did their relative individual wages, but rose only modestly over time. This unique pattern is at least partly explained by the fact that immigrant households initially benefited from transfer payments earmarked for new immigrants. With respect to housing, the percentage of young FSU immigrants living with families of their own (spouse and children) is lower than that of non-Haredi Israeli-born Jews (33 percent and 39 percent in recent years, respectively). Home ownership is also lower among young FSU immigrants. The

growing numbers of FSU immigrants now living in central Israel (nearly half of all young immigrants) experience the greatest difficulties in buying a home, although the percentage of owner-occupiers has been rising steadily. Greater competition for housing has doubtless contributed to rising housing prices for all groups.

In conclusion, this study supports the view that the social protests of 2011 were motivated by a decline in the purchasing power and the relative economic attainments of young individuals and families in Israel. While wage and income erosion has generally been the most severe among Arabs and Haredi Jews, who are located at the very bottom of Israel's economic hierarchy, for social and political reasons both of these sectors were on the margins of the protest movement. The material basis for mass unrest lies in the economic challenges facing the younger generation of Israeli-born Jews, whose members had expected to take their place in the middle and upper-middle classes.

Appendix

Identifying Household Type in Income Surveys

Individuals in the survey were classified by type of living arrangement. Due to data limitations the classification was based on certain assumptions, changes in which would have altered the estimates. Definitional consistency over time nevertheless makes it possible to recognize key trends.

The following living arrangements were identified (which include those presented in Figure 14):

Married couple with children: Married individuals living in a household with children under 18.

Living with parents: Young person over 17 defined neither as head of household nor his/her spouse; at least 16 years between the “minimum age” (the lower of the ages of the head of household and the spouse) and the age of the youngest individual living in the household; head of household and spouse are married. (The definition included young people living in households headed by a single parent.)

Co-residents: Young person over 17; unmarried; no children in the household; no more than ten years between the oldest and youngest individuals in the household.

Married couple without children: Two married individuals living alone in household.

Unmarried couple without children: Co-residents; only two unmarried opposite-sex individuals live in the household.

Couple without children: Married or unmarried couple without children.

Shared accommodation: Co-residents, excluding cohabiting couples.

Single-parent household: Based on National Insurance Institute definitions.

Single-person household: Person living alone.

Other: All individuals not meeting any of the above definitions.

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Changes in Labor Force Survey Data and Their Meaning

Eran Yashiv*

Abstract

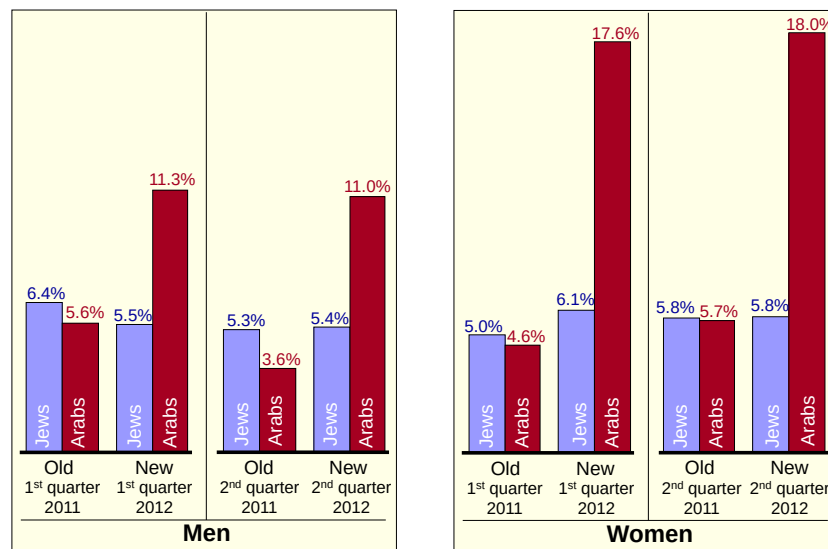
In 2012, the Central Bureau of Statistics began to conduct its labor force surveys in a new way: the central differences were major changes in the sampling and a move from a quarterly to a monthly survey. The change brought about some significant differences in the data. In particular, amongst Arab Israelis there was a dramatic jump in the unemployment rate; it was approximately two times greater in men and three times in women. Following this, the estimates of the unemployment rate in the overall population also rose. Labor force participation rates amongst all populations examined – men and women, Jews and Arabs – were higher than reported by the old survey method. It thus seems that there is a more serious problem of unemployment in the Arab sector than what was reflected by the old survey and it is important to give greater emphasis to steps to deal with this unemployment. At the same time, the picture of the labor force participation rates in Israel, an issue that is central to labor market problems, is somewhat better than it had been believed to be.

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In 2012, Israel's Central Bureau of Statistics adopted a new labor force survey format. The main changes were a considerable change in the survey's sampling frame and replacing quarterly with monthly surveys. These changes resulted in some significant differences in the data.

The following figures show data for four quarters: the first two quarters of 2011, based on the old format of the survey, and the first two quarters of 2012, based on the new format. The data are not seasonally adjusted. Figure 1 shows unemployment rates for men and for women; Figure 2 presents labor force participation rates among Israeli Jews and Arabs.¹

Figure 1
Unemployment rate
comparison between old and new surveys

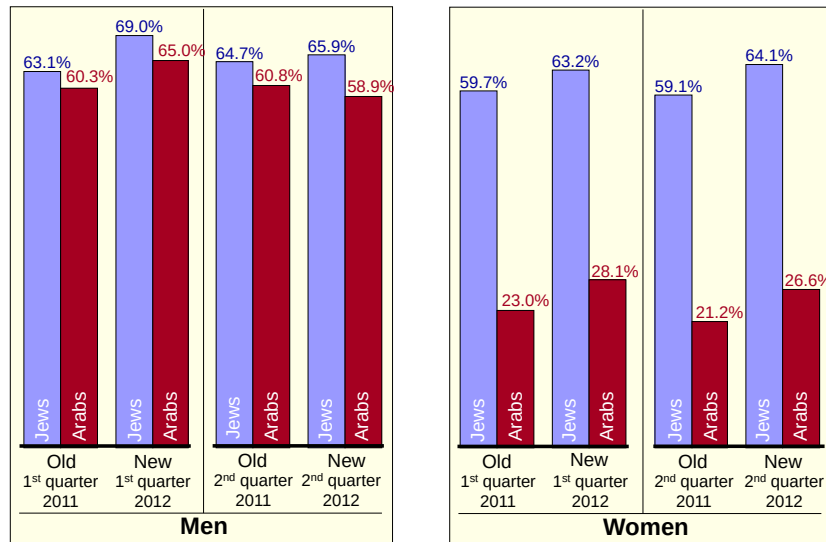


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

¹ The terms Arabs and Arab Israelis are used interchangeably to refer to the same population.

Figure 2
Labor force participation rates
 comparison between old and new surveys



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

The figures show the following:

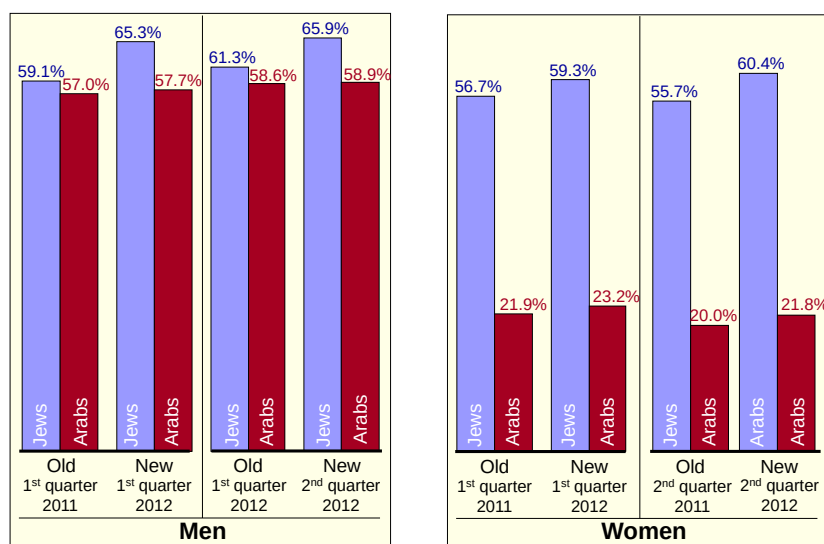
- Unemployment rates did not change significantly among Jews, male or female, between the old and the new survey. Among Arabs, on the other hand, there was a dramatic leap in the unemployment rate: an approximate doubling among men and tripling among women. As a result, the general unemployment rate for the total population increased as well.

- Labor force participation rates amongst all the populations surveyed – men and women, Jews and Arabs – are higher than what was seen in the old survey. In the first half of 2011, the participation rate ranged from 64-65 percent among Jewish men, and went up to 66-69 percent in the first half of 2012. In 2011, the participation rate of Arab men ranged from 60-61 percent, and went up in 2012, to 59-65 percent. For women, the labor participation rates for Jews were some 59-60 percent in 2011 according to the old survey and rose to 63-64 percent in 2012. For Arab women, the rate was 21-23 percent in 2011, while according to the new survey the rate was 28-29 percent in 2012.

What do these changes mean? Three things are clear:

- Unemployment rates among Arabs appear to be much higher than they seemed from the old survey. Likewise, according to the new survey, the share of Arabs in the total unemployed population is higher (approximately 30 percent) and the total unemployment rate is also higher than what was observed in the old survey.
- The labor force participation rate for the total Israeli population appears to have increased by about 4 percentage points over what was noted in the old survey. Nevertheless, the labor force participation gap between Jews and Arabs has remained largely unchanged.
- In the change from the old to the new survey, employment rates for Jews increased in tandem with the higher labor force participation and unchanged unemployment rates (Figure 3). Employment rates for Arabs remained largely unchanged, as higher unemployment rates were offset by higher labor force participation rates.

Figure 3
Employment rate
 comparison between old and new surveys



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

The current data have two key implications for government policy:

1. There is a bigger problem with unemployment in the Arab sector than what was reflected by the old survey method. Higher priority should therefore be given to measures to combat unemployment in this sector.
2. Labor force participation, long believed to be a major cause for concern in the Israeli labor market, seems to be better than previously thought (on the assumption that the new survey method is more reliable than the old one). Nevertheless, the improvement is not sufficient so as to obviate the significant steps needed in order to handle this important issue.

III. EDUCATION – GENERAL ISSUES

Trends in the Development of the Educational System

Nachum Blass*

Abstract

The analysis of the educational system's development in this chapter focuses on the demographic changes taking place within the system. The initial part of the chapter shows that while Haredi (ultra-Orthodox) and Arab Israeli shares of the pupil populations are growing, there appears to be a recent slowdown in this growth. An examination is conducted on how this trend is reflected in changes in the distribution of the preschool population. The second part of the chapter concentrates on the national expenditure on education. In recent years, there has been a large increase in education spending – although spending per pupil relative to GDP per capita has been falling further and further behind the OECD average. The final section deals with the expected impact of the Trajtenberg Commission's recommendations in the field of pre-primary education against the background of the latest developments in the budgetary realm and in relation to the OECD countries.

* Nachum Blass, Senior Researcher, Taub Center. I would like to thank Dalit Nachshon-Sharon for her comments and editing, and Yulia Cogan for preparing the graphs. In various parts of the research for this chapter I was assisted by the Taub Center researchers Sagit Azary-Viesel, Haim Bleikh and Kyrill Shraberman, and I am very grateful to them.

In the chapters on the educational system that appeared in the Center's recent *State of the Nation Reports* (Blass 2010 and 2011), special attention was devoted to the demographic developments, and in particular to the composition of the pupil population. Those chapters presented the distribution of pupils among the four main components of the educational system – State, State-religious, Arab Israeli¹, and Haredi – with reference to the various age levels and the trends over time. Against the backdrop of those reviews, this chapter will focus on expanding the discussion on the age composition of society in Israel as expressed by changes in the share of the younger age groups and by the trends of development among preschool children – changes and trends that give an indication of what may be expected regarding all children and all of Israeli society.

1. Prominent Demographic Trends Among Israel's Pupils

Demographic and Educational Development Among Youth (aged 0-19)

Composition by age. The share of the young population in society, the age compositions within the group and the attendance rates at each age, have a large influence on the state's educational system. The impact of demography on the functioning of educational systems in the world is no less important than that of other factors, such as ideology and tradition. Ostensibly, the smaller the share of the young among the population, the less of its resources society has to allocate to education. It may even be supposed that when the number of pupils in the educational system is shrinking, the number of teachers and number of classrooms should decrease accordingly. However, examination of the trend of decrease in

¹ The terms Arabs and Arab Israelis are used interchangeably to refer to the same population.

the relative share of the younger age groups in various countries shows that it is frequently accompanied by a trend of reduction in class size, an increase in expenditure per pupil, and a rise in teachers' wages. The main reason for this is that teachers' employment conditions are usually not flexible, and so there is a tendency to use general demographic processes that result in a reduction in the proportion of children in society in order to improve learning conditions and teachers' working conditions.

A closer look at the international picture reveals the existence of two patterns of development, with most countries distributed along a continuum between two poles: at one end are the developing countries, where natural growth rates are relatively high and the young constitute a large share of the population, while attendance rates and the level of educational services are low. At the other end are the established and wealthy countries where fertility rates are relatively low and the young constitute a small share of the population, while attendance rates and the level of educational services are high. In the daily reality of schools in developing countries, these trends are expressed by crowded classrooms and low levels of pay for workers in education, as opposed to small classrooms and appropriate levels of pay for teachers in developed countries.

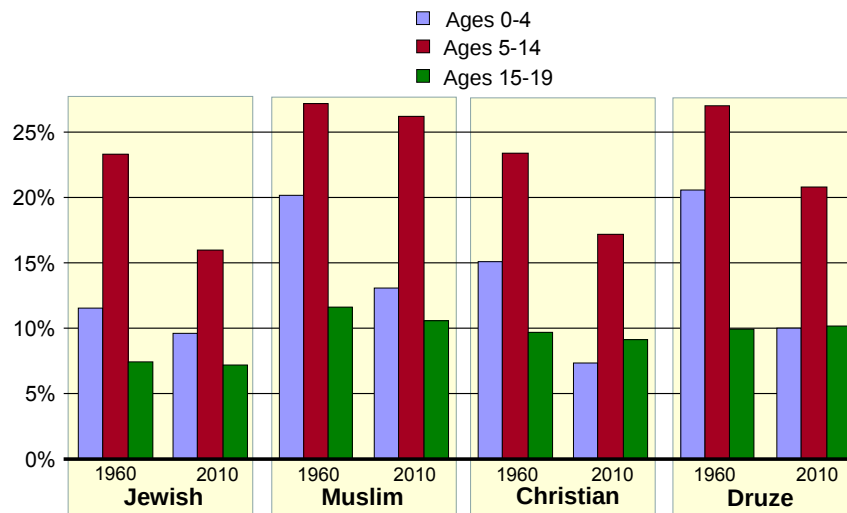
Israel is to some extent exceptional in this context. On one hand, the country has high fertility rates and a relatively low level of educational services (as evidenced by crowded classrooms and low teacher pay); on the other hand, attendance rates are very high, and the state's level of economic development is high. Another unique aspect of Israel is the absence of any link between the change in the fertility rate and classroom size. Since Israel's establishment, there has been a steady and consistent decline in fertility rates, accompanied by a decrease in the younger groups' share of the population. In many developed countries that achieved high attendance rates a long time ago, the reduction of the children's population of recent decades was accompanied by a drop in classroom size. In contrast, in Israel the decline in fertility rates was accompanied by a rapid rise in attendance rates, but by no significant

decrease in average classroom size. Neither did the teachers' relative pay change, mainly due to the size of the teaching labor force, and the tendency of their professional leadership to prefer the improvement of working conditions – primarily a reduction in actual teaching hours – over pay raises.²

The proportion of those aged 0-19 in Israel has been trending down since the 1960s, when it stood at 44 percent. By 1990 it had dropped to 40 percent, and the decline has continued also in recent years, when it fell below 36 percent (for more on this, see Appendix Table 1). The change occurred among all the population groups, to varying degrees. The change is particularly prominent among the Druze, where the share of young people has dropped by 16.5 percent since 1960; the decline during the same period was 14.6 percent among Christian Arabs, 12.8 percent among Muslim Arabs, and 9.4 percent among Jews (Figure 1).

² Teachers' level of pay in comparison to other professionals is a complex issue, especially with regard to pay per work-hour. The chapter will not go into that issue, but it should be noted that upon examination of the OECD *Education at a Glance*, 2010 data (Table D3.1), it is clear that teachers' pay in Israel is low, even when their work-hours per week and per year are taken into consideration.

Figure 1
Percentage of youth in the population
 as percent of age cohort, by religion, 1960 and 2010



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Regarding differences within the young age group: the decline is steepest among ages 5-14, whose share of all 0-19 year-olds fell from 23.6 percent in 1960 to 17.8 percent in 2010. This figure represents a drop at a rate of some 25 percent (only 5.8 percentage points) in four decades, as opposed to a decline at a rate of 18.5 percent (only 2.3 percentage points) in the share of ages 0-4, and a tenth of a percent rise in the share of ages 15-19 (Table 1).

Table 1. **Percentage of youth in the total population**
by religion, 1960 and 2010

		Percentage of youth in total population		
		0-4	5-14	15-19
Total (in thousands)				
Jews				
1960	1,911.3	11.5	23.2	7.4
2010	6,068.9	9.6	16.0	7.2
Muslims				
1960	166.3	20.2	27.2	11.6
2010	1,303.9	13.1	26.2	10.6
Christians				
1960	49.6	15.1	23.4	9.7
2010	122.6	7.3	17.2	9.1
Druze				
1960	23.3	20.6	27.0	9.9
2010	126.5	10.0	20.8	10.2
Total				
1960	2,150.4	12.4	23.6	7.8
2010	7,623.6	10.1	17.8	7.9

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Composition by sector. The differences between the various population sectors in the rate of fertility decline and relative contraction of the younger age groups finds expression in another dimension: a rise in the share of non-Jews (Arabs, Bedouin and Druze) among all children. Since 1960, the relative proportion of Arab Israeli pupils has risen from 17 percent to over 26 percent.

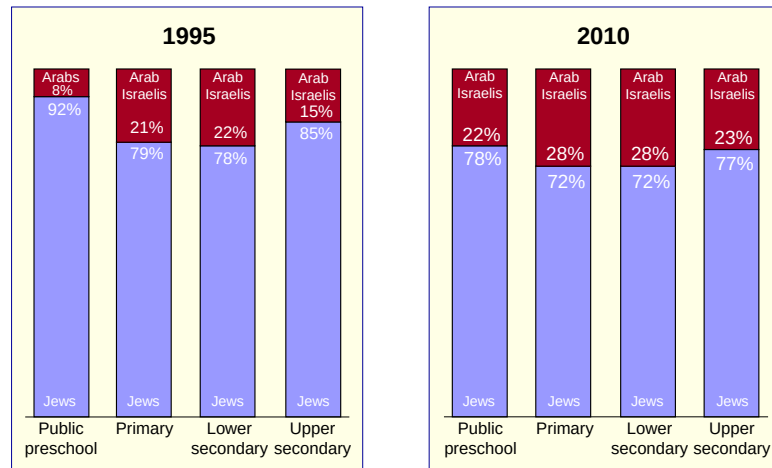
Three processes influence the distribution of pupils among the various sectors, some of them working in opposite directions: the first is the process of natural population growth; the second is changes in attendance rates; and the third is migration processes. The differences in natural growth rates and the rise in attendance rates contributed for the most part to the increase in Arab Israeli pupils' share of all pupils in Israel. Although these processes have slowed in recent years, due to the decline in natural growth rates among the Arab Israeli population and a parallel rise among the Jewish population, natural growth rates among the Arab Israeli population still remain generally higher. Nevertheless, whereas among the Jewish population attendance rates have more or less achieved their maximum level, among the Arab Israeli population the process of expansion is still occurring especially in pre-primary and secondary education.³

Migration has had a varying impact over the years, but its direction is consistent: strengthening the Jewish population's share. The impact was especially powerful in Israel's first two decades after the State's establishment and in the 1990s, with the arrival of the large wave of immigration from the former Soviet Union. A finding published in the past is also noteworthy: in the Arab sector there has also been migration with the integration of children from Judaea and Samaria (Blass and Douchan 2006).

The effect of the various patterns of natural growth and the difference in attendance rates are shown in Figure 2, which presents pupil composition by sector at the various educational levels. It is evident that the share of Arab Israeli pupils is rising, with the most prominent rise in preschool and in upper secondary school. The increase in attendance rates has augmented the impact of the difference in natural growth rates.

³ This is particularly apparent among preschool children, where the growth rate of the Jewish population in the past five years was higher than that of the Arab Israeli population (Blass, Bleikh, and Zaban 2012).

Figure 2
Distribution of Jewish and Arab Israeli pupils *
 as percent of each educational level, 1995 and 2010



* Jews grouped without religious classification; Arab Israelis include Druze, Bedouin and Circassian.

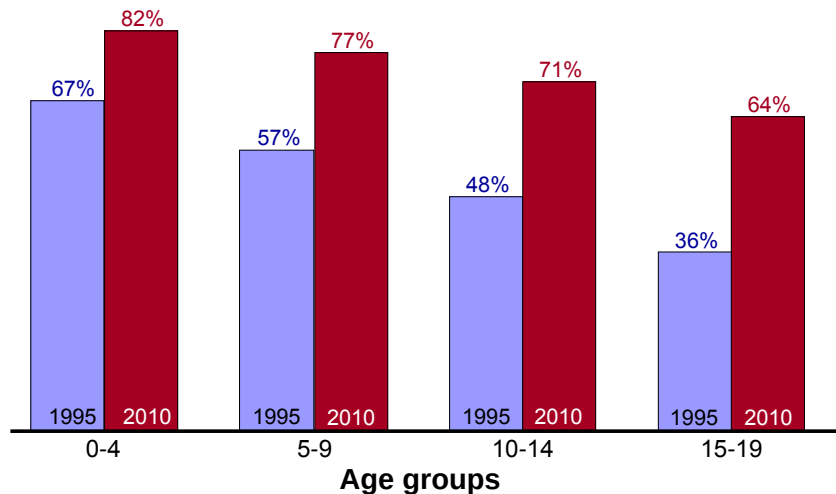
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, Appendix Table 1 in this chapter.

Composition by origin. The composition of the Jewish population by origin is of great importance in discussions of the achievements and difficulties of the Israeli educational system. One of the primary reasons put forward for the problems in the Israeli educational system – including Israeli pupils' low scores on international tests – is the high proportion of children who were not born in the country, whose mother tongue is not Hebrew, and who have a different culture at home. However, the weight of this argument seems to be diminishing. The data show that the rise in the share of second generation native-born Israelis is one of the most prominent demographic trends. Since 1995, the proportion of Jews born to an Israeli-born father among those aged 0-4 rose from 67 to 82 percent,

and among those aged 15-19 from 36 to 64 percent (Figure 3). This means that in 2010 the decisive majority of Jewish children in Israel were of Israeli-born parents (at least the father).

Figure 3
Jewish children of Israeli-born father
by age group, 1995 and 2010



Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

In this context Table 2 is interesting since it shows how Israel compares to OECD countries with high percentages of pupils who were not Israeli-born or whose parents were not native-born. Israel is among the countries with a relatively high percentage of immigrant pupils, or pupils whose parents are immigrants; unlike other countries, though, the achievements of native-born pupils whose parents are not native-born are

higher than those of pupils whose parents are native-born.⁴ Likewise, it is hard to distinguish a clear pattern in the link between length of time in the current country and achievements.

A recently published article (Cobb-Clark, Sinning and Stillman 2011) examined the effect of migration on the achievements of first-generation and second-generation migrants. Unsurprisingly, the researchers reached the conclusions that the institutional arrangements in each country have a not inconsiderable impact on migration, that the effect of migration persists also among the second generation of migrants, and that the language migrants speak at home (different from or identical to the language of the country to which they migrated) also influences achievements – migrants who spoke the country's language at home scored higher achievements, and vice versa.

⁴ Almost certainly the reason for this is that the OECD data regarding native-born Israelis include the Arab Israeli population, whose achievements are lower on average, and a large proportion of immigrant pupils or their parents were born in the former Soviet Union, where the Jewish population had a long tradition of investing in education.

Table 2. **Achievements in reading on the PISA examinations for pupils in selected countries**
by country of origin, 2009*

	Native-born				Immigrants	
	Native-born parents		Immigrant parents			
	Percent of pupils	Test score	Percent of pupils	Test score	Percent of pupils	Test score
Luxembourg	59.8	495	24.0	439	16.3	448
New Zealand	75.3	526	8.0	498	16.7	520
Canada	75.6	528	13.7	522	10.7	520
Switzerland	76.5	513	15.1	471	8.4	455
Australia	76.8	515	12.1	530	11.1	518
Israel	80.3	480	12.6	487	7.1	462
US	80.5	506	13.0	483	6.4	485
Germany	82.4	511	11.7	457	5.9	450
Austria	84.8	482	10.5	427	4.8	384
Belgium	85.2	519	7.8	454	6.9	448
France	86.9	505	10.0	449	3.2	428
Russia	87.9	464	7.2	435	4.9	444
Netherlands	87.9	515	8.9	469	3.2	471
Sweden	88.3	507	8.0	454	3.7	416
England	89.4	499	5.8	492	4.8	458
OECD average	89.6	499	6.0	467	4.6	448

* Numbers are rounded.

Source: OECD, *Education at a Glance*, 2010.

Composition by level of religious observance. The differences in various demographic traits within the Jewish sector, especially the difference in fertility rates and the number of children per family, also impact the composition of the education system. These differences are well reflected in the changes in the composition of pupils according to the educational stream of attendance, which differ primarily in terms of their level of religious observance.⁵

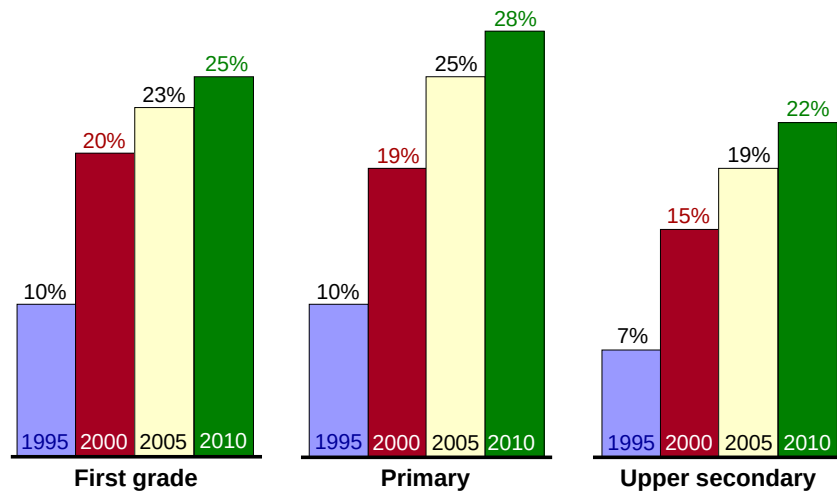
Over the years, Haredi education's share of Jewish education has expanded considerably, and the expansion has slowed only in the past two to three years. This process stems first and foremost from the natural growth rates of the Haredi population relative to the secular population, and is notable even in comparison to the national-religious population – as has already been noted in the past (see, for example, Blass 2007).

Only a negligible portion of this development can be attributed to pupil transfers between the different types of school supervisory authorities.⁶ Figure 4 depicts the change in the share of Haredi education pupils out of all pupils in Jewish education between the years 1995 and 2010.

⁵ In the Jewish educational sector it is easy to follow these changes because of the anchoring of the separation between religious streams in the organizational structure of the education system. In Arab Israeli education the decisive majority of schools are included in state education, but there, too, has been an expansion of religious frameworks among the Muslims and a preference for Church schools among the Christians.

⁶ The question regarding the transfer of pupils between the various educational frameworks has been studied in the past, and it was found that generally the parents' choice of a certain kind of educational framework was stable and unchanging over time (Blass and Douchan 2006).

Figure 4
Percentage of children in Haredi education
 out of all Jewish pupils, 1995-2010



Source: Taub Center for Social Policy Studies in Israel.

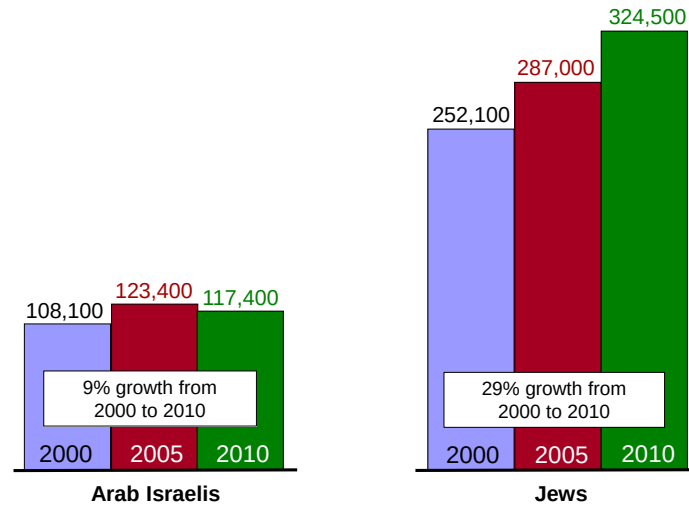
Data: Central Bureau of Statistics.

Demographics in Preschools as an Indicator of the General Trend⁷

Figure 5 presents the increase in the number of children in the Jewish and Arab Israeli sectors, respectively, for ages 3-5. As can be seen, during these years most of the children in the age levels examined were Jewish, and this is also the population that grew at the highest rate over the decade (29 percent, as opposed to 9 percent among the Arab Israelis).

⁷ This section is based on Blass, Bleikh, and Zaban (2012), Chapter 3.

Figure 5
Number of children aged 3-5
 by sector*, 2000, 2005 and 2010



* Jews grouped without religious classification; Arab Israelis include Druze, Bedouin and Circassian.

Source: Taub Center for Social Policy Studies in Israel.

Data: Blass, Bleikh, and Zaban (2012).

The most prominent characteristic of this development is the difference in the growth rates of the yearly cohorts between the two halves of the decade (Appendix Table 3). In the first half of the decade, growth was positive among Jews and Arab Israelis alike, with a larger increase in ages 3-4 among Arab Israelis than among Jews and the reverse for age 5. In the second half of the decade an interesting change occurred. Among Jews the growth rates of yearly cohorts rose as opposed to the first half of the decade, whereas among the Arab Israelis the trend was reversed, and in the second half there was a decline in the size of the yearly cohorts.

Against the background of the changes in the number of children in each cohort, it is interesting to examine the development of attendance rates in preschools.⁸ As Figure 6 shows, 85 percent of Jewish children aged 3-5 attended preschool in the year 2000. This figure barely changed over the course of the decade, and stood at 84 percent in 2010. Among Arab Israeli children, on the other hand, there was a significant rise over the course of the decade and in 2000, only 49 percent of them attended preschool. In the course of the decade there was an increase of 22 percentage points and the rate reached 71 percent in 2010. The explanation for the discrepancy lies in the process of implementation of the Compulsory Education Law for ages 3-4. Already in the first half of the decade, the Arab sector was given priority in the implementation of the law, since the Arab Israeli settlements belong to the lowest socioeconomic clusters (Clusters 1-2) which were the first to enter the framework of the law.

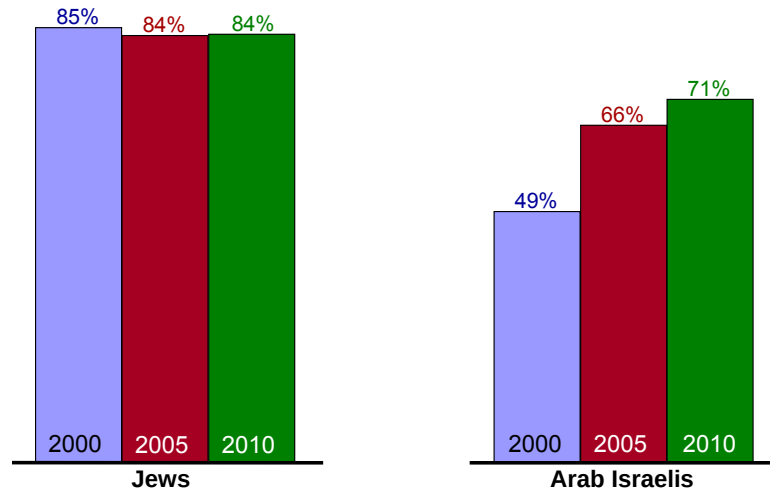
The changes in attendance rates in the different sectors also find expression in Arab Israeli pupils' relative share of the entire pupil population in public preschools, which rose from 17 percent to almost 22 percent (see Appendix 1).

As for the Jewish sector, the data point to stability in the attendance rates in each of the yearly age cohorts, with the rates rising with age, and approaching maximum among four- year-olds and reaching it among five-year-olds.

⁸ It is important to emphasize that the figures for preschool attendance are based on Ministry of Education data and do not include children in private preschools.

Figure 6

Percentage of 3-5 year-olds in preschool
out of total in age group, by sector, 2000, 2005 and 2010



Source: Taub Center for Social Policy Studies in Israel.

Data: Blass, Bleikh, and Zaban (2012).

In summary, the rate of increase in the number of preschool age children in the last five years was higher in the Jewish sector than in the Arab Israeli sector, mainly due to changes in fertility rates (a drop among Arab Israelis and a rise among Jews). Nevertheless, the rate of increase in attendance rates in preschools was more accelerated in the Arab sector, due to increased awareness of the importance of early childhood education and the implementation of the Compulsory Education Law for ages 3-4 among this population. In the Jewish sector, attendance rates remained stable for the 3-5 age cohorts, whereas in the Arab sector attendance rates rose significantly during this decade, especially in the years 2000-2005. As a result of the two processes combined, Arab Israeli

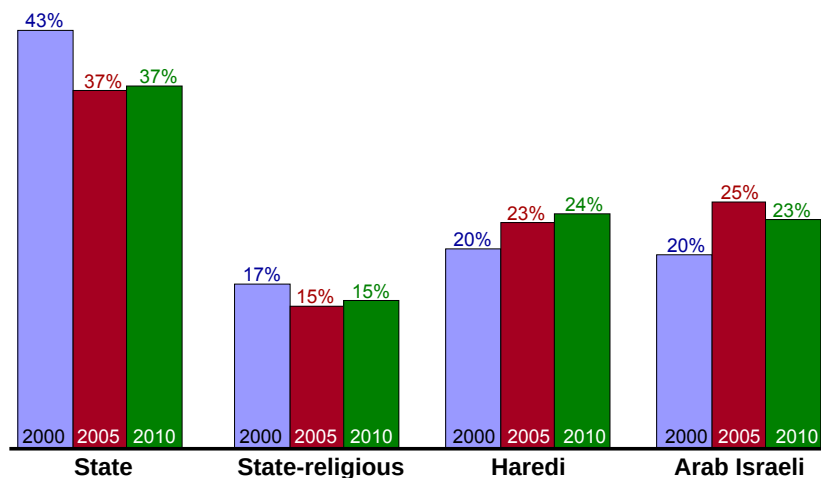
pupils' share of all preschool pupils rose, approaching their share in the general population, even though their share of the entire population of children declined.

Distribution of Children in Preschools by Sector and Type of School Supervisory Authority

As has been discussed, the changes in the general attendance rates in the preschools were different in the Jewish and Arab sectors; but even within the Jewish sector itself they were not uniform. As Figure 7 shows, pupils in the Haredi education system saw their share of all preschool pupils rise, while the share of pupils in the State education system, especially State-secular education, fell steeply. Here, too, there is a significant difference between the two periods. In the first five years (2000-2005), the share of pupils in Haredi education grew faster than in the following five years (2005-2010).

Figure 7

Distribution of 3-5 year-olds in preschool*
in the Jewish and Arab Israeli schools, 2000, 2005 and 2010



* The total number of 3-5 year-olds in preschool equals 100 percent.

Source: Taub Center for Social Policy Studies in Israel.

Data: Blass, Bleikh, and Zaban (2012).

Due to the absence of data on religious affiliation at birth, differences in attendance rates between the various population groups cannot be examined. It is assumed that the significant expansion of Haredi education is explained mainly by natural growth. However, some believe – as voiced sometimes in the public debate – that Haredi education is expanding not only due to natural growth and a rise in attendance rates, but also due to the transfer of children from State and State-religious education to Haredi education. This claim has been made in the past in regard to primary and secondary education, but has been refuted by a Taub Center study (Blass and Douchan 2006).

As is the case in primary and secondary education, the rates of transfer between the types of supervisory frameworks are negligible also at preschool age; if anything, they tend to be in the opposite direction, i.e., the transfer of children from Haredi education to the State and State-religious frameworks. Table 3 shows clearly that between 2009 and 2010, for example, 1,407 pupils moved from State-religious and Haredi education to State education – more than transferred from State education to State-religious and Haredi education. Haredi education lost 1,647 pupils to the other educational streams.

Table 3. **Preschool pupil transfers between school supervisory authorities**
the difference between the number of pupils joining and the number leaving

Year	State	State-religious	Haredi
2000-2001	1,106	-98	-1,008
2004-2005	1,423	-484	-939
2009-2010	1,407	240	-1,647

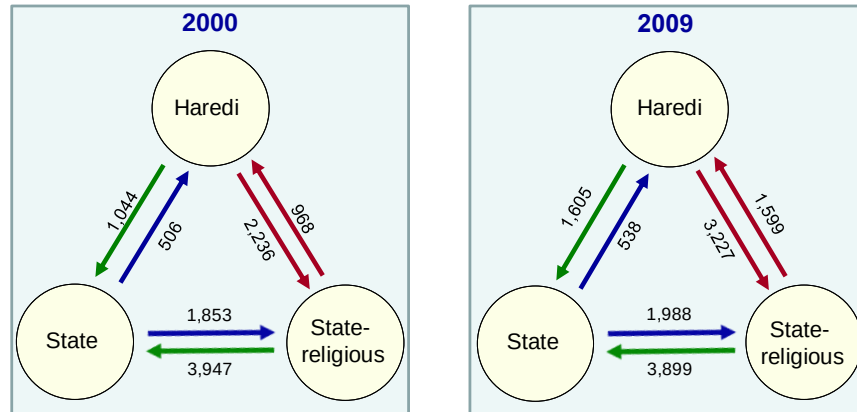
Source: Taub Center for Social Policy Studies in Israel.

Data: Blass, Bleikh, and Zaban (2012).

Another viewpoint is seen by the examination of pupil transfers between educational levels, that is, from kindergarten to first grade. As it turns out, the picture here is no different. Of all children in kindergarten who advanced to the first grade, 89 percent continued in the same educational stream, and that figure remained stable over the course of the entire decade. Here, too, if there are transfers, the results show more transfers from the Haredi sector to State and State-religious education than the other way around.

Figure 8 presents the transfers between the various educational streams in Hebrew education in the years 2000 and 2009. In each of these years, the number of pupils who moved from the State-religious and Haredi networks to State education was larger than the number of those moving in the opposite direction. In 2009, for example, 1,605 pupils moved from Haredi to State education, whereas only 538 pupils transferred from State schools to Haredi education. Therefore, in light of the fact that attendance rates in preschools in the Jewish sector were high and did not change much over the period under review, the rise in the number of preschool children in the Haredi sector and their share of the general population can be attributed mainly to the differences in fertility rates between them and the secular and traditional populations.

Figure 8
**Pupil transfers between supervising authorities
 in the move from kindergarten to first grade**
 number of pupils who transferred, 2000 and 2009



Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Education.

The Haredi sector itself is not a unitary whole. There are three subgroups within it for which data are available: *The Independent education*, *Ma'ayan Hachinuch Hatorani* [Hebrew: Fount of Biblical Education], and *other recognized institutions*, as well as one subgroup for which data could not be obtained — the *exempted institutions*.⁹ At the school level, as published in past Taub Center *State of the Nation Reports* (Blass 2010), 43 percent of the pupils turn to Independent education, 25 percent to the exempted institutions, and the remainder is divided between *Ma'ayan Hachinuch Hatorani* (16 percent) and institutions in the category of “recognized others.”

⁹ For more details, see Appendix 2.

In the preschools the division is completely different: most of the children are sent to the recognized preschools, and only a minority attend the preschools of the Independent education network and those of *Ma'ayan Hachinuch Hatorani*. Furthermore, the share of the Haredi preschools that do not belong to the large Haredi educational networks and the number of children attending them are rapidly rising, while the share of preschools that belong to these networks is diminishing. The data may point to real trends in the preferences of the Haredi population, but possibly they also indicate an adaptation to an organizational-budgetary reality that is not clear to an outsider, and it is that which impels those turning to the religious frameworks to prefer preschools that do not belong to the large networks.

The Arab sector is also fragmented, and there are three subdivisions within it: one by nationality (Arab, Bedouin or Druze – the number of Circassians is too small to allow for comparing them to others), a second by legal status (official or recognized¹⁰), and a third by religion (Muslim or Christian). The relative changes by nationality in the Arab sector have been reviewed in another publication of the Center (*Pre-Primary Education in Israel* 2012). The data point to an increase in the number of Arab Israeli pupils (including Bedouin and Druze) attending preschool, especially in the first half of the decade. This growth occurred mainly among the Bedouins and to a lesser extent among Arabs, although it did not include the Druze (with the exception of three-year-olds in the decade's first half).¹¹

One of the trends that has not received much attention in the media or from Jewish educators is the move by growing portions of the Arab sector to recognized education. Figure 9 shows that the phenomenon is also evident in the preschools. Over the course of the last decade there

¹⁰ See more details regarding the internal differentiations within the Israeli educational system in Appendix 2.

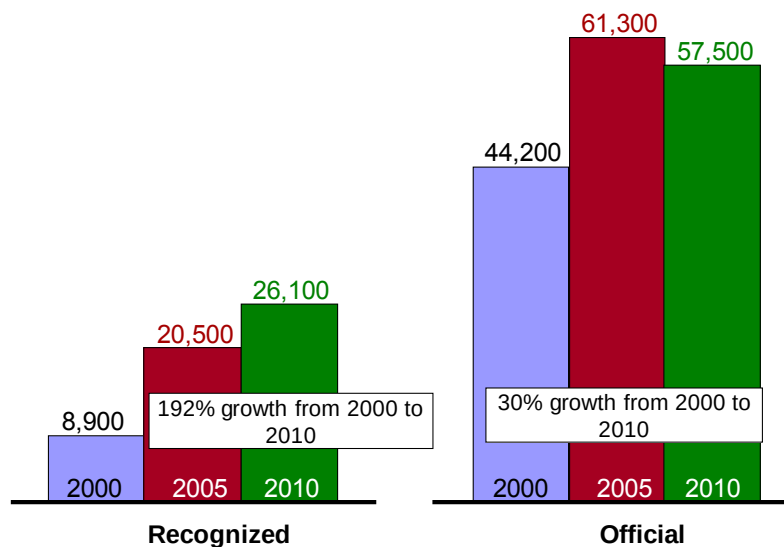
¹¹ The study does not differentiate between Muslim and Christian preschools, because there is no such distinction in the educational system.

was a change in the distribution of Arab Israeli pupils between institutions defined as official and the recognized ones. In the first half of the decade, 2000-2005, the growth in the number of children in recognized preschools was impressive: 173 percent among three-year-olds and 123 percent among four-year-olds. Afterwards, there was a significant moderation in the growth of the number of pupils in the recognized preschools. These data conform to the trend in primary and secondary education that was noted in the previous annual reviews (Blass 2009; Blass 2010): an intensifying trend towards private education in the Arab sector.

Figure 9

3-5 year-olds in preschool

Arab sector, by legal status of school, in thousands



Source: Taub Center for Social Policy Studies in Israel.

Data: Blass, Bleikh, and Zaban (2012).

The reason for the shift to recognized preschools may be the lower tuition fees that stem from a lower level of services (see Zaban 2012), but there may be other reasons as well. In any event, it is important to point out this line of development, which is parallel to developments in primary and secondary education, because it may have consequences at levels far beyond the field of education where dissatisfaction with the services provided by the official state educational network finds expression in a move to preschools operated by Muslim or Christian religious elements.

2. Expenditure on Early Childhood Education and Private Preschools¹²

The debates on educational topics in the wake of the social protest drew attention to early childhood education in general, and to the question of high fees at preschools in particular.¹³ According to the *Statistical Abstract of Israel*, some 26,000 two-year-olds, constituting one-sixth of the age cohort, attended private preschools in 2010, as opposed to one-tenth of the cohort in 2000.¹⁴ The corresponding data for ages three and four are 15,000 and 2,000 children, respectively. Apparently, the remaining children who do not attend public preschools are in some type of home arrangement, with nannies, in pre-nursery homecare, etc. – in other words, in frameworks that do not report to the Central Bureau of Statistics.¹⁵ In all age groups, a decisive majority of private preschool

¹² The section on private preschools in this chapter was written together with Kyrill Shraberman, researcher at the Taub Center.

¹³ In contradistinction to the previous sections, the discussion on private preschools is based on data from the Central Bureau of Statistics, not those of the Ministry of Education.

¹⁴ *Statistical Abstract of Israel*, No. 62, Table 8.4.

¹⁵ According to the data submitted by the Ministry of Industry, Trade and Labor to the Trajtenberg Committee, about 100,000 children aged 0-3 are in

pupils are Jewish – understandably so, in light of the higher income levels and the greater availability of preschools.

Attendance at private preschools falls with the rise in age. It is especially evident in significant differences in attendance between ages 2-3 (most of whom are not covered by the Compulsory Education Law) and ages 4-5.

Expenditures on Early Childhood Education

The expenditures per pupils aged 3-4 in a public preschool range from very low for those attending preschools included in the framework of the Compulsory Education Law up to around NIS 900 per month for children attending public preschools and paying tuition fees (some of the latter according to a sliding scale determined by the parents' income level).

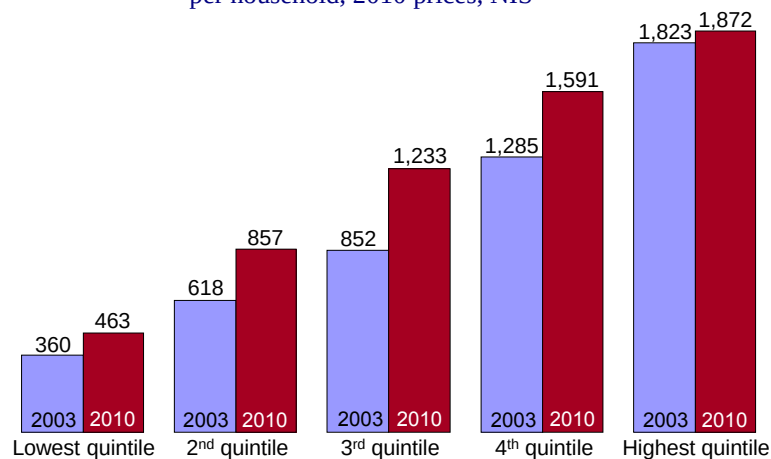
Before presenting the data on household expenditure for early childhood education, it is important to clarify their statistical significance. The proportion of households with children aged 0-3 that reported positive expenditure (that is, greater than 0) on early childhood education was around 61 percent of all households with children in this age range, and differed greatly by socioeconomic variables. In cases where the household had a child of the relevant age but did not report any expenditure on early childhood education, the data available to the public at large does not allow the determination as to whether the child is sent to a framework and whether there was an expenditure, or whether there was some other reason for non-reporting of the expenditure. Therefore, the data that are presented in this section were calculated on the basis of the reported expenditure only. If the calculations included the households that did not report such an expenditure, assuming that they did not have this expense, then the estimates reported for average expenditure per child would be lower still, due to the inclusion of the zero expense. Thus,

supervised frameworks, and another 125,000 are in unsupervised private frameworks.

these data should be seen as estimates of the highest possible expenditure per child aged 0-3 in an early childhood education framework.

Figure 10 shows the average expenditure on education per child at ages 0-3 (irrespective of the issue of the preschool's ownership, whether public or private) in the years 2003 and 2010, by quintiles of net household monetary income per standardized person. As expected, spending on pre-primary education rises with the rise in household income, and there was an increase over time, as well.

Figure 10
Average expenditure on preschool education*
per household, 2010 prices, NIS



* Private preschools, day care, pre-compulsory kindergartens, Haredi *heder* (ages 2-5).

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

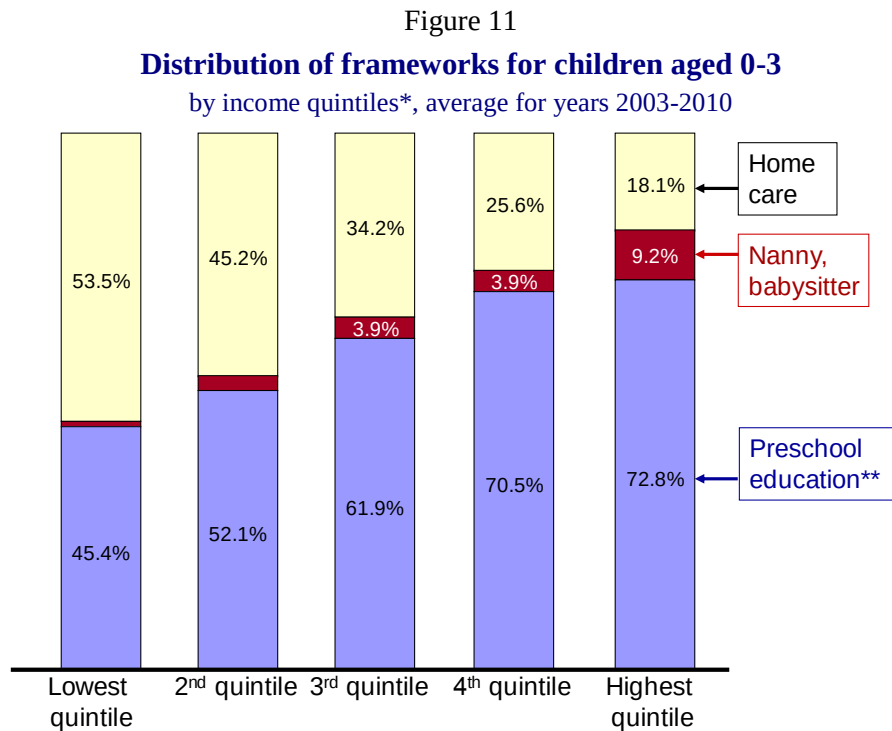
Two more things can be seen in the figure:

- A. The average household expenditure on early childhood education is significantly lower than the NIS 2,000 and even NIS 3,000 per child spoken of in the public debate. As can be clearly seen, even in the top quintile the average expenditure does not reach such sums (although this does not include afternoon care).¹⁶
- B. Between the years 2003-2010, the average expenditure on early childhood education rose much faster among parents from the lower quintiles than among parents from the higher quintiles (in percentage terms).

Figure 11 depicts the distribution of children in the various frameworks for young children by quintiles of parents' income.¹⁷ It presents the types of solutions for care of families at different income levels. As it turns out, the higher the income level, the more use is made of daycare services, or of a nanny at home, and the less use is made of internal domestic arrangements. Although these data do not prove that everyone who sends a child to daycare or employs a nanny works outside the home, or that everyone who cares for a child at home does not work outside the home, it may nevertheless be assumed that there is a high degree of correlation between the economic possibility of sending a child to daycare and the desire to work outside the home.

¹⁶ The Trajtenberg Committee reports an estimate of NIS 1,800-3,500 per child for daycare expenses (Trajtenberg Committee Report 2011).

¹⁷ The figure is based on data from the *Household Expenditure Surveys* of the Central Bureau of Statistics. The population examined is households with children aged 0-3. Inclusion in the framework is based on reported positive expenditure in that category. If there is no reported expenditure, that household is placed in the category of "at home." However, the levels of reporting on expenditures on preschools, out of the households with children of the relevant ages, are lacking, due to problems in the coordination of the timing of payments to the frameworks and the survey/filling out of the form.



* Quintiles by net monetary income per standard person.

** Private preschools, day care, pre-compulsory kindergartens, Haredi *heder* (ages 2-5).

Source: Taub Center for Social Policy Studies in Israel.

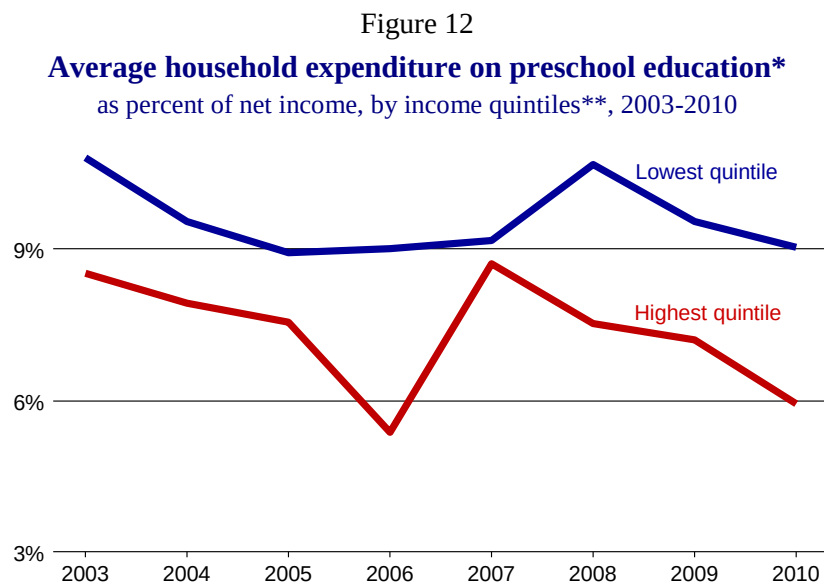
Data: Central Bureau of Statistics.

Beyond the somewhat self-evident fact that in absolute terms families with high income spend more on their children's education than families with low income, it is interesting to examine the relative burden of the child's education to the family as expressed by the share of the expenditures on the education of children aged 0-3 out of the household's total net financial income (hereinafter: relative expenditure).

Figure 12 shows several trends:

A. Considering that average net income in the top quintile is six times higher than in the lowest quintile, the gap between the highest and lowest quintiles in the relative burden apparently is not large (at most 3.1 percent in 2006, and on average 2.5 percent).

B. However, despite the similarity in spending on pre-primary education as a share of total income, an expenditure of NIS 463 for a family in the lowest quintile represents a much heavier burden than does NIS 1,872 for a family in the higher quintiles.



* Private preschools, day care, pre-compulsory kindergartens, Haredi *heder* (ages 2-5).

** Quintiles by net monetary income per standard person.

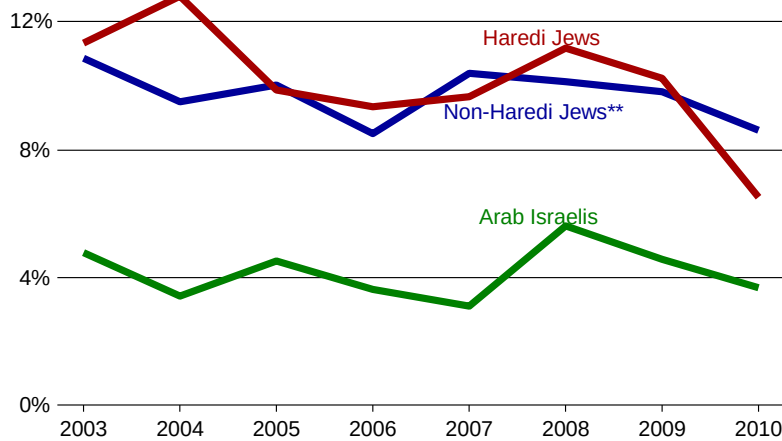
Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Most of the population in the lower quintiles belongs to the Haredi sector and to the Arab sector. Thus, in order to compare by sector, the relative expenditure on education in the lowest quintile divided by sector was examined (Figure 13). The burden of spending for early childhood education among Arab Israeli households in the lowest quintile relative to income is as much as 2.5 times lower than in the Jewish and the Haredi sectors.

Figure 13

Average household expenditure on preschool education*
as percent of net income, by sector, 2003-2010



* Private preschools, day care, pre-compulsory kindergartens, Haredi *heder* (ages 2-5).

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Since all of the households examined belong to the same quintile, this difference cannot stem from income level. The explanation, therefore, must be sought in one of several possibilities or a combination of them:

- A. Due to a lack of awareness of the importance of early childhood education, the Arab Israeli population is less inclined to invest in it.
- B. There is a greater possibility of enlisting family assistance in childcare because many of the women do not work and the families are larger.
- C. There is a lack of preschools in the vicinity of their homes.

The fact that there was such a rapid rise in the attendance rate among ages 3-4 in the Arab sector after the implementation of the Compulsory Education Law for these ages would seem to indicate that all three explanations are reasonable, but the third and last carries crucial weight.

3. Allocation of Resources to Education as an Expression of Commitment and of Its Importance

The national and government commitment to educating the younger generation can be examined in several ways. One way is to compare the level of expenditure over time, and to look at its various components (public spending, government spending, and private household spending) and the changes in their relative shares. Another is to compare the level and various measures of expenditure on education in Israel relative to other countries, especially those that Israel aspires to resemble.

Comparison of Expenditures over Time

The national allocation for education includes the government budgets, those of the local authorities, non-profit organizations and various associations, and household budgets. Table 4 clearly indicates that the

rate of national expenditure on education as a share of GDP has been slowly but steadily dropping since 1995. The share of current expenses on education as a percentage of public and private spending is also in decline. In the government sector's share of public spending on education there were fluctuations. After a period of stability between 1995 and 2000, there was a drop between 2000 and 2005, but afterwards a significant rise until 2010. This measure points to an improvement in education's standing in the past five years – after years of stability and even decline.

Table 4. **National and public expenditure on education***

	National expenditure on education (as percent of GDP)	Current expenditure on education** (as percent of private and public consumption)	Government sector portion (as percent of national expenditure on education)	Ministry of Education budget (as percent of government budget)
1995	8.8	9.6	78	9.0
2000	8.5	9.8	79	9.5
2005	8.3	9.6	76	9.9
2010	8.2	9.3	80	10.1

* Central Bureau of Statistics, Press Release from August 8, 2011.

** Not including construction and development.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

It is customary to see the rise in the share of household spending on education (or, the reduction in the government sector's share) as evidence of increasing inequality in education. This is not the only interpretation, though, since a growth in the number of individuals participating in expenditures stems also from new populations joining the circle of participants in the educational process. Therefore, even when joining is accomplished through private financing, in certain cases it may indicate a reduction of gaps in access to education, rather than their expansion. For example, the rise in the number of Arab Israeli pupils and residents of the periphery in post-secondary academic institutions, some of which are private, as well as the rise in the number of 3-4 year olds attending preschool, contributed significantly to the increase in the household share of the national expenditure on education, while it also increased access to and rates of participation in higher and in early childhood education.

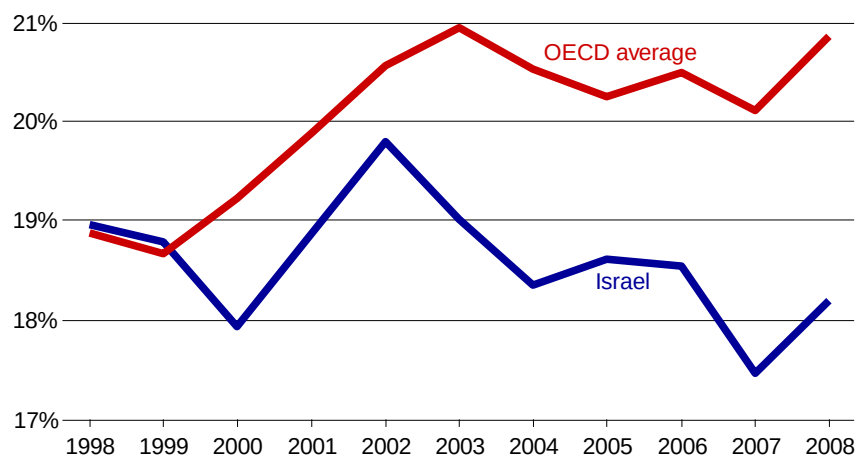
Table 4 also points to an increase in the share of the sum allocated for education out of the state budget over the years which may indicate a rise in the field's importance. Nevertheless, this development may not necessarily point to growth in the education budgets, but simply indicate that budgetary cuts have been less damaging to education than to other fields.

International Comparison of Education Expenditures: Israel Relative to the OECD Countries

A comparison to other countries, especially the OECD countries, provides another important perspective on Israeli society's attitude towards education. When expenditure per pupil in PPP (purchasing power parity) terms divided by GDP per person is examined, it is found that spending in Israel was generally similar in level to spending in the OECD countries in 1998. Nonetheless, there is a significant difference in developmental trends from the beginning of the decade (2000) to 2008.

Figure 14¹⁸ shows that there was a similarity between Israel and the OECD in expenditure per pupil as a percentage of GDP per capita in the second half of the 1990s, but since then, spending in Israel has been decreasing, whereas in the OECD countries the trend is in the opposite direction. Generally, except for a very brief period, the rate of expenditure per pupil as a share of GDP per person in Israel during the period in question was lower. Furthermore, the decline in the first half of the decade (2000-2005) was steeper, while the renewed growth in the second half of the period was slower.¹⁹

Figure 14
Public expenditure per pupil in Israel and the OECD
as percent of GDP per capita, 1998-2008



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

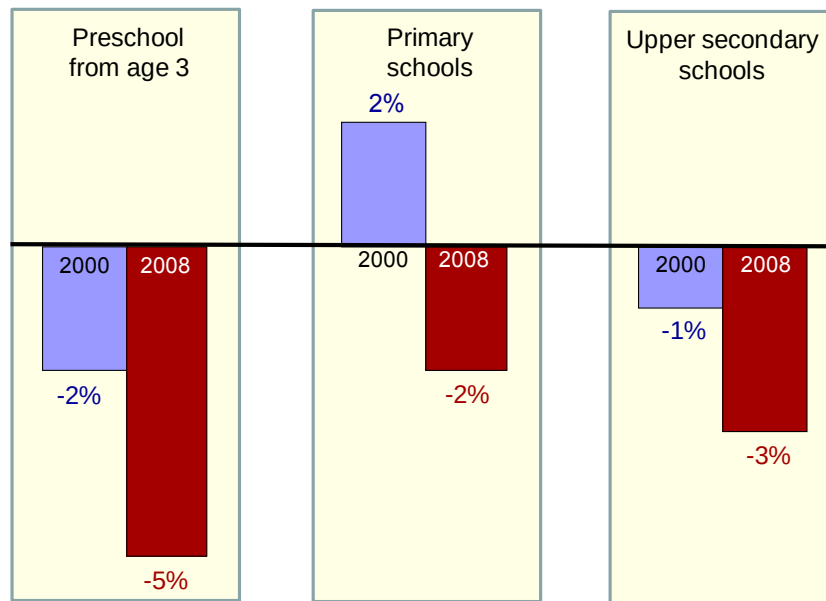
¹⁸ The data for the preparation of this graph were processed and collected by Sagit Azary-Viesel.

¹⁹ This trend might be reversed in 2009-2012 due to large increases in education budgets in Israel and the recession in OECD countries. These are the latest figures that could be obtained for the OECD countries.

A similar picture arises from Figure 15, which depicts the development during the same period by educational levels. As can be seen, by this measure, too, the rate of public spending on education in Israel relative to GDP declined over the period. In contrast, in the OECD countries the process was reversed (see footnote 18).

Figure 15

Difference in per pupil expenditure between Israel and the OECD
as percent of GDP per capita, 2000 and 2008



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD, *Education at a Glance* 2010.

4. Budgetary Impacts of Adopting the Trajtenberg Committee's Recommendations in the Field of Education: Costs and Possibilities

It was recently decided to adopt the Trajtenberg Committee's recommendations in the field of education. The Committee chose to focus on ages 0-9 in its recommendations, which were primarily intended to ease the financial burden for young working families with children. This does not mean that these proposals might not make a significant contribution to improving the children's education, but that was not their main goal, and it is quite probable that more important educational goals might have been achieved with the same budgets.

On January 8, 2012, the government approved the implementation of the recommendations in the chapter on education in the Trajtenberg Committee's Report. The central recommendation was to immediately complete the long delayed implementation of extending the Compulsory Education Law to ages 3-4 – which received overwhelming public support. There is no doubt that implementing the Committee's recommendations would bring down educational costs for some families. The question is whether this change will also contribute to decreasing the existing inequality. In other words, it might be better to spend the large sums that will be required to implement this decision on other areas that could achieve better results both in terms of educational and social goals.

As noted, the Trajtenberg Committee's recommendations refer to ages 0-9 – a range that includes three different age groups in terms of the state's commitment to education: ages 0-2, towards whom the state currently has no budgetary-educational commitment, but provides assistance in financing educational frameworks to some of the population (particularly working women, whose wages are low, and families in the care of the welfare services); ages 3-4, towards whom the Compulsory Education Law has been extended but only partially implemented in recent years; and ages 5-9, who are included under the Compulsory Education Law.

Subsidizing education for ages 0-3. The 0-3 year age group includes 470,000 children, about 100,000 of them in frameworks supervised and subsidized by the state, and another 100,000 in private and unsupervised frameworks. According to the data presented to the Trajtenberg Committee (which are not always validated by the data from the Central Bureau of Statistics, *Household Expenditure Survey*, see Section 2 of this chapter), the subsidized frameworks charge fees in the range of NIS 2,000 a month per toddler and NIS 1,500 per infant. The highest subsidy level to low-income families is about NIS 1,250; households with an income of NIS 5,000 per person or more receive no subsidy at all. Tuition fees at daycares and private nurseries may be higher in economically well-established areas than in weaker ones, but there is no reliable information regarding these differences.

In this context, the Trajtenberg Committee recommended several courses of action:

The construction of new daycares for 30,000 children in the next five years. It is clear that this move will only slightly alleviate the shortage of daycares, but since at this stage there are no agreed upon construction standards, it is unclear how many daycares will have to be built and what their construction will cost. The Committee allocated NIS 1 billion to this item.

Assistance with the cost of adapting to code. About 200,000 children attend public and private daycares, and an unknown number of others attend other types of preschools. However, it is not known how many of the daycares meet code. The Committee allocated NIS 700 million to this item..

Subsidized fees at daycares. Full implementation of the recommendation to subsidize tuition fees is due to cost about NIS 600 million over five years. What the Committee based its decision on is unclear, but calculations show that this is the sum that would be required to subsidize 100,000 children at a rate of NIS 500 a month (today about 50,000 children are subsidized at an average sum of NIS 850 a month).

Costs of training daycare workers: To this item NIS 75 million was allocated.

So long as there is no firm basis for assessing how many parents would be interested in having their children attend daycares and nurseries, and how the daycares would operate (number of children per caretaker, caretakers' pay, their educational and training qualifications, the daycares' physical program, and so forth), any budgetary estimate will be unfounded. Therefore, the financing will not be determined by objective need, but by government decision concerning the size of budgets that will be allocated beyond current spending. Lacking the ability to determine the necessary financing according to clear criteria, the Trajtenberg Committee recommended – in keeping with its estimation of existing budgetary constraints – allocating an additional NIS 1 billion for construction and NIS 700 million for adapting to code (one-time expenses), while also taking into consideration that the cost of current subsidies in their maximal format will be about NIS 600 million a year, and the cost of teaching and training some NIS 75 million a year.

Full implementation of the Compulsory Education Law for ages 3-4.

The 3-4 year age group numbers about 300,000 children. Two-hundred and fifty thousand of them attend preschools; the decisive majority attend public preschools (about 228,000). About 105,000 are already exempt from tuition fees, another 125,000 pay graduated tuition fees, and the remainder pay full tuition fees to other private frameworks or do not attend preschool. These data indicate that full implementation of the law will release about 125,000 children from paying partial or full tuition fees and bring another 75,000 or so children into the system (25,000 from the private preschools, and another 50,000 who do not attend preschool at all).²⁰

²⁰ This is an overall estimate. A more accurate assessment of the number of children for which it will be necessary to find a solution in the framework of implementing the law, and their distribution, is currently being performed at

The cost of implementing the law, including the graduated tuition fees, stands today at about NIS 1.2 billion (half of the sum for children exempt from paying tuition fees, and the other half for those that pay graduated tuition fees). Immediate implementation of the law with no rise in the number of children attending preschools would mean the transfer of about NIS 650 million (125,000 children multiplied by tuition fees of NIS 7,700 a year multiplied by 0.68 – the average rate of payment today following an average subsidy of 32 percent) to parents whose children are already attending preschools. The benefit is greater the higher the parents' income level, since they are currently being subsidized at a lower level or not at all. In other words, the main beneficiaries of implementation are the parents who are currently not eligible to receive any discount according to the means test.

Extending implementation also to children who are attending private preschools or who are not currently in any framework will require additional budgetary funds for tuition fees and for building new preschools. The additional allocation for tuition fees should be in the range of NIS 550 million, and for building 2,500 preschool classrooms (at 30 children per classroom) – about NIS 1.8 billion. The sum may be less since not all private preschool children will move to public frameworks, and some will be absorbed by the existing frameworks. It goes without saying that these sums do not include additional construction that may be required to maintain the existing system (replacement of old and condemned structures, expansions due to population growth and internal migration).

The additional expenditure required for training thousands of preschool teachers was not taken into consideration at all by either the Trajtenberg Committee or the government. Past studies have shown that

the Taub Center, and it indicates that over half the children for whom a solution will need to be found are in Tel-Aviv and Jerusalem. In Jerusalem, that means in the range of not less than 28,000 children, about 15,000 of them in East Jerusalem.

training a preschool teacher costs about a NIS 250,000. Since each preschool requires 1.16 teachers, this is about 3,000 new teachers, the cost of whose training will amount to about NIS 750 million.

Altogether, the additional expenditure required to fully implement the Compulsory Education Law for ages 3-4 will include the following items: NIS 1.2 billion for tuition fees (NIS 650 million for the children already attending preschools and another NIS 550 million for those that will join – current expenses for each year); NIS 0.75 billion for training preschool teachers (one-time fixed cost); and NIS 1.8 billion for construction (one-time fixed cost).

Afternoon daycares and long school-day. Another significant decision in terms of current expenses is subsidies for afternoon daycare for children aged 3-9. This involves the implementation of a long school-day on a voluntary basis for children of working parents. The government has estimated the full cost at NIS 2.35 billion. It is important to emphasize again that the main goal informing the decision is not to improve education, but to make it easier for parents to go to work.

The government and the committee would do well to look at the overall issue of a long school-day in the preschools and in the schools. A long school-day was already legislated by the Knesset in the late 1990s, and it was cited as one of the Dovrat Commission's central recommendations, as well as among the demands of the social protests of the summer of 2011. It should be noted that the transition to a long school-day entails a number of educational and professional problems. Although this is not the place to discuss them, it is only right and proper to discuss the budgetary estimate of financing the move.

Afternoon daycare in the preschools. In the framework of the *Ofek Hadash* agreement ("New Horizon"), it was determined that preschools would operate until 14:00. A sweeping decision to extend the school-day in the preschools until 16:00 would lead to a rise of at least 30 percent in teachers' pay, merely as a result of the lengthening of the work week from 30 to 40 hours. In addition, there is the cost for children who up

until now were not in a framework and who are expected to join in the wake of the law's full implementation. Since the principal motivation for extending the school-day in preschool is to enable parents to work a full day, the solution proposed by the government – that the long school-day in preschool will be voluntary and not compulsory – is a good one.

Afternoon care in primary education. Everything said regarding children also applies to pupils in grades 1-4 in the primary schools. Here there also may be some help due to the additional hours mandated for teachers in the framework of “New Horizon,” which should serve to cut costs and improve the quality of afternoon care. Under the assumptions that teachers will perform all tasks of teaching, accompaniment and supervision of pupils that stay in school until 15:30,²¹ and that non-professional workers as well as informal educators could also be utilized at these hours, the costs could be cut even more.

5. Summary and Conclusions

The Trajtenberg Committee's recommendations and the government's decisions in their wake entail a large budgetary allocation, at least part of which constitutes net added income to the economically well-established populations. Since economically weak populations already enjoy the benefits of free education for ages 3-4 and of subsidized daycares, adoption of these recommendations is in essence regressive and will only contribute to increasing socioeconomic inequality.

To many, the system's central problem is the large gaps that opened in inputs and outputs between different parts of the system, especially between pupils from weaker socioeconomic strata and pupils from more established strata (see, for example, the OECD Report on the Educational System in Israel 2011). As noted by Ben-David (2010), on the basis of

²¹ An eight-period school day in Israel ends at 15:30 and not at 16:00.

the TIMSS and PISA tests, which ranks achievements in basic learning fields since the late 1990s, the gaps in Israel are the largest among all the developed countries. Therefore, the system's most urgent task is to work on reducing the gaps. This is also the quickest way (as proven in a study conducted in the past by the Taub Center, the results of which were delivered to the Ministry of Education²²) to improve both learning achievements and Israel's place on the scale of countries participating in the TIMSS and PISA tests.

If reducing the gaps were the main goal, it would be possible to take the allocation that will be required by adoption of the Committee's recommendations for children aged 0-9 and direct it towards deploying a method of differential funding per pupil. This would guarantee the allocation of budgets to schools according to the number of pupils and their socioeconomic background. Furthermore, these sums would also make it possible to assure a broader basket of services for each pupil. Differential funding per pupil, which grants a preference of over 50 percent to those from weaker backgrounds, was practiced for four years in primary education (according to the Shoshani Committee's Report), and then cancelled on the pretext that the method made it difficult to complete even the standard learning program in the well-established schools. This claim was proven to be incorrect (Blass et al. 2010; Blass 2011), since even during the year when the financing was implemented to the fullest extent, the well-established schools were budgeted appreciably more hours than the required minimum.

It should be emphasized that differential per pupil funding does not require Knesset legislation and can be implemented immediately (that is, from the upcoming school year). Applying this method of funding to the entire educational system, not just primary education, will make it possible to improve the achievements of the weaker populations, reduce the number of pupils in classrooms in schools that serve these

²² Letter to the Director-General of the Ministry of Education from April 2, 2004.

populations, significantly reduce the number of small schools and the small classes in schools that serve the well-established populations, and expand the limits of school autonomy.

Increasing equality in the educational system is the most important goal, not just because it may considerably help improve Israel's average achievement and its ranking among countries on the international tests. It is of great importance, even if it does not lead to an increase in equality in educational achievements,²³ due to its broader societal message that each and every group and each and every child deserves a fair chance. This message is of supreme importance for its contribution to societal solidarity.

²³ The advancement of equality in society contributes to the growth of equality in learning achievements much more than the growth of equality in education contributes to equality in society (see Adler and Blass 2009).

Appendices

Appendix Table 1. **Population by age groups, religion, and decades, 1960-2010**

Age groups (as percent of total population)					Total population (thousands)
0-4	5-14	15-19	0-19		
Jews					
1960	11.5%	23.3%	7.4%	42.2%	1,911.3
1970	10.7%	19.3%	10.4%	40.5%	2,582.0
1980	11.0%	19.5%	8.0%	38.5%	3,282.7
1990	9.7%	19.0%	8.9%	37.6%	3,946.6
2000	9.0%	16.8%	8.4%	34.2%	4,955.4
2010	9.6%	16.0%	7.2%	32.8%	6,068.9
Muslims					
1960	20.2%	27.2%	11.6%	59.0%	166.3
1970	21.2%	31.5%	10.0%	62.7%	328.6
1980	19.0%	30.9%	11.9%	61.8%	498.3
1990	16.2%	27.2%	12.2%	55.6%	677.7
2000	17.0%	25.9%	9.8%	52.7%	970.0
2010	13.1%	26.2%	10.6%	49.9%	1,303.9
Christians					
1960	15.1%	23.4%	9.7%	48.2%	49.6
1970	12.7%	24.5%	10.1%	47.3%	75.5
1980	11.2%	22.55	10.9%	44.6%	89.9
1990	10.6%	19.1%	9.4%	39.1%	114.7
2000	9.3%	18.1%	8.1%	35.5%	135.1
2010	7.3%	17.2%	9.1%	33.6%	122.6

Appendix Table 1. (continued) **Population by age groups, religion, and decades, 1960-2010**

	Age groups (as percent of total population)				Total population (thousands)
	0-4	5-14	15-19	0-19	
Druze					
1960	20.6%	27.0%	57.5%	9.9%	23.2
1970	18.4%	30.4%	59.3%	10.6%	35.9
1980	18.3%	28.6%	58.6%	11.6%	50.7
1990	14.2%	26.5%	52.7%	12.0%	82.6
2000	12.5%	23.3%	46.1%	10.3%	103.8
2010	10.0%	20.8%	41.0%	10.2%	126.5
Total					
1960	12.4%	23.6%	43.8%	7.8%	2,150.4
1970	12.0%	20.9%	43.3%	10.4%	3,022.0
1980	12.1%	21.1%	41.8%	8.6%	3,921.7
1990	10.7%	20.3%	40.4%	9.4%	4,821.8
2000	10.35	18.3%	37.2%	8.7%	6,369.3
2010	10.1%	17.8%	35.8%	7.9%	7,623.6

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Appendix Table 2. **Distribution of pupils by levels of education and sector, 1995-2010**

	1995		2000		2005		2010	
Education level	Jews	Arab Israelis	Jews	Arab Israelis	Jews	Arab Israelis	Jews	Arab Israelis
Public preschool	92%	8%	86%	14%	78%	22%	78%	22%
Primary school	79%	21%	75%	25%	73%	27%	72%	28%
Lower secondary	78%	22%	80%	20%	74%	26%	72%	28%
Upper secondary	85%	15%	85%	15%	81%	19%	77%	23%
Total	83%	17%	79%	21%	75%	25%	74%	26%

Appendix Table 3. **Children aged 3-5 by sector, 2000-2010**

Age	Year	Jews	Arab Israelis	Total	Jews	Arab Israelis
		(thousands)			(percent)	
3	2000	87.4	36.2	123.7	70.7%	29.3%
	2005	97.8	41.0	138.8	70.5%	29.5%
	2010	111.8	39.3	151.1	74.0%	26.0%
4	2000	84.8	35.8	120.6	70.3%	29.7%
	2005	94.4	41.5	135.9	69.5%	30.5%
	2010	108.4	39.2	147.6	73.5%	26.5%
5	2000	79.9	36.1	116.1	68.9%	31.1%
	2005	94.8	40.9	135.6	59.9%	30.1%
	2010	104.3	38.9	143.3	72.8%	27.2%

Source for both tables: Taub Center for Social Policy Studies in Israel.

Data for both tables: Central Bureau of Statistics.

Appendix Table 4. **Attendance rates in preschool***
for ages 3-5

Age	Year	Jews	Arab Israelis	Total	Jews	Arab Israelis
		(thousands)			(percent)	
3	2000	56.7	11.6	68.3	83.1%	16.9%
	2005	62.9	22.9	85.5	72.2%	26.7%
	2010	74.9	23.0	97.9	76.5%	23.5%
4	2000	76.4	15.0	91.4	83.6%	16.4%
	2005	86.3	26.1	112.5	76.8%	23.2%
	2010	95.2	25.8	121.0	78.6%	21.4%
5	2000	82.0	26.6	108.6	75.5%	24.5%
	2005	91.5	32.7	124.3	73.6%	26.4%
	2010	102.6	34.8	137.4	74.7%	25.3%

* Not including private preschools.

Source: Taub Center for Social Policy Studies in Israel.

Data: Ministry of Education.

Appendix Table 5. **Participation rates in preschool***

number of children in preschool divided
by the number of children in the cohort

Age	Year	Jews	Arab Israelis	Total
3	2000	64.9%	31.9%	55.2%
	2005	64.3%	55.8%	61.8%
	2010	67.0%	58.5%	64.8%
4	2000	90.1%	42.0%	75.8%
	2005	91.4%	63.0%	82.7%
	2010	87.8%	66.0%	82.0%
5	2000	102.6%*	73.6%	93.6%
	2005	96.6%	80.1%	91.6%
	2010	98.3%	89.3%	95.9%

* The data for the age cohorts presented in Table 3 do not include those born abroad, i.e., new immigrants. Therefore, when the number of children in preschools is divided by the number of children in the age cohort, the denominator is biased downward. However, according to Central Bureau of Statistics publications the number of immigrant children is quite small. There is, therefore, reason to think that the preschool attendance rates presented here are biased upwards, but not to an appreciable extent. That is probably also the reason why in one case a rate of attendance higher than 100 percent was obtained. It should be noted that the attendance rate is calculated according to the original data, not according to the figures in the tables (which are rounded); calculating the attendance rates according to the data in Tables 3 and 4 may yield slightly different results from those shown in Table 5.

Appendix Table 6. **Jewish children aged 3-5 attending preschool**
in absolute numbers and percentages

Age	Year	State school	State-religious	Haredi	Total	State school	State-religious	Haredi
		(thousands)				(percent)		
3	2000	26.5	12.3	17.9	56.7	46.8%	21.7%	31.5%
	2005	25.8	12.9	24.2	62.9	41.0%	20.5%	38.5%
	2010	31.1	16.2	27.7	74.9	41.5%	21.6%	36.9%
4	2000	41.2	16.2	19.0	76.4	54.0%	21.2%	24.8%
	2005	43.2	17.3	25.9	86.3	50.0%	20.0%	30.0%
	2010	47.3	19.0	28.8	95.2	49.7%	20.0%	30.3%
5	2000	47.3	16.7	18.0	82.0	57.7%	20.4%	21.9%
	2005	49.5	17.2	24.9	91.5	54.0%	18.8%	27.2%
	2010	54.0	19.1	19.5	102.6	52.6%	18.6%	28.8%

Appendix Table 7. **Percent reporting expenditure and the amount of that expenditure on early childhood education**
by sector

	Jews				Arab Israelis	
	Non-Haredi/others		Haredi		Percent reporting expense	Amount of expenditure (NIS, 2010 prices)
	Percent reporting expense	Amount of expenditure (NIS, 2010 prices)	Percent reporting expense	Amount of expenditure (NIS, 2010 prices)		
2003-2006	65.6%	1201	69.6%	427	33.1%	251
2007-2010	70.4%	1351	77.6%	433	30.1%	323

Source for both tables: Blass, Bleikh, and Zaban (2012).

Appendix 2. The Structure of the Educational System in Israel: The Legal-Organizational Aspect²⁴

When discussing the educational system in Israel, it is often customary to disregard its complicated structure and to focus on the official educational system, including State and State-religious education. Frequently the reference is only to the Jewish sector within the system. However, the demographic reality necessitates devoting some attention to describing the system and its components.

The multivariate classification of educational institutions cuts across all of the system's learning levels, from pre-primary education to higher education, and it assumes different forms. Classification into groups is influenced by the existing legislation in the educational field, by the history and tradition of education's development, by ideologies and educational concepts prevalent in the educational field, and by other factors. The "formal" educational system in Israel is classified by a few main divisions.

Age division (classification by educational level). This division, the one that is generally familiar to the public, is set in the Compulsory Education Law and in Knesset decisions on reform of the educational system. The classification refers to the following basic structure:

- a. Pre-compulsory education (ages 3-4)
- b. Compulsory kindergarten (age 5)
- c. Primary education (1st-6th grades, ages 6-11)
- d. Lower secondary school (7th-9th grades, ages 12-14)
- e. Upper secondary school (10th-12th grades, ages 15-17)
- f. Post-secondary and academic studies (18 and above)

²⁴ From Blass, 2002.

This is the primary division, but within each level a variety of possible frameworks can be discerned, some of which include two stages combined while others split each stage. Thus, there are schools in primary education with classes from kindergarten to the sixth grade, from the first to eighth grade or even from the first to ninth grade, and kindergarten to the first or second grade; secondary institutions from the ninth to twelfth grade, the tenth to twelfth grade, the seventh to twelfth grade, and even the seventh to fourteenth grade, and more.

Legal status (in official terms, status). The educational laws in Israel recognize three types of educational institutions, according to a measure of how much they are subjected to state supervision: official, recognized, and exempted institutions:

- A. Official educational institutions: According to the legal definition, official educational institutions are all the institutions owned by the state or local authorities, which have been declared official institutions in the records. Generally speaking, these are all the educational institutions for children of compulsory education age (in effect, only those institutions for children from kindergarten to lower secondary school). The four-year secondary educational institutions and high schools usually are not official, even if owned by the local authority, or even by the state, because they have not been declared as such in the records. A convenient marker for distinguishing between official educational institutions and those that are not is the identity of the teachers' employer. Institutions at which the teachers are state employees are official, whereas institutions at which they are employed through other bodies are not official.
- B. Recognized educational institutions: These are divided into two groups:
- All the official institutions
 - Recognized educational institutions that are not official

The recognized institutions that are not official are institutions that are not owned by the state, but have accepted some or other measure of state supervision (as set in the law). These institutions' workers are not state employees, and the institutions enjoy a greater measure of independence in their admission of pupils, employment of teachers, the choice of curriculum, etc.

Among the recognized institutions that are not official, it is necessary to distinguish between those of the independent religious educational network and of the *Ma'ayan Hachinuch Hatorani* network, and other institutions. The institutions of the two networks that are politically affiliated with the Haredi parties (*Agudat Yisrael* and *Shas*, respectively) enjoy a special status set in the Budget Foundations Law, according to which they are entitled to funding identical to that of the official educational institutions. Others in this framework include Jewish institutions that are subject to one of the three types of supervision (see further on) and non-Jewish, usually Christian (Church) institutions.

- C. Exempted institutions: These institutions, like the recognized institutions that are not official, are not owned by the state, and they do not accept state supervision. The children attending them are exempted from abiding by the Compulsory Education Law, for which reason they are known as "exempted" institutions. To date these have been Haredi-religious frameworks (Torah schools, for example, in primary education), but in the future the spread of the home schooling phenomenon may well require defining home schooling frameworks, too, as exempted institutions.

In addition to the educational institutions included in the three categories by status, there are learning frameworks for children that do not recognize the state's existence at all and those in charge of which don't even seek to obtain exempted status. Such, for example, are the institutions of *Neturei Karta*, where the parents and children are effectively in breach of the state's laws.

Sector division, by population sectors. The division by sectors is primarily between Jews and non-Jews. In the non-Jewish sector there are three sub-sectors: Arabs, Bedouin and Druze (also the Circassian, which is negligible in size). It is important to note that most of the children who are neither Jewish nor Arab Israeli (mainly the children of non-Jewish new immigrants and children of foreign workers) attend Jewish State education.

Religious division (in official terms, “type of supervision”). The division by religion is into three types of education: State, State-religious, and other:

- A. State education: a network that includes mainly those institutions that are not religious in the Jewish and Arab Israeli (non-Jewish) sectors.
- B. State-religious education: the frameworks of Jewish national-religious education.
- C. Other education: usually the reference is to Jewish Haredi education. There are no official institutions in this category, although there is a division by types of recognized institutions (networks as opposed to others), and the category also includes the exempted institutions.

Division by funding – by basic funding unit for receiving budgets. The various educational institutions receive their budgets in several ways – funding per pupil, per classroom, or a combination of both. This refers to frameworks in which education is free, but parental payments are required nonetheless:

- A. Funding per pupil: Most of the educational frameworks are funded according to the number of pupils attending them, i.e., the basic funding unit is the pupil. How the cost of this funding unit is calculated varies from framework to framework. The institutions funded through tuition fees per pupil include: pre-compulsory and compulsory kindergartens, recognized primary educational institutions that are not official (not including the independent religious network and the *Ma’ayan Hachinuch Hatorani* network), the exempted

institutions, secondary education, and higher education. The funding per pupil may be uniform, as in compulsory kindergartens, for example, or differential – according to various principles – and it may combine several funding principles, such as:

- Differential standard per pupil by learning topics, by level of service at the school, and by the profile of educational workers and class level (upper secondary schools).
- Differential standard per pupil by structure of institution and profile of its educational workers (recognized institutions in primary education that are not official and the lower secondary schools).
- Differential standard per pupil by socioeconomic background (certain frameworks of secondary education, such as special education classes and guidance classes).

B. Funding per classroom: a method of funding unique to institutions of official primary education, and to the independent religious and *Ma'ayan Hachinuch Hatorani* networks.

C. Combined standard per classroom and per pupil: a method of funding practiced in the lower secondary schools and self-managed schools in primary education.

Other divisions – by ownership, geographic location, etc., could also be examined, but the classification described above seems to accurately reflect the main divisions within the educational system and convey a reliable picture of its complexity.

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IV. EDUCATION – ISSUES RELATED TO REFORM

A Vision and Set of Recommendations for the Israeli Education System

Nachum Blass, Carmel Blank and Yossi Shavit*

Abstract

Following the social protest movement of the summer of 2011, several focus groups came together with the aim of formulating concrete demands and recommendations for socioeconomic policy changes. This chapter relates to “protest documents” that were formulated by four groups and focuses on their recommendations in the area of education. An analysis of these documents reveals important differences between them as well as no small measure of agreement regarding promising policy directions. The goal is to distill policy proposals that are likely to contribute to an improvement in academic achievements while narrowing gaps between ethnic groups and social strata amongst Israeli pupils. In addition, the aim is to articulate an educational vision based on these proposals, to identify the central common recommendations and to estimate the costs of their implementation.

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In the course of the summer of 2011 in Israel, as in many other countries, a wide protest movement developed calling for social and economic change. The protesters and their leadership demanded social justice and the advancement of the social welfare state. They also called for lower housing costs, an improved education system and a more equitable distribution of social responsibilities. The movement was unable, though, to articulate focused demands and it seemed that there was difficulty in organizing around a definitive plan of action. As the mayor of New York Michael Bloomberg quipped about the Occupy Wall Street demonstrators, “They are not sure what they want, but they want it now.” Following this, a number of working groups organized in an attempt to give real content to the Israeli social protest movement.

The present paper looks at four “protest documents” that have since been published, and focuses on their recommendations in the area of education. The documents, listed in the order of their publication, are: *Education Reform: Making Education Work for All Children*, by Shlomo Swirski and Noga Dagan-Buzaglo of the Adva Center (August 2011); a proposal by the Program Policy Chairs of the Taub Center, entitled *A New Public Agenda for Israel* (August 2011); the report of the Trajtenberg Committee (the Committee for Economic and Social Change), appointed by the Israeli government to formulate concrete policy recommendations informed by a concern for social justice (published in September 2011); and an interim report prepared in the framework of an expert panel on social justice (the Spivak/Yonah panel) headed by Yitzhak Kashti.¹

The goal in this chapter is to distill from the four documents policy recommendations capable of improving educational achievements among Israeli pupils while narrowing disparities between ethnic groups and social sectors. The teams that prepared these reports included academics, social activists and experienced professionals in the field of education. An in-depth look at their reports reveals important differences between

¹ The final report of this team has not yet been published.

them; nevertheless, there is considerable agreement regarding several promising policy directions. The aim here is to formulate an educational vision based on these reports, to identify the central common recommendations and to estimate the costs of their implementation. Some of the funding could come from efficiency measures in the system. The intent here is to set the goals while a more detailed discussion of the means of implementation can take place at a later time.²

It is important to note that the recommendations in this document in no way diminish the decisive role of parents and family in the education of their children. Research indicates that the main differences in children's achievements lie in differences in their backgrounds; children from affluent backgrounds will, on average, have higher achievements than those from weaker backgrounds, even if the education system gives the same conditions to both. The education system, as progressive and equal as it may be, is no substitute for parents and is unable to erase the social differences in children's backgrounds. Nevertheless, even in the current situation, the Israeli education system does not seem to do enough to narrow gaps between pupils coming from different social backgrounds, because the extent of affirmative action is insufficient to deal with the existing social inequalities. Thus, the education system in Israel continues to give better quality education to those who come from stronger social backgrounds, at a time when children from weaker backgrounds, who do not come with advantages from home, need high-quality education in a progressive and supportive educational environment. The call today is to increase affirmative action particularly in those schools with children from weaker social groups, that is, in schools that are classified as schools with "low expectations," and to

² At the end of the document a short summary is presented that relates to the main points of the recommendations of each report. The appropriate English language links are provided for those who are interested in looking into the reports in more depth.

increase the differences in allocations between schools that serve affluent populations and those that serve children from weaker backgrounds.³

Recommendations for Action

Strengthen public education. The following recommendations offer a wide variety of tools for improving and strengthening public education. However, the basis for implementation of these recommendations must be through establishing the importance of education as a national priority, from both a budgetary and a societal value standpoint. The government can no longer simply pay lip service to the idea of prioritizing education; it must be reflected in the way in which resources are allocated to education in the state budget. It is therefore recommended that the rate of investment per pupil be linked to GDP per capita, such that as the economy grows and, along with it per capita GDP, education will reap more of the benefits of growth, while in periods of recession, when per capita GDP declines, the priority given to education will be reflected in a smaller reduction in government spending on education.⁴

Cessation of the privatization process. The Israeli education system, like those of other countries, has been undergoing a privatization process in recent years. The primary manifestation of this process in Israel is the involvement of non-governmental organizations of various kinds (non-profits, associations, philanthropists, parents, and others) in public education institutions. Non-governmental organizations often bring with them material resources, thereby eliciting the cooperation of principals and parent committees providing them access into their institutions. However, these initiatives are not necessarily aligned with the declared policy of the Ministry of Education. What is more, the processes by which these organizations form their arrangements with schools are not

³ Swirski and Dagan-Buzaglo 2011. See the list of reports at the end.

⁴ The calculation will be based on multi-year averages or five-year averages in order to avoid random fluctuations.

necessarily transparent or equitable and are often temporary and dependent on the funding available to the organization in question. In addition, the involvement of various organizations leads to the creation of selective educational institutions that prevent accessibility to weaker groups by charging high fees or through selective screening for skills and aptitudes that are unevenly distributed across the population. Beyond the widening of disparities between social groups, the privatization of the system harms public education by drawing away high-quality teachers and high-performing pupils. Thus, if the state takes its responsibility for education seriously, it must find ways to reverse the processes of privatization in the education system, and closely supervise the involvement of NGOs in the schools.

Adequate budgeting. The budgets of educational institutions should be increased so that they can provide pupils with high-quality educational services without recourse to supplemental budgeting from external entities. Charging parents fees should be prohibited in all public educational institutions; all public school services and activities, including textbooks, should be funded by the state.

In order to reduce school expenditure on textbooks, the Ministry of Education should intensify its supervision in this area so that textbooks can be re-used from year to year. It is also recommended that schools, in cooperation with parents, devise means of limiting parental expenditure on school supplies (e.g., brand-name book-bags, assignment planners, etc.).

Cost: Three billion shekels per year.⁵

⁵ Some of the costs that are involved in implementation of this recommendation are included in the next section and so the estimate of cost relates only to the cancellation of parents' payments. Today, the Ministry of Education approves parental fees from NIS 250 for preschools to NIS 1,300 for grades 11-12. Assuming that the average permitted is NIS 1,000 per year, and the actual amount collected is NIS 1,500, this represents a sum of about NIS 3 billion.

Budgeting for equal opportunity. The State of Israel has an obligation to provide education of equal quality to all of its citizens. As noted in the introduction to this paper, pupils come to school from different starting-points, depending on their socioeconomic background. Moreover, affluent parents provide their children with learning support and material resources that widen the gaps over time. The education system is expected to contend with these disparities; educational equity therefore means differential budgeting in accordance with pupils' socioeconomic levels. Schools and classes should be budgeted according to pupil numbers and some objective, uniform socioeconomic measure (such as the Strauss Index), from kindergarten through secondary school. Uniform criteria such as these should determine per pupil governmental allocation to two resource "baskets": a teaching-hours basket specifying the number of instructional hours that the school receives per pupil; and a services and activities basket. This kind of budgeting should produce a significant differential, of at least 50 percent, between the allocation for pupils from the lowest socioeconomic group and that for pupils from the most privileged strata. This will facilitate a differential reduction in class size, school computerization, etc. The differential budgeting should ensure that every pupil acquires the full array of skills needed to succeed. One must also ensure that a complete range of educational services is available to all pupils, including an adequate selection of study programs, teachers trained to provide instruction in the subject areas they are responsible for, classrooms, teaching aids, etc.

Cost: The total budget increase needed to implement this recommendation is estimated at two billion shekels per year,⁶ not

⁶ The estimate is based on the premise that implementation of the recommendation will not involve the reduction of budget from more affluent schools, and is based on a model that was formulated within the framework of the Dovrat Commission's work. It will require the addition of 100,000 employee-position hours for primary and post-primary schools (at a maximum cost of half a billion shekels). The differential budgeting in kindergartens will cost an additional NIS 250 million. The financial

including the increase required for classroom construction and teacher training necessary due to the addition of teaching hours required by such affirmative action.

Making educational institutions open and accessible. Schools that are publicly funded should be prohibited from rejecting pupils based on financial, ethnic or sectoral criteria, or on the basis of prior scholastic achievement. Screening based on these criteria should be considered sufficient reason for withdrawing public funds from the school in question. School principals should be empowered to expel pupils who are violent or exceptionally defiant of authority, whose presence in school severely harms the welfare of other pupils.

Equality within educational institutions. Tracking pupils, whether in the form of grouping by proficiency level or by subject matter studied, greatly influences their ability to earn the matriculation certificates required for admission to institutions of higher education and for entry into key positions in the labor market. Over the years, weak social groups have been channeled by school staff, sometimes with good intentions, into non-academic tracks – and so the economic disparities widened between them and the more privileged groups. In order to provide high-quality equitable education, any form of tracking or grouping that is contrary to the will of the pupil or his parents should be prohibited. At the same time, the education system must provide schools with the tools they need to deal with pupil heterogeneity at the classroom level, in the form of appropriate pedagogical methods.

magnitude of the basket of services per pupil is some NIS 4.75 billion. The calculation assumed a current cost of some NIS 2,500 per pupil, where the number of pupils in the entire system, including kindergartens, is some 1.9 million. Since most of the services are already given, we are speaking of an additional NIS 1.25 billion to the Ministry of Education budget. The total addition required for employee-position hours and the basket of services stands at NIS 2 billion.

A core curriculum that is compulsory for all pupils. One of the education system's primary duties is to ensure that all of its graduates have acquired the skills they need for optimal integration into a technologically, culturally and socially complex society. The education system must also provide the social values and cultural foundation necessary to foster social cohesion. One basic condition essential to the fulfillment of these tasks is the existence of a core curriculum that is compulsory for all Israeli pupils. In addition to the core studies, schools should offer programs that address the specific needs, aspirations and values of different groups and sectors within Israeli society. This, however, should supplement, rather than substitute for the core curriculum. Budgeting should be withdrawn from schools that do not teach the core curriculum.

Improving the quality of teaching. Measures to encourage and develop teachers in the public education system should be maintained and intensified. These measures should focus on improving the teacher recruitment process, pre- and on-the-job training, employment conditions, salaries, and enhancing the prestige of the teaching profession. At the same time, appropriate steps should be taken to encourage good teachers to stay in the profession, and to facilitate the retirement of teachers unsuited to the field. Special emphasis should be placed on the professional development of school principals and the administrative staff, and on creating occupational mobility avenues for teachers.

Expanding educational services. As part of the effort to strengthen public education, educational services should be expanded and made accessible to the public at large. In accordance with this view that early childhood education lays a basic and crucial foundation for the educational process as a whole, the authors support the government decisions of early January 2012 adopting the Trajtenberg Committee's recommendations in the education sphere: implementing the Compulsory Education Law for ages 3-4, subsidizing afternoon programs for the children of working parents, increasing the number of day care centers

for ages 0-3, and extending the school day for children ages 5-9. However, there are reservations about the plan to fund these decisions through an across-the-board cutback in all government ministry budgets.

Attention to higher education. The educational process does not end with secondary school. For many of the jobs available in the labor market, an academic degree is required. Moreover, economic and cultural development can be achieved only if broad swathes of the public enjoy access to higher education. One way of providing this access is through undergraduate student loans that cover tuition and living expenses, with repayment after studies have been completed and based on the post-studies income level (per the Australian model). In light of existing criticism of this model,⁷ the authors encourage the consideration of additional options.

⁷ There are two major criticisms of the Australian model. One contends that collecting on loans involves a great deal of administrative difficulties since it includes gathering information on the loan recipients' income after their studies are completed. The answer to this is a mechanism linked to income tax. The second criticism is that students without means will be concerned about taking loans based on their repayment in the future. The response to this is better publicity and linking the payment schedule to income level.

The Reports that Are the Basis for the Recommendations (in order of their publication)

- **The report issued by the Adva Center (Swirski and Dagan-Buzaglo, 2011)**⁸ focuses primarily on scholastic inequality among Israeli pupils and on low achievement. It also addresses the need to institute a uniform core curriculum alongside studies that reflect the values of the myriad communities that make up the Israeli social mosaic. The report's recommendations focus on how to improve the scholastic achievements of two-thirds of Israeli pupils studying in what are referred to as "low-expectation" schools – pupils who do not meet the normative levels of achievement set by the Ministry of Education and international exams.
- **The report issued by the Taub Center (proposal by the Program Policy Chairs of the Taub Center)**⁹ identifies several major problems with the Israeli education system: low pupil achievement levels on international exams, large disparities between pupils, the lack of a core curriculum in a growing portion of Israeli schools, resource disparities between schools (particularly relating to class size), inadequate quality of teaching manpower, and teacher dissatisfaction with employment conditions. The report also addresses various failings of Israel's system of higher education.
- **The report issued by the Committee for Economic and Social Change (the Trajtenberg Report)**¹⁰ devotes most of its attention to the 0-9 age group, and focuses on lowering educational costs for working parents. Its main recommendations relate to implementing free

⁸ adva.org/uploaded/edu-eng-2011-2.pdf.

⁹ taubcenter.org.il/tauborgilwp/wp-content/uploads/Eng-A-New-Public-Agenda-for-Israel-Dec.pdf.

¹⁰ yadhanadiv.org.il/sites/default/files/downloads/resources/Trajtenberg%20Report%20Summary%20-%20English.pdf.

compulsory education for three- and four-year-olds, to centralizing administration of early childhood education within the Ministry of Education, and to subsidizing early childhood expenses. The report also recommends implementing an extended school day for children ages 3-9.

- **The social justice movement's expert panel**¹¹ identifies the erosion of Israeli public education as a major problem. The report recommends defining and regulating public education as education that is accessible, equitable and free from the age of six months through the completion of undergraduate higher education.

¹¹ j14.orgt.il/spivak/?p=610.

Compensation Incentives to Boost Teacher Productivity: US Research Yields Disappointing Results

Adam Gamoran*

Abstract

Three rigorous studies of compensation incentives in the US indicate that paying higher salaries to more effective teachers does not lead to higher overall levels of student achievement. The results were similar whether incentives were provided to individual teachers, or on a school-wide basis. One interpretation of the findings is that teachers were motivated to improve performance, but lacked the tools to do so. Other teacher quality initiatives should be evaluated with the same rigor as has been applied to the compensation reforms.

Recent studies of teacher compensation incentives in the US indicate that simply paying teachers more – whether as individuals or as entire school staffs – does not result in higher student achievement. These studies use rigorous designs to ensure that the effects of programs are not biased due to patterns of selection into the programs.

Compensation incentives for teachers are a prominent school reform strategy in the US. A variety of federal programs provide funds that

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states and local districts can use to pay teachers more if they produce higher student achievement. This strategy is motivated by research that indicates that teachers vary substantially in the achievement of their students, but traditional markers of merit such as years of experience and degrees obtained are poor predictors of productivity. One response to these findings is to offer higher pay to teachers who are especially successful at elevating student achievement. The logic of this approach is that higher pay will motivate teachers to work harder or to select more effective strategies to raising student achievement. However, three recent studies suggest this strategy is not successful.

In Nashville, Tennessee, teachers volunteered to participate in an experiment in which those who produced higher student achievement would receive higher pay, with possible salary increases ranging as high as \$15,000. Among those who volunteered, half were randomly assigned to participate in the program, and half served as controls. After three years, however, researchers found no consistent effects of program participation on student achievement (Springer et al. 2010). Overall, achievement of students whose teachers were eligible for the bonuses was no higher than that of students whose teachers were not eligible. Similarly, a program of performance pay in Chicago also found no achievement increases for students whose teachers were eligible for pay bonuses (Glazerman and Seifullah 2010).

One of the quandaries about implementing performance pay for teachers is whether bonuses should be paid to teachers as individuals, or as members of an entire school staff. While it is possible to link student achievement to particular teachers, that is true only for tested subjects (reading and mathematics). Moreover, the individual approach may promote competition rather than cooperation within schools. Hence, other approaches to compensation incentives focus on whole schools rather than individual teachers. New York City, for example, recently conducted an experiment with school-wide performance bonuses, in which schools were randomly assigned to be eligible to receive school-wide bonuses for elevating student achievement to specific targets. After

three years, however, despite the allocation of bonuses to many schools, student achievement was no higher in the participating schools than it was in schools that had not been selected to participate in the program (Marsh et al. 2011).

The ineffectiveness of pay for performance programs in the US suggests that increased motivation may not suffice to lead teachers to improve student outcomes. One interpretation of these results is that money is not a major motivator for teachers. Indeed, teachers have been found to prioritize working conditions over pay when seeking positions (Ingersoll 2006). However, recent studies have not required such a tradeoff. More likely teachers were motivated to improve performance, but lacked the tools – knowledge, skills, and/or working conditions – to do so.

Increased teacher compensation may still be important to recruit the highest caliber of teachers into the profession, or to induce highly effective teachers to work in the most challenging contexts. Other teacher quality initiatives may also be considered, such as professional development to provide teachers with additional knowledge and skills to improve their work, and improved working conditions such as smaller classes and more time to meet with colleagues. These approaches should be examined with the same rigor as has recently been applied to performance pay in the US studies.

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Teacher Quality: Literature Review and Policy Directions

Yael Navon and Yossi Shavit *

Abstract

Research indicates the importance of teachers in impacting their pupils' achievements. However, the specific teacher characteristics that affect achievements are not known. Thus, it is unclear how to improve the quality of teachers. Some suggest changes in the selection criteria of teachers; others believe that pay incentives would motivate skilled teachers to enter and remain in the profession. Studies of the effectiveness of economic incentives on teacher efficacy yield mixed results. Israeli studies indicate the positive influence of individual and group economic incentives on student achievement in the matriculation exams. In contrast, studies in other countries have found that economic incentives do not have a significant influence on pupil achievement. In the past decade the education system in Israel has undergone two reforms – Ofek Hadash and Oz LeTemurah. The reforms include, amongst other things, incentives by way of a salary rise, performance-based bonuses and new career ladders. These reforms included promising components as well as possible pitfalls that are discussed in the paper. Finally, there is a call for an evaluation of these programs in an attempt to assess the impact of their components on pupil achievement and on teacher motivation, morale and performance.

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The main determinant of the educational success of young people is family background, in particular parental education and economic status. Since policymakers' ability to influence family background is complex and often very limited, education policies tend to focus on systemic variables that affect educational achievement. Understanding the effects of systemic features, among them teacher quality, is thus highly valuable.

1. The Importance of Good Teachers

Researchers generally agree that teachers are an important, and perhaps the most important, systemic factor in education. The 2007 McKinsey Report identified three variables common to education systems with high-achieving pupils, two of which – teacher recruitment and training – are related to teacher quality (Barber and Mourshed 2007). Studies using the currently accepted method of fixed effects models also indicate that teachers are an important variable in pupil achievement. Studies of this type examine the variance in achievement among otherwise comparable pupil groups taught by different teachers (e.g., different classes at the same school). These studies assess the extent to which particular teachers can affect pupil achievement, controlling for a variety of other factors relevant to achievement. Input, in the form of teacher quality, is usually measured in terms of achievement units, enabling researchers to assess teacher effectiveness in improving pupil achievement. These studies have consistently found a significant effect of the teacher on pupil achievement (or on changes in achievement over time)¹ as well as a great deal of variance in teacher quality.² In other words, these studies indicate that particular

¹ Models that examine incremental achievement or control for past achievement are termed value-added models.

² It should be noted that these studies face significant methodological challenges in inferring causality. One of the major challenges is the non-random assignment of teachers and pupils to classes and schools by geographical area, school type, etc. When placement is not random, the models must distinguish the influence of teachers (i.e., the causal relationship between teacher quality and pupil

teachers could have a major influence on pupil achievement.³ Some of the studies have compared the effect of the teacher to the effects of the school or class size and have found the influence of the former to be more important (Luyten 2003⁴; Nye, Konstantopoulos, and Hedges 2004; Rivkin, Hanushek, and Kain 2005; Buddin and Zamarro 2009; Sanders, Wright, and Horn 1997; Nye, Konstantopoulos, and Hedges 2004; Rivkin, Hanushek, and Kain 2005; Hanushek 2011).⁵

The implication suggested by these findings is that pupil achievement can be enhanced by improving teacher quality, and this might be more significant than the improvement found by making other systemic improvements. It is worth noting that improved pupil achievements have both social and economic value. Hanushek (2011) has studied the hidden economic value of teacher quality, both in terms of the financial reward for education in the labor market and in terms of the relationship between improved cognitive skills in the population and national economic growth.

achievement) and the influence of other differences between pupils. The most common method of dealing with this challenge is by means of adding fixed-effects coefficients for the pupils or the school to the model. Inferring causality is further complicated by omitted environmental effects, biases due to the achievement indices used, and more (Koedel and Betts 2010; Papay 2011).

³ The educational outcome examined by most studies is grades, both because grades are easy to measure and because improving them is considered one of the education system's primary objectives. Other educational outcomes have been examined, however. For example, Jennings and DiPrete (2010) have found evidence that teachers' influence on social and behavioral development is comparable in magnitude to their influence on academic achievement, while Koedel (2008) has found teachers to have a significant effect on drop-out rates.

⁴ Luyten's (2003) review shows opposite cases as well, where the strength of the influence of the school was found to be greater than that of the teacher, especially when teacher influence was measured by the difference between parallel classes (same school, same grade, same course of study). Levitan therefore concludes that the teacher is not necessarily a more important determinant of pupil achievement than other school factors.

⁵ The comparison is generally to reducing the class size to a certain number of pupils; the studies that are cited compare when class size is reduced by a significant number of approximately ten pupils.

His calculations show that bringing United States pupil achievement on international tests up to Finnish levels by improving teacher quality would have increased United States GDP by no less than \$112 trillion.

Findings also indicate that to the extent that there is a correlation between teacher quality (in terms of effectiveness) and pupils' socioeconomic background, this is likely to exacerbate class inequality in education. In order to decrease the inequality caused by family background, education policymakers can direct teachers identified as effective to schools and classes with a high concentration of pupils from socioeconomically underprivileged backgrounds.⁶

2. Can Good Teachers Be Identified?

In light of these findings, one would expect education systems to devote a great deal of attention to improving teacher quality. Achieving such an improvement is far from simple, however. The main difficulty is that although it is clear ex post facto that good teachers can improve their pupils' achievements, identifying such teachers in advance proves to be a difficult task. Moreover, although many researchers have aimed to identify the characteristics of good, achievement-improving teachers, these factors have yet to be identified with any precision. Numerous researchers have looked for statistical relations between pupil achievement and observed teacher characteristics, such as education, seniority and gender. Others have searched for relations between various teacher characteristics and teacher

⁶ It is important to note, however, that the success of teacher quality in decreasing inequality depends on the degree to which improved achievements persist over time, i.e., on the extent to which teachers' influence is long- rather than short-term, though the findings about this latter aspect are inconclusive (Sander and Rivers 1996; Kane and Staiger 2008; Rothstein 2010). Likewise, the possibility of narrowing gaps also depends on the effectiveness of teachers being similar for pupils of different social standing. Here, too, the findings are not conclusive (Sanders and Rivers 1996; Sander, Wright, and Horn 1997; Aaronson, Barrow, and Sander 2007; Slater, Davies, and Burgess 2009).

effectiveness as defined by fixed effects models. Despite these efforts, findings have been scant, pointing to no strong and consistent correlations between observed teacher characteristics and pupil achievement. Moreover, more researchers agree that the characteristics identified so far explain a very small part of the variance in teacher quality (Nye, Konstantopoulos, and Hedges 2004; Aaronson, Barrow, and Sander 2007; Buddin and Zamarro 2009; Leigh 2010).⁷ Interestingly, only a few studies have systematically explored teacher personality traits in the context of pupil achievement (Blass 2008).⁸

One of the only teacher characteristics with a consistent correlation to pupil achievement is teacher experience (Greenwald, Hedges, and Laine 1996; Nye, Konstantopoulos, and Hedges 2004; Rivkin, Hanushek, and Kain 2005; Clotfelter, Ladd, and Vigdor 2006; Clotfelter, Ladd, and Vigdor 2007; Croninger et al. 2007; Buddin and Zamarro 2009; Harris and Sass 2009; Leigh 2010; Hanushek 2011). Nevertheless, numerous findings indicate that the correlation is weak and nonlinear, and sometimes disappears after the first few years of teaching (Clotfelter, Ladd, and Vigdor 2006; Clotfelter, Ladd, and Vigdor 2007; Buddin and Zamarro 2009; Slater, Davies, and Burgess 2009; Leigh 2010; Hanushek 2011; Harris and Sass 2011).

Findings regarding the effects of other teacher characteristics on student achievement have been even less consistent. For example, most studies have found no consistent correlation between teacher education, irrespective

⁷ Clotfelter, Ladd, and Vigdor (2006) disagree, however, claiming that measurable features explain a large part of the overall influence of teacher quality.

⁸ In this context it is worth noting that teacher effectiveness has to do not only with teacher characteristics but also with teaching practices, or with what we shall term “teaching quality” (as opposed to “teacher quality”), or what Cruickshank (1976) refers to as “process variables.” Numerous diverse studies have addressed teaching quality, and a deeper understanding of the effects on pupil achievement is likely to help policymakers design effective teacher training and professional development programs.

of the measure used, and pupil achievement or improvement⁹ (Nye, Konstantopoulos, and Hedges, 2004; Rivkin, Hanushek, and Kain 2005; Clotfelter, Ladd, and Vigdor 2006; Xu and Gulosino 2006; Clotfelter, Ladd, and Vigdor 2007; Croninger et al. 2007; Buddin and Zamarro 2009; Hanushek 2011; Harris and Sass 2011; Harris and Sass 2011). The few studies that have focused on teachers' specific field of study have shown contradictory findings (Dee and Cohodes 2008; Metzler and Woessmann 2010). Only a handful of studies have examined the relation between teacher effectiveness and licensing test scores. Here, again, the findings are not consistent (Clotfelter, Ladd, and Vigdor 2007; Buddin and Zamarro 2009). The same is the case regarding the findings on the influence of different types of teacher certification (Clotfelter, Ladd, and Vigdor 2007; Croninger et al. 2007; Hanushek 2011; Harris and Sass 2009). The findings on the influence of innate characteristics are also not conclusive, although some studies have found female teachers to have a positive effect on pupil achievement compared with their male counterparts (Aronson, Barrow, and Sander 2007; Buddin and Zamarro 2009; Leigh 2010).

Studies that have looked at teacher personality characteristics examined personality differences between teachers (or student teachers) and the general population and the relationship between teacher characteristics and teacher quality as evaluated by principal and pupil evaluations, researchers' observations and training grades. Due to the complexity and varying definitions of the concept of personality, it is difficult to draw a clear line

⁹ Though no relation has been found between teacher education and pupil scores, studies have provided evidence for a positive relation between teacher education and pupil drop-out rates (Koedel 2008) and between teacher education and overall educational inequality (Montt 2011). Some studies measure teacher education as a dichotomous variable, where advanced degree holders are assigned the value "1." Though most studies have found no consistent relation between teacher education and pupil achievement, some findings do support such a relation. A test of statistical significance combining forty education coefficients from roughly twenty-five studies indicates that most of the available evidence supports a positive relation between teacher education and pupil achievement (Greenwald, Hedges, and Laine 1996).

between personality traits and other individual and teaching characteristics. Furthermore, the measures of these characteristics are many and varied. Among these are tests designed to identify various attitudes, values, areas of interest, needs, coping mechanisms, and latent personality traits, as well as projective tests, including verbal associations and the Rorschach test (Getzels and Jackson 1963). As noted, only a few studies have examined the relation between personality traits, as measured by various personality tests, and pupil achievement. Pupil improvement in reading and spelling is found to be correlated to teachers who are termed “self-controlled”¹⁰; and teachers who are termed “turbulent”¹¹ are found to have greater pupil improvement in mathematics and science (Heil and Washburne 1961). No significant correlation was found, however, between teacher extraversion and conscientiousness, as measured by a five-factor model (The Big Five), and pupil achievement in mathematics (Rockoff et al. 2008). It should be noted that Rockoff and his colleagues have found a significant positive correlation between pupil achievement in mathematics and factors based on a number of combined personality indices¹² (Rockoff et al. 2008); but since these factors have yet to be examined in further studies, no theoretical or practical conclusions can as yet be drawn.

In any event, the effects of teachers’ acquired characteristics, even those found to be significant, on pupil achievement are weak. The effect of teachers’ personality traits on pupil achievement have not been studied to an extent that would justify drawing conclusions.

¹⁰ These types showed a preference for questionnaire items that classified them as methodical, preoccupied with cleanliness and conscientiousness, and showed no affinity for items related to aggressiveness, impulsivity and humor.

¹¹ These types showed a preference for questionnaire items with more aggressiveness, impulsivity, and did not show an affinity for items related to cleanliness or conscientiousness.

¹² Rockoff et al. distinguish between two factors: “cognitive” and “non-cognitive” skills. Cognitive skills include accreditation, training institution selectivity, SAT scores, IQ, and math skills. Non-cognitive skills include extraversion, personal and general efficacy, commitment, and personality test scores.

It seems that if changes to the admissions criteria of teaching colleges or in the structure of economic incentives for teachers are based on the aforementioned observable characteristics, they should not be expected to result in considerable improvements in pupil achievement. Such steps may change the teacher population in terms of various characteristics and traits, but these do not seem to affect pupil achievement to any significant extent.

Nevertheless, although educational background and cognitive tests are not promising as predictors of teacher effectiveness, higher admissions and hiring requirements with respect to these indices may help improve the social status of the teaching profession, indirectly encouraging talented candidates to turn to teaching. One difficulty with this proposal, however, is that stricter requirements are unrealistic when the demand for teachers exceeds the supply of candidates. Along with stricter entrance requirements, the problem of supply must therefore be addressed by increasing the rewards associated with the teaching profession.

3. Using Value-Added Models to Improve Teacher Quality

The difficulty in identifying effective teachers in advance on the basis of observable characteristics has led Hanushek (1972, 2011) and others to propose the use of value-added models to identify such teachers. Value-added models are used to calculate changes in pupil achievement over the school year while controlling for other pupil characteristics. This model is suggested by researchers to help in identifying teachers who are clearly ineffective and to remove them from classes, and/or to use differential financial incentives to reward effective teachers.¹³ The use of value-added models thus sidesteps the need to identify characteristics predictive of

¹³ Performance-based salary is meant to improve teaching manpower in two ways: it provides an incentive for teachers to work harder to improve pupil achievement, and it also encourages effective teachers to remain in the teaching profession (Buddin and Zamarro 2009).

teacher effectiveness in advance, making it possible to improve the quality of teaching staff after the fact.

The use of value-added evaluations is problematic in several respects, though. First, since rewarding and promoting the right teachers requires ongoing efforts to evaluate teacher effectiveness, many resources must be invested in frequent and comprehensive data gathering. Second, teachers evaluated solely on the basis of their individual accomplishments might neglect collective efforts requiring teamwork. Third, teachers fearful of losing their jobs due to low effectiveness might gear their teaching toward high evaluation scores, to the exclusion of other important teaching objectives. Fourth, teacher evaluations are marred by various methodological biases, including failure to take into account the differences in pupil populations. For example, the model's failure to control for pupils based on non-observed characteristics is bound to penalize teachers assigned to classes or schools with difficult pupil populations and to reward teachers in less difficult ones (Hanushek et al. 2010). Fifth, teacher unions may resist the removal of ineffective teachers (unless done in very small numbers) as well as the introduction of differential performance-based compensation, as labor unions usually prefer worker compensation to be based primarily on seniority, training, and rank rather than on performance.

4. Incentives

Proposals to use value-added models as a basis for firing, promotion and compensation are based, among other things, on the assumption that incentives may improve teacher quality. There are several recognized incentive routes, including: salary raises or bonuses based on individual performance, group bonuses based on collective performance, developing career ladders that enable promotions on the basis of relevant criteria, and mentoring programs. The use of incentives involves several important distinctions. First, it is important to distinguish between internal and external incentives, where the former includes personal satisfaction which

may be based on the perception of one's work as meaningful or important, positive interactions in the workplace, a sense of self-fulfillment, etc. External incentives involve rewards from one's environment, material or non-material, such as status, prestige, work conditions, and financial rewards. Policy cannot provide internal incentives directly, but it can create the conditions that foster them. There is also a distinction between individual incentives given on the basis of individual performance, and group incentives given on the basis of collective performance. All the programs noted previously offer external incentives in the form of money, status, and recognition, but the relative weight of each differs with each incentive program. Programs offering differential performance-based salaries (both individually and collectively) focus on financial rewards, usually accompanied by status. Career ladders and mentoring programs emphasize status, sometimes accompanied by financial rewards. The nature of the external reward (material or non-material) and the identity of its recipients (individuals or groups) affect the ability of policy to encourage internal rewards.

Should external incentives be used, and if so, when? According to general principal-agent theory, when agents, in this case, teachers, are motivated by internal rewards and altruism, no external rewards are necessary. The theory acknowledges, however, that agents are motivated by a variety of incentives, and that the preference of agents for different incentives is not uniform. It is thus probable that external rewards are also needed to improve teacher effectiveness. The effectiveness of such incentives depends on labor market structure, in particular, on the extent to which teachers and principals have access to information on the correlation between effort and outcomes.¹⁴ In cases of information asymmetry, when managers have access to relatively limited information, resource-intensive evaluation and monitoring systems must be developed in order to ensure the effectiveness of financial incentives. Moreover, the use of financial rewards

¹⁴ "Managers," according to this theory, are those who demand and pay for the outcomes. In the case of education there are multiple managers, including parents, pupils, the Ministry of Education, taxpayers, and school principals.

as incentives, particularly for internally- motivated workers, may actually impair both effort and outcomes (Levačćić 2009). Finally, external rewards that damage internal motivations may also harm efforts to improve teacher quality in the long term by attracting less suitable candidates. Since any desirable policy must focus on long- as well as short-term teacher quality, it is important to weigh carefully incentive programs that not only do not damage internal motivations but that work to foster them.

Studies on the influence of economic incentives on teacher effectiveness have yielded conflicting results. Some have found such incentives to promote teacher quality (Eberts, Hollenbeck, and Stone 2002; Lavy 2002; Figlio and Kenny 2007; Lavy 2009). In Israel, Lavy (2009) found individual incentives to have a positive effect on pupils' matriculation test-taking rates, average matriculation scores, and matriculation eligibility rates. He also found group incentives at the school level to have a positive effect on average matriculation exam scores, the average number of matriculation units per pupil, the average number of matriculation units per pupil in the sciences, and pupil drop-out rates between lower and upper secondary school (Lavy 2002). Examining some of the possible side effects, Lavy found no evidence that individual incentives caused teachers to manipulate pupil grades or to orient their teaching to success in incentive-related evaluations. These findings give the impression that individual or group incentive programs can yield desirable results. Several limitations give reason for caution, however. Lavy's research time frames were short (only one or two years); his studies focused exclusively on upper secondary school pupils and matriculation outcomes; and the schools examined were unrepresentative of Israeli high schools in several important respects.¹⁵ Due to these limitations, Lavy's conclusions must be considered with caution, and the research should be expanded to encompass additional contexts and performance indices over longer periods of time. Furthermore, in light of

¹⁵ The individual incentive program was examined in schools where matriculation eligibility rates were equal to or lower than the national average, while the group incentive program was examined primarily in schools serving small communities.

the theory, future studies should examine the effects of external incentive programs on internal incentives and on success in attracting suitable candidates to the teaching profession.

Standing in sharp contrast to Lavy's findings are the rather pessimistic conclusions of a National Research Council report on the use of incentives in education (Hout and Elliott 2011). This prestigious report raises serious doubts concerning the efficacy of financial incentives in improving teacher quality. In this thorough survey of the literature on incentives for both teachers and pupils, the authors show that the use of material incentives leads to negligible or no improvement in pupil achievement, and that what little improvement is made tends to be concentrated in tests where teachers are both interested in and capable of inflating pupils' grades in order to bias their own evaluation results. One of the authors' chief conclusions is that programs designed to improve teacher quality should offer teachers professional support alongside, or as part of, their incentive programs. Such support is especially important given the fact that low-performing populations (ineffective teachers or schools) are often also those lacking the ability to improve on their own.

As already noted, training and professional development are mentioned in several McKinsey reports among the features common to successful and improved education systems (Barber and Mourshed 2007; Mourshed et al. 2010). Many studies examine the perceptions of teachers and lecturers in training programs and the effectiveness of these programs, although only a handful of studies have examined the influence of these programs on the success and effectiveness of teachers in practice. Among the few that have are several American studies on non-traditional training programs such as the Teach for America program which recruits outstanding students from elite universities and assigns them to difficult-to-staff schools. While the studies indicate positive outcomes in terms of pupil achievement (Hanushek 2011), such improvements are not necessarily the result of training methods. Finnish studies have noted the requirement of professional training and mandatory Masters' studies as factors attracting young Finns to the teaching profession (Toom et al. 2010). Since there is little evidence of correlations

between observed teacher training characteristics and their effectiveness, one's view of how such training should be designed inevitably depends on the perception of the teachers' proper role and requisite professional skills, and is thus a function of policies in other areas. The view of teachers as professionals who are required to have theoretical and practical knowledge as well as decision-making skills or, alternatively, as skilled workers who carry out decisions has implications on the type of training required as well as on the criteria for lecturers in training programs (Townsend 2011).

Professional development, training, and support can help introduce external incentives without stifling internal ones. Without proper training and support, some teachers may react to performance-based incentives with despair or low motivation for improvement. Firestone and Pennell (1993) suggest that work conditions, including autonomy, a variety of required skills, task-oriented identification with the overall work process, involvement in decision making, cooperation, learning opportunities, and resources, contribute to some extent to commitment among workers in general and among teachers in particular. There is some evidence that instituting career ladders may promote commitment, as may group incentives, especially ones responsive to teamwork and learning opportunities (Firestone and Pennell 1993). By contrast, individual incentives might promote competitiveness, which could harm teamwork, cooperation and learning opportunities (Duttweiler 1988; Firestone and Pennell 1993).

As well as performance-based incentive, material external incentives include universal compensation in the form of base pay. According to the 2010 McKinsey Report, one of six features common to education systems that have managed to improve their achievement levels is appropriate compensation for teachers and administrators, including reasonable base pay relative to GDP per capita (Mourshed et al. 2010). Studies in the United States have shown that low pay discourages good students from entering the teaching profession and prevents good teachers from remaining (Temin 2002). Temin further claims that under certain circumstances due to market conditions, base pay should be raised above a minimum threshold; reforms

that do not include base-pay raises or raises that are insufficient cannot hope to improve the quality of teachers. In many developed countries, the relative pay of primary school teachers fell in the second half of the twentieth century (Lakdawalla 2006). In some countries, however (including Finland, ranking first in pupil scores on international tests), teachers' pay, although not particularly high, is higher than GDP per capita. In Israel, by contrast, teachers' pay was 60 to 70 percent of GDP per capita before, and 80 percent, by some assessments after implementation of the *Ofek Hadash* program (Nathan 2006; Nathanson and Tzameret-Kercher 2009).

5. *The Situation in Israel*

Some of the policy proposals noted in the current review of the literature and certain of the features mentioned in the McKinsey Reports have already been implemented in Israel over the past decade. The *Meitzav* (School Effectiveness and Growth Indices) tests were introduced a decade ago to assess pupil achievement, and in the last five years two major teacher-centered reforms were introduced and implemented: *Ofek Hadash* ("New Horizon") in primary and lower secondary schools, and *Oz LeTemurah* ("Courage to Change") in upper secondary schools.

The new reforms included raising teachers' base pay while increasing their number of at-school work hours, defining career ladders based on seniority, professional development and supervisor evaluations, and encouraging teachers to take up other non-instructional duties. The *Oz LeTemurah* program also introduced performance-based individual and group bonuses. Both programs included teacher evaluations, although at this point only *Ofek Hadash* has built a detailed evaluation tool based on the combined and collaborative input of supervisors, administrators, teachers, and principals with an agreed upon definition of a "good teacher." The tool's strengths include diverse outcome indices reflecting the complexities of teaching. In addition, the tool offers detailed indices and more than one evaluation method, including principal observations, self-evaluation and

evaluation by other relevant parties. The tool was developed through the collaboration of relevant parties and includes teachers in the feedback process as well as in the goal setting for improving teaching (Beller 2012).

The literature surveyed reinforces the sense that these reforms hold considerable promise for improving teacher quality and the level of teaching. Israel's education system now faces the task of stabilizing and institutionalizing these reforms while continuing to examine their effectiveness, and at the same time responding to criticism and considering possible improvements. Implementation of these reforms, especially *Oz LeTemurah* is still in its early stages; their short- and long-term results should be monitored to find which of their features should be preserved and which may be improved, omitted, or added. To this end, it is important to continue to invest in creating pupil achievement databases (such as *Meitzav*) and to ensure that they are accessible to educators and researchers, both as evaluation tools for assessing current conditions and trends, and as one measure of the success of the reforms.

In addition, as already noted, mentoring and guidance initiatives can help minimize the potentially negative side-effects of evaluation and incentive programs (Duttweiler 1988). Efforts should therefore be devoted to certain aspects of professional development and systemic institutional support. In this context, *Meitzav* data may be helpful in directing systemic support to the schools that need it.

Several central aspects of the reforms merit reexamination. First, there is a need to examine teacher's current base pay relative to GDP and to other market salaries. Second, the effectiveness of additional teacher work-hours – the target of much recent criticism – should be subjected to further scrutiny; these additional hours, some claim, place an unwarranted burden on teachers and principals, damaging their work conditions and professional commitment. Third, the effectiveness of the incentive mechanisms contained in the reforms, including career ladders and individual and group bonuses, should be further examined. While some studies support these mechanisms' effectiveness, possible disadvantages should also be considered, among them the negative effects of competitive bonuses on

collaboration and teamwork and adverse effects on work conditions and commitment. Fourth, attention should be devoted to implementing the evaluation program and combining it with suitable training and professional development policies. Despite its previously noted advantages, there are certain possible flaws to the teacher evaluation tool of the *Ofek Hadash* program, which merit further consideration, such as its overreliance on principals as single evaluators. A recent paper on the evaluation program proposes adding other evaluation tools like portfolios on teachers' work and perceptions, as well as examining the relationship between teacher evaluations and further opportunities for professional development (Hartaf, Ratner-Avrahami, and Beller 2011).

Evaluation programs, competent and thorough as they may be, are insufficient catalysts of improvement. For this, it is important to combine a process of evaluation with professional development and support for teachers (Hartaf, Ratner-Avrahami, and Beller 2011; Hout and Elliott 2011).

Finally, in addition to the proposed examination of the reforms' effectiveness through pupil achievement, resources should be allocated to an examination of entrance into the teaching profession over time – both quantitatively, in terms of the number of candidates, and qualitatively, in terms of candidates' personal characteristics. An increase in the number of candidates would make possible the examination of new selection mechanisms like demonstration classes and group evaluation, and their implementation and support in continued and long-term improvement.

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Evidence-Based Investments in Education: Recent Research Begins to Point the Way

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Abstract

Recent advances in education research have led to more reliable evidence about the effectiveness of education reform initiatives. Class-size reduction, for example, was evaluated rigorously in a state-wide randomized experiment in the US, and led to important knowledge about the potential payoff of this reform. Generalizing from research in other contexts is problematic, even if the research was well designed, so rigorous studies of education in Israel are needed to determine which programs are effective in this country.

Recent advances in education research have begun to build an evidence-based field. Findings based on reliable evidence point the way towards educational investments that are likely to pay off in the future.

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Historically, research on education has not been a reliable guide to decision making (Lagemann 2000). Much of the research was descriptive rather than prescriptive, and the literature was plagued by an inability to distinguish the effects of programs from the effects of selection into programs (Whitehurst 2003). For example, research on teacher professional development might examine outcomes for teachers who participated in a program compared to those who did not, but because participants were volunteers, it was difficult to tell whether favorable outcomes reflected something about the program, or simply reflected pre-existing differences between those who had volunteered to participate and those who had not. (Likewise, if outcomes were unfavorable, one could not discern whether the program was actually damaging or whether the weakest teachers signed up for additional training)

A landmark in building an evidence-based field of education research was the Tennessee STAR study, a large-scale study of class-size reduction that took place all across the state of Tennessee in the late 1980s (Finn and Achilles 1990). Students and teachers were randomly assigned to classes that were designated as regular-sized (22-25 students), regular-sized with a teacher aide, or small (13-17 students). Despite some imperfections in the random assignment process, the study succeeded in ruling out selection patterns as the cause of outcome differences (Ehrenberg et al. 2001). The results of the study showed significant and sustained benefits of smaller classes in kindergarten and first grade, and paved the way for a variety of class-size reforms across the US (Mosteller 1995; Ehrenberg et al. 2001).

The Tennessee class-size experiment led to an expanded focus on real-world field experiments in US education. Since 2002, the US Department of Education has encouraged US researchers to adopt research designs that allow for judgments of cause and effect. It established the What Works Clearinghouse to evaluate and synthesize rigorous studies of education programs and policies. The Clearinghouse now contains hundreds of “intervention reports” and dozens of “practice

guides” intended to help educators decide which programs to implement in their schools and classrooms.¹

Class-size reduction provides an excellent example to identify the limitations as well as the benefits of random assignment studies for decisions about educational investments. Other states have not realized the success of Tennessee. In California, for example, state-wide class-size reduction did not yield the expected payoff, apparently because classroom spaces did not suffice to accommodate the additional classes, and there was a lack of well-prepared teachers to staff the larger number of classrooms. In Florida, meanwhile, a state-wide class-size reduction law has not been well implemented due to cost considerations. A nationally-representative, quasi-experimental study of class-size reduction found no overall benefits, suggesting that class-size reduction may not confer universally the benefits it brought in Tennessee without the accompanying conditions of adequate space and a supply of well-trained teachers (Milesi and Gamoran 2006). The broader lesson to be drawn from these findings is that experimental research must have sufficient nuance and complexity to address questions about what programs work for whom, and under what circumstances, before it will be fully reliable as a basis for decisions about investments.

This holds even more strongly when one considers taking lessons learned from research in one country and applying them to another – such as drawing lessons for investments in Israel based on research in the US. Few studies of education in Israel provide rigorous estimates of causal effects, yet the need for such research is great. Israeli decision-makers can look to findings from elsewhere for suggestions of how to proceed, but major resource commitments should rely on knowledge that is specific to Israel. For example, class sizes in Israel are large, particularly in secular schools in the upper elementary and lower secondary grades. Based on US research, reduction of class sizes could yield significant and lasting improvement in student outcomes. Yet other countries, notably

¹ The What Works Clearinghouse may be found at: <http://ies.ed.gov/ncee/wwc/>

those in the Far East, have large classes and perform well on international tests. Which model is appropriate for Israel? A well-implemented randomized study could answer this question. Similarly, Israeli schools stand out in the relatively low number of hours spent in the core academic subjects of reading and science (Ben-David 2010). Increasing class hours in these subjects could be a powerful lever to elevate academic achievement – or it could be a wasted effort, depending on how the hours are used. Asking schools to volunteer for increased hours could lead to a biased comparison if schools that are already more effective are overrepresented among the volunteers. By contrast, a randomized study would provide a more accurate and useful indicator of whether a reform that increases hours of instruction would benefit achievement all across schools in Israel.

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The Dovrat Commission and Teachers' Union Recommendations: A Story of Rejection and Acceptance

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Abstract

This chapter deals with the teachers' working conditions after their signing of comprehensive wage bargaining agreements (Ofek Hadash ("New Horizon") with the primary school Teachers' Union and Oz LeTmura ("Courage to Change") with the secondary school Teachers' Organization). These agreements largely resemble principles proposed by the National Task Force for the Advancement of Education (the Dovrat Commission) in 2005. One of the chapter's two primary focal points is a comparison of the major items in the agreements signed with the teachers to the parallel items in the recommendations of the Dovrat Commission. The other is an attempt to answer the question of why the Task Force recommendations encountered such sweeping opposition on the part of the teachers' unions, when the agreements that were eventually signed – after prolonged strikes and bitter struggles – are so similar to the original recommendations. The answer suggested here is that the two primary reasons for the wide rejection were the Dovrat Commission's preference not to increase the government budget for education, and its unwillingness to allow the teachers' unions a voice in formulating the recommendations. Furthermore, the Dovrat Commission's recommendations on some issues contradicted positions deeply rooted and widely accepted within the teacher community.

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After a period of prolonged strikes, two comprehensive wage bargaining agreements which may well be termed historic were signed between the representative unions of the teachers in Israel and the government. They not only dealt with wage conditions, which were significantly improved, but also fundamentally changed the structure of teaching job posts. These agreements were preceded by the recommendations of the National Task Force for the Advancement of Education in Israel (the Dovrat Commission) as well as two important documents of the teachers' unions (*HaTza'ad HaKoveah* ("The Crucial Step") of the primary school Teachers' Union and *Oz LeTmura* ("Courage to Change") of the secondary school Teachers' Organization).¹ Analysis of the wage agreements that were signed reveals a clear link and considerable affinity between them and the Dovrat Commission's recommendations on the one hand, and the documents drawn up at the time by the teachers' unions on the other hand. Against this background, the question arises: why were the Dovrat Commission's recommendations concerning the structure of teaching job posts, working conditions and pay rejected so adamantly by the teachers in 2005, only to be largely accepted a few years later?²

¹ "The Crucial Step" is the Teachers' Union's program for the advancement of education in Israel (2004). "The Courage to Change in the Educational System" is the Secondary Teachers' Organization's program for structural and values reform in the educational system, which was submitted to the Task Force for the Advancement of Education in Israel. The discussion in this chapter refers to everything written in these documents as the organizations' official positions. In the same period there appeared another important report, the "ELA (Citizens for Education) Report," which also referred to many of the issues mentioned here.

² The Dovrat Commission dealt with numerous and diverse topics and the wage agreements mainly concerned the structure of the teacher's post, working conditions and pay. This document will not discuss the disagreements between the teachers' organizations and the Dovrat Commission's recommendations on such topics as the regional educational administrations, study curricula, method of funding, etc., but only those items that appear in the wage agreements.

The chapter will briefly describe the process of appointing a Dovrat Commission for Education. It continues with comparisons of the recommendations of the Teachers' Union ("The Crucial Step") and the Teachers' Organization (*Oz LeTmura*), and the wage agreements that were eventually signed.³ The subsequent discussion will deal with the question of why the teachers rejected the Dovrat Commission's recommendations and whether and how it influenced the development of the educational system.

1. The Dovrat Commission: Its Establishment and Letter of Appointment

The Dovrat Commission was established in 2003 by then-Prime Minister Ariel Sharon and Minister of Education Limor Livnat, as a response to growing dissatisfaction with the state of education. It is not known exactly what prompted them to make the decision or which processes led to it, but in a report that appeared in *Ha'aretz* newspaper,⁴ Meir Shani (one of the Dovrat Commission's founders) said the following:

³ The comparison of the report by the Dovrat Commission, the teachers' organizations' two position papers, and the wording of the agreements signed between the government and the teachers is based on an analysis of documents that are open to the public. The discussion and conclusions are based on the positions, knowledge and experience of the author, who participated in the debates in the framework of his role as secretary of the Dovrat Commission's committees on teachers' pay and on resources and budgets. The chapter was sent for preliminary reading to some of the Dovrat Commission's members. Prof. Ruth Klinov, Prof. Na'ama Sabar-Yehoshua, Meir Kraus, Meir Shani, Rabbi Shai Piron, and Ofer Brandes made numerous important and useful comments – some of which are manifest in this document, either as explicit citations or as changes in the original content – though there remain, of course, differences between us. The opinions and conclusions are the author's alone.

⁴ Aviva Lurie, "The Reformist," *Ha'aretz*, 19 May 2004.

“[...] In the wake of findings to which we had been exposed, mainly as a result of a study by Dr. Dan Ben-David,⁵ a Tel-Aviv University economist, on the socioeconomic situation in Israel, we prepared a presentation that showed how the State of Israel had deteriorated in the past 30 years and was becoming a Third World nation, and appeared with it at various forums. Limor Livnat heard about it and asked us to show it to the heads of the Ministry of Education [...] There was a division of labor between us: [...] I presented the field of economics and society, and Shlomo dealt with education, and Limor, who hadn’t known him until then, was very impressed and sent me a note with the question: ‘Will Shlomo agree to head a committee that I’m about to appoint?’ I replied that yes, he would, without asking him. Afterwards she asked him and he said ‘No,’ and then I went and pressured him and he said: ‘All right, but if I’m in, you’re in, too.’ And that’s how it started.”

Meir Kraus, who coordinated the Dovrat Commission’s work on behalf of the Ministry of Education, describes matters similarly: “The initiative and enthusiasm of successful hi-tech and business people (Dovrat and Shani, for example) for the advancement of the education system in conjunction with the publication of unflattering results for Israel on international tests, in combination with the Minister’s willingness to examine in depth a reorganization of the system (something that politicians generally shun) – all of these gave rise to the idea of a national task force.”⁶

The Dovrat Commission’s letter of appointment from September 21, 2003, which was written in coordination and with the approval of its intended chairman,⁷ gave clear expression to economic emphases (“The

⁵ Now Prof. Dan Ben-David, Executive Director of the Taub Center.

⁶ All the citations from Meir Kraus and Ruth Klinov in this chapter are from their correspondence with the author and appear with their permission, unless noted otherwise.

⁷ Ruth Klinov writes: “Even before the committee’s establishment a few guidelines were concluded with then-Prime Minister Ariel Sharon and

educational system's first goal – to allow the State of Israel a relative long-term economic advantage”) and coherent societal conceptions (“The educational system's second goal is increasing social solidarity, and its third goal – reduction of gaps and increasing equality”). The letter of appointment also gave expression to a managerial-operational emphasis in its demand to establish the educational system on advanced managerial principles (clear vision and goals, quantifiable targets, transparency, efficiency, etc.). The Dovrat Commission was requested to draw up recommendations in several areas: central goals for the entire education system; the structure of the public education system; an examination of the teaching profession, for all of its aspects and for all age levels; and improved management in the education system. The Commission was asked to complete its work within a year.

It bears mention that the Dovrat Commission was asked to examine the topic of the teaching profession “in an effort to consult with the teachers' unions and their representatives,” but there was no instruction to achieve full cooperation. Neither was anything said about budgetary constraints that the Commission would have to take into consideration.

The Dovrat Commission submitted its report only slightly late – in January 2005 – and the government approved it immediately and almost without any discussion on the 16th of the same month (Government Decision No. 3060).

The government decision states:

1. The government views as a national priority and central goal the implementation of a comprehensive and overall reform in education, which will have a balanced budget according to the Commission's calculations, and adopts the principles of “The National Plan for Education,” as presented by the Dovrat Commission.

Minister of Education Limor Livnat. They included a budgetary framework for the cost of the reform.”

2. The government will adopt the principles of the recommendations of “The National Plan for Education,” which was drawn up by the Dovrat Commission, with the changes and adaptations required for their implementation, except for the following two topics:
 - Wages, working conditions and employment relations
 - The Dovrat Commission’s recommendations concerning expanding the required budget beyond the budgetary framework, including the expansion of free education in preschools
3. The government will adopt the budgetary framework on which the plan is based, subject to the priorities of the state budget as will be determined from time to time.

The Minister of Finance and the Minister of Education, Culture and Sport must without delay enter into an uninterrupted, sincere and genuine negotiation with the teachers’ unions and the New *Histadrut*, with the goal of implementing and conducting the reform in agreement and with their active cooperation [...] with the goal of achieving a collective agreement or collective arrangement, on matters that are customarily settled between employers and said workers’ unions.

Unlike the letter of appointment, which merely asked the Dovrat Commission to make “an effort to consult with the teachers’ unions,” the government decision enjoined the ministers concerned to “enter into an uninterrupted, sincere and genuine negotiation [...] on matters that are customarily settled between employers and said workers’ unions.” Nonetheless, representatives of the teachers’ unions had not been made part of the Dovrat Commission itself or of the working teams established in its framework, and that was no accident.⁸ Their lack of participation

⁸ Representatives of the Ministry of Finance and the Ministry of Education weren’t invited to participate in the Dovrat Commission discussions either.

stemmed from the strained relations between the unions' leaders and Minister of Education Livnat, and from the social-organizational-political approach of the initiators of the idea of a commission. In their view, workers' unions had no place in the forums dealing with the planning – and especially the management – of the educational system. Furthermore, in their opinion, the leaders of the teachers' unions over the years had become accustomed to examining everything from the narrow perspective of the teachers' working conditions, particularly those of the veteran teachers. Their positions were perhaps logical from the teachers' viewpoint, but were quite frequently opposed to the steps required to improve the educational system.

By this analysis, the teachers' unions were perceived more as an obstacle that needed to be overcome than as a resource that could and should be harnessed in order to achieve a common goal. Having the teachers participate in the discussions was liable to “throw a wrench in the works” and delay the timely drawing of conclusions, so it was, therefore, preferable to arrive at the recommendations without having them play a part in the discussions or considerations, and to bring them a finished draft for review and comments.⁹ This was in reference mainly to the possible injury to veteran teachers in favor of new teachers (an approach that was indeed among the Dovrat Commission's principal recommendations). At certain stages, Meir Shani, chairman of the Committee on Teacher Pay, asserted that there was no avoiding a protracted and bitter teachers' strike to compel the teachers to accept the

Nevertheless, the Ministry of Education had a representative in the Dovrat Commission serving as coordinator (Meir Kraus), and Ministry of Finance representatives were observers at the deliberations of the Committee on Budgets and Resources.

⁹ On the attitude of those heading the Dovrat Commission toward the issue of having teachers and representatives of the Ministry of Education participate, Ruth Klinov says: “From the start it was assumed that it would be necessary to impose the reforms on the teachers, and there was no chance of reaching an agreement with them.”

report's recommendations (indeed such strikes occurred, and the recommendations were not accepted).¹⁰

Also introduced into the government decision was the budgetary constraint, which had been entirely missing from the letter of appointment. It is not surprising that economic considerations and budgetary constraints should be included in a government decision, but there is room for wonder at the decision by the Dovrat Commission's chairman that his recommendations would not deviate from the existing education budget (even though mention was made of returning the sums deducted in the last cut decided on in 2003). This appears to have stemmed from a combination of several factors, including:

- A prior agreement with the heads of the Ministry of Finance that established that, as a condition for their future support of the Dovrat Commission's recommendations, it would not recommend budgetary deviations – and in return, the budget cuts of 2003 would be cancelled. The Commission strictly abided by this understanding and strayed from it only on the topic of preschools, regarding which it recommended a large budgetary increase.
- A noble attitude, although perhaps naïve in the Israeli political reality, that held that allocating additional resources to education is important and desirable, but even in their absence it is appropriate to put forward the best proposals for improvement within the existing budgetary framework.
- A belief (mistaken, in the author's view) that it is possible to execute large educational reforms even without significant budgetary increases.

¹⁰ Nonetheless, as will be noted, the Dovrat Commission chairman and the head of its Committee on Teacher Pay maintained contact with the heads of the teachers' organizations, and updated them on the recommendations that had been reached in order to hear their comments.

- An assessment that every large public system, the educational system included, suffers from inefficient and wasteful management, and it can therefore be improved by efficient use of the wasted resources.

It is possible also that the Dovrat Commission members' long experience in revamping and improving failing businesses without the need for significant additional resources also played a part. Either way, the decision proved to have fateful consequences.

These two basic ideological assumptions of the Dovrat Commission's chairman (and perhaps also of whoever appointed the Commission) – non-cooperation on the part of the teachers and adherence to the existing budget – laid the foundation for a face-to-face confrontation between the government, which adopted the Dovrat Commission recommendations, the teachers' unions and broad swaths of the public. In the first stage, the conflict ended with the absolute rejection of the Commission recommendations concerning working conditions and pay. In the second stage, when the emotional confrontation between the sides subsided and the basic assumptions were removed, agreement was arrived at and the recommendations were accepted almost in their entirety.

Spotlight: The Dovrat Commission: Composition and Structure of the Commission

The members of the Dovrat Commission were carefully chosen after its chairman had spoken with them and described its goals. Clearly the criterion for selection was to grant representation to as many relevant professions and fields of experience as possible while maintaining a certain homogeneity in terms of the approach towards problems in order to forestall interminable discussions and make it possible to reach conclusions and recommendations.

Part of the criticism directed at the Dovrat Commission was that it was managed by businessmen. Beyond the fact that the word "businessmen" is not a dirty word, cynical use was sometimes made of it for the purpose of undermining confidence in the Commission's work. The fact is that only a minority of its members were what are called "businessmen" (Shlomo Dovrat, Meir Shani and Yitzhak Danziger). Also serving on the Commission were two senior economists, experts in the educational field, Professors Ruth Klinov and Victor Lavy. Other members of the Commission were academicians from the educational or related fields – Prof. Ismail Abu Sa'ad, Dr. Meir Buzaglo, Dr. Dan Gibton, and Prof. Naama Sabar Ben-Yehoshua; active educators – Ilana Bar, Rabbi Avraham Gisser and Rabbi Shai Piron; and other experts and officials – Jacky Vanunu (local authority official), Prof. Nili Cohen (jurist), Rabbi Mordechai Karlitz (former mayor of Bnei Brak), former Minister of Education Prof. Amnon Rubinstein, and Ofer Brandes (past assistant to Minister of Education Amnon Rubinstein and special advisor to the Commission). Meir Kraus, senior official at the Ministry of Education, was the Dovrat Commission coordinator on behalf of the Ministry. The Commission's work was organized by Ruth Ottolenghi, former director of secondary education at the Ministry of Education, and Shmuel Har-Noi, who has filled a number of positions in the army, public service and the educational field.

The Dovrat Commission was divided into 12 professional committees, some of which were split into subgroups on additional topics: Committee on Regional Educational Administrations, Committee on Teacher Training and Professional Advancement, Committee on Educational Continuity, Committee on Children and Youth at Risk, Committee on

Measurement and Evaluation, Committee on Educational Streams and Communities, Committee on Legislation, Committee on School Management, Committee on Students with Special Skills, Committee on Teacher Pay, and Committee on Budgets and Resources (the latter two were coordinated by the author, Nachum Blass). These committees were attended by the Commission members and various experts in the fields specific to each committee. Observers were attached also to the committees.

Among the committee members and observers were representatives of the Ministry of Education and Ministry of Finance, but not one representative of the teachers' unions (with the exception of Ms. Ruhama Katzir on the Committee on Teacher Training and Professional Advancement). The fact that the teachers were not invited to participate in the Commission discussions does not mean that their opinions were not taken into consideration. The two teachers' unions drew up detailed and comprehensive documents, compiled by teams of experts. Participating in the preparation of the Teachers' Union's document *Ha'Tzaad HaKoveah* (Teachers' Union 2004), in addition to its own experts, were Y. Gabai, H. Gaziel, D. Gordon, Y. Cohen, N. Mark, A. Salent, D. Inbar and E. Peled. Participating in the preparation of the Secondary Teachers' Organization's document *Oz LeTmura* (Secondary Teachers' Organization 2004) – which was based on an earlier proposal that was drawn up by the organization, tried in five schools and had an evaluation component conducted by the Szold Institute – were Y. Friedman, L. Kramer-Hayon, U. Laor, R. Ben-Yishai, S. Kahan, S. Granit, G. Ben Dror, and D. Rosenfarb.

Beyond that, in the course of the Dovrat Commission work – especially towards the end of its discussions, after the principal recommendations had already been formed – numerous meetings took place between the Dovrat Commission chairman and the heads of the teachers' unions, as well as between the chairman of the Committee on Teacher Pay and an extended delegation of the teachers' unions, in order to obtain their consent to the recommendations.

2. The Dovrat Commission's Recommendations and Teachers' Unions' Positions: Similarities and Differences

In this section the Dovrat Commission's recommendations are compared to the positions of the teachers' unions, as expressed in the two documents noted previously and in the wage agreements eventually signed at the end of the process. The Commission dealt with a broad spectrum of topics concerning the education system. This section deals only with topics directly related to the teaching post, structure, working conditions, and pay.

The Dovrat Commission's recommendations will be presented at the start of each of the topics discussed, followed by the relevant recommendations of the teachers' unions, and at the end the understandings reached in the framework of the agreements that were signed: Ofek Hadash with the Teachers' Union, and Oz LeTmura with the Secondary Teachers' Organization. The intent is not to go into the complexities and details of the various documents; the comparison will refer only to the major points and essential differences between them.¹¹

• **Teaching work load and number of work days per week.** According to the Dovrat Commission's proposal, teacher and kindergarten teacher posts should be 40 weekly hours, and the week should consist of five school days of eight hours each. The proposal gave expression to the Commission members' view that the transition to a work structure similar to that of most of the workers in the economy is a

¹¹ It bears mention that there is a genuine difficulty comparing the five documents, each of which has dozens of items. Nonetheless, the Internet is replete with "comparisons" of the Ofek Hadash and Oz LeTmura agreements, and behind each comparison there is usually a particular bias and a tendency to praise one and condemn the other, in keeping with the writer's organizational affiliation.

primary condition for any genuine improvement in the status of the teaching profession.¹²

The teacher unions' proposals were similar in the matter of the work load, but different with regards to the number of work days per week. The Teachers' Organization's proposal was identical to the Dovrat Commission's, whereas the Teachers' Union's proposal spoke of overall work-hours as 36 hours a week.¹³ In both proposals the work week stayed at six days. Ultimately both agreements accepted the teachers' positions (work load of 36 hours in Ofek Hadash; 40 hours in Oz LeTmura and six days week).

The transition to a five-day school week came up during the discussions on a long school day, and was also discussed extensively in the report of the Public Committee for Examining a Long School Day (the Adler Committee). Shortening the school week was supposed to help finance the transition to a long school day, through the transfer of the Friday school hours to the other days of the week. The staunch opponents of this move were officials of religious education, who feared the "cancellation of the Torah" (*bitul Torah*). Some of the teachers were also opposed because they thought it would make it difficult to free one day a week for professional development, and other parties voiced concern about keeping students busy on Fridays. Ultimately, these contentions led to cancelling the linkage between the decision on a long school day and the decision on a transition to a shortened school week (Report of the Public Committee for Examining a Long School Day, 1996). The teachers' opposition was not particularly strong, however, because the existing work arrangements allowed them, even before the transition to Ofek Hadash and Oz LeTmura, to discharge a full-time post

¹² Nonetheless, the Dovrat Commission did not address the structure of the school year and the teachers' long vacations.

¹³ In a survey conducted on the topic of the Teachers' Union's position regarding a five-day school week, it emerged that most of the teachers support the transition to a five-day work week. The survey was conducted by the Rafi Smith Institute and based, among others, on focus groups among members of the Teachers' Union.

in five or even four days a week. Eventually the issue of the number of school days per week was not included in the new wage agreements, and the students' school week and teachers' work week remained at six days.

- **Share of frontal teaching hours out of total work-hours.** Until the signing of the new wage agreements, the number of frontal teaching hours required of a teacher in primary school education stood at 30, and in secondary education at 24. Nonetheless, many of the teachers (mothers of children up to the age of 14, male and female teachers above the age of 50, teachers filling various other positions at the school, and teachers preparing students for matriculation) enjoyed some flexibility in this matter, so in practice the number of frontal teaching hours in primary education was 25.5 (see Cohen 2011).

According to the Dovrat Commission's proposal, during the work week teachers in primary school were supposed to teach 26 frontal hours (25 hours in the 7th-8th grades), and teachers in secondary education – 23 frontal hours. In the remaining hours the teachers would engage in one-on-one instruction, fulfill various roles in the school, and conduct other professional activities. According to the proposal, the only reduction in hours of the position would be for mothers of children up to age 14 – and it would reduce the number of non-frontal hours.

The idea behind this recommendation was to bring about an increase in the actual quota of teaching hours in order to reduce the number of teachers and thereby raise their pay and improve their level. Likewise, it was meant to ensure full attendance by teachers at schools throughout the students' school week, which was also intended to be 40 hours.

The Teachers' Union's document "The Crucial Step" proposed that teachers in primary school would teach 24 frontal hours, and in secondary education – 21 hours (in other words, reduce the number of actual teaching hours). The Oz LeTmura document proposed that teachers in secondary education would teach 24 frontal hours (i.e., leave the status quo in place).

In the Ofek Hadash agreement the sides agreed that teachers in the 1st-6th grades would teach 26 frontal hours, whereas teachers in the 7th-

9th grades – 24 hours. According to the Oz LeTmura agreement, too, the teachers in the 7th-12th grades are supposed to teach 24 frontal hours. Ultimately, in the agreements the teachers' unions came close to the Dovrat Commission's recommendations, and even went beyond them in the case of secondary education.

• **Termination of most deductions of required frontal hours due to fulfilling other duties or specific reductions (maternity and age-related).** As mentioned, one of the most important principles which guided the work of the Dovrat Commission was organizing the educational system so as to reduce the number of teachers in order to make it possible to choose good teachers (increase choice) and raise their pay. As mentioned in the previous item, one of the methods proposed for that was to directly increase the number of frontal teaching hours required of a teacher.

Another primary recommendation in that direction was to cancel the regulations which entail a reduction in frontal teaching hours.¹⁴ The Dovrat Commission recommended cancelling, or more precisely replacing the benefit with additional pay for education hours (given to class homeroom teachers), age-related hours (given to teachers above the age of 50), hours for matriculation preparation, and hours for coordination of study subjects and class levels.

The Teachers' Union's document makes no reference to the topic, while the Oz LeTmura document proposes "cancellation of the method whereby various job benefits are granted through a reduction in hours and its substitution with a percentage increase in pay" (p. 16), or, in other words, full agreement is expressed with the Dovrat Commission's recommendations. Nonetheless, the Secondary Teachers' Organization

¹⁴ Prior to the professional negotiation over the Ofek Hadash program, an updated assessment was conducted of the average number of teaching hours in a class. According to the assessment, the average number of teaching hours a week taught by a teacher in a full-time post in primary education was 25.5; a teacher in lower secondary school taught in class 21.5 hours a week; and a teacher in upper secondary school taught 19 hours a week.

changed its position in the subsequent pay discussions, expressing its opposition to the cancellation of the hourly benefits. This issue lay at the focus of the protracted negotiations between the Teachers' Organization and the Ministries of Education and Finance.¹⁵

Ultimately, in the agreement with the Teachers' Union all of the reductions were cancelled (except those for age and mothers who teach), whereas in the agreement with the Teachers' Organization all of the benefits and rebates were left intact – an achievement the organization's spokespeople are wont to make much of. This is the most prominent difference between the two wage agreements, and the most prominent deviation from the Dovrat Report's recommendations. However, it is very important to emphasize that as opposed to in the past, the reduction in frontal hours for performing specific jobs does not reduce the overall number of hours a teacher is required to be at school; in other words, all of the jobs (including homeroom teacher and preparation for matriculation) must be performed at school.

- **Raising teachers' compensation.** The Dovrat Commission recommended that teacher and kindergarten teacher wages be raised and adjusted to the pay level of academic workers of similar education in the state service, taking into consideration their working conditions. Great emphasis was placed in particular on raising the pay of beginning teachers. "The Crucial Step" document proposed that teacher pay would be similar to the average wage in the economy, whereas Oz LeTmura demanded a raise of 60 percent for the transition to a 40-hour position.

The Dovrat Commission's recommendations were more generous than what "The Crucial Step" document required, but fell short of the Teachers' Organization's demands, because the pay of academicians in the state service is higher than the average wage in the labor market. The

¹⁵ It is hard to know for certain what the reasons were for the Teachers' Organization's change of position, but it may have stemmed from the vigorous opposition to this item in Ofek Hadash by some of the teachers affiliated with the Teachers' Union.

exact size of the raise in percentage points in the final wage agreement is unclear, and given to various interpretations.¹⁶ Nonetheless, the relative beginning wage proposed by the Commission at the end of 2004, which stood at NIS 5,500 for a teacher with a bachelor's degree and NIS 6,050 for a teacher with a master's degree, was higher than the pay won by the teachers' unions in 2008 and 2011 (NIS 5,591 and NIS 5,861, respectively). On the other hand, the pay of teachers who have reached maximum seniority in the agreements was higher than proposed by the Commission – NIS 15,382 versus NIS 10,285 for teachers with a bachelor's degree and NIS 15,720 versus NIS 13,750 for teachers with a master's degree. The tendency on the part of the teachers' unions to favor teachers with seniority at the expense of beginning teachers is clear. Nonetheless, the Dovrat Commission recommended allowing a pay increase of up to 12 percent for teaching more frontal hours than the required minimum, and in special cases, by a decision of the school administration, an increase of up to 20 percent.

- **Components of teachers' compensation.** The Dovrat Commission proposed to base teacher pay on fixed components and variable components.

- **Fixed wage components: seniority, education, and pay scales**

Seniority. The previous seniority formula in teacher pay set raises of 5 percent during the first seven years, 2 percent a year from the eighth to the 25th year of seniority, and 1 percent a year until maximum seniority – 36 years.

The Dovrat Commission did not demand the cancellation of seniority, but did recommend reducing its weight. It proposed a formula that would have added 2 percent to beginning pay in each of

¹⁶ As mentioned previously, most of the publications dealing with a comparison between the agreements refer to the pay issue, particularly the issue of pay per hour, and each of them finds ingenious ways to prove its point. Ultimately, after all the comparisons, although the pay raise in each of the agreements is granted in a different way, it is still rather similar.

the first 20 years, and another 1 percent a year for the following ten years. There is an enormous difference between the two formulas. Whereas under the previous formula the teachers' pay table at maximum seniority was higher than the starting wage by 114 percent, under the Commission's formula, teacher pay at maximum seniority would have been higher by only 50 percent.

In the proposals of the Teachers' Union there is no specific reference to the seniority issue, whereas the Teachers' Organization's proposal speaks of a 2 percent raise per year during the first 20 years and 1 percent a year from the 21st year. That is: the cumulative raise at maximum seniority (35 years) was supposed to be 72.5 percent.

The final settlement of the issue differed in each of the two agreements signed with the teachers' unions: in the agreement with the Teachers' Union it was agreed to a raise of 2 percent in each of the first seven years and 1 percent per year subsequently until the 36th year, altogether – 50 percent, (exactly as the Dovrat Commission proposed, although distributed over a greater number of years, i.e., the Commission's report did better for the teachers). In contrast, in the agreement with the Teachers' Organization the original seniority formula was retained.

Education. Before the signing of the wage agreements, any improvement in the teacher's level of education guaranteed a raise in pay. The transition from the level of a teaching qualification to an academic degree resulted in a raise of about 15 percent, another 8 percent for a second degree, and another 7 percent for a doctorate.

The Dovrat Commission recommended making entry to the teaching profession conditional on a bachelor's degree, granting a 10 percent raise for a master's degree, making the transition from Pay Level 5 to Level 6 conditional on qualifying for a master's degree (with the transition itself adding 11 percent to the wage), and an additional 3 percent for a third degree.

In the wage agreements with the two teachers' unions it was agreed to a pay raise for a master's degree in the range of 4-5 percent, and another raise of similar size for a doctorate.

Pay scales. Until the signing of the current wage agreements, the pay ladder was dictated by the wage scale, benefits for professional development and other types of remuneration of fairly limited extent (except for a large one for school principals and deputies). Employers had no discretion regarding raises in pay.

The Dovrat Commission proposed a fundamental change, which primarily involved setting pay scales where the transition between them is conditional only in part on seniority (a minimal time period was set for advancing from one level to the next) and on education (a bachelor's degree at least was required for the lower levels and a master's degree for the senior levels). Additional conditions for the transition between levels were the performance of various jobs at school, excellence in teaching and other criteria, some of which were proposed explicitly and others which were to be set at a later stage.

The teachers' unions accepted the Commission's approach in principle, and it was set in the final wage agreements.

In the wage agreements it was said that the criteria for transition from one level to the next would be determined by the Ministry of Education and the National Authority for Measurement and Evaluation (a body established in the wake of the Dovrat Commission, hereinafter: RAMA – the Hebrew acronym), in consultation with the teachers' unions. The differences between the Commission proposals and those of the teachers' unions lay in the details: the number of levels, the time period between transitions from one level to the next, and the procedures for approving transition between them. Eventually, promotion levels were set for teachers, and it was determined that a limit would be set on the share of holders of each level out of all the teachers (it is still unclear whether this refers to their statewide share or their share at each school). Likewise it was agreed that a limit would also be set on the share of holders of senior

levels out of all the teachers. Ofek Hadash and Oz LeTmura proposed to keep in place seniority, education and supplementary courses as central components in the determination of pay, and added the performance of various jobs at school to that.

- **Variable wage components (differential payments to teachers)**

The Dovrat Commission recommended including variable wage components in teachers' pay, for the purpose of augmenting and strengthening the administrative tools at a school principal's disposal and creating incentives for teachers. These components were supposed to take into account the background characteristics of the students (primarily the school's socioeconomic situation), exceptionally crowded classes, specific and temporary difficulties in a particular class, and so forth. The intention was to make the school principal a central and influential factor in recommendations for pay raises, and the added wages were intended to be conditional on the actual terms of work, not permanent and not part of the ordinary wage. The Dovrat Commission also recommended granting bonuses to school staff and considering compensating teachers of exceptional excellence. The proposal included a mechanism for the evaluation of teachers and of their potential for professional advancement, with the intention that teachers would have professional horizons that would guarantee due compensation for their abilities, professionalism, education, and achievements.

Both teachers' unions agreed to recognize excellence by differential compensation, but the promise was fulfilled only in the Oz LeTmura wage agreement.

- **Termination procedures.** One of the widespread criticisms leveled at the teachers' unions is the impediments they pose to terminating the employment of teachers who do not meet the profession's demands. The Dovrat Commission addressed this issue extensively and drafted termination procedures based on three principles. The first was the

creation of an evaluation report for teachers, which would have to be completed annually. This was meant to prevent arbitrary termination when previous evaluations were positive (and also to prevent rapid promotion when previous evaluations were negative). According to the Commission recommendations, the evaluation reports were supposed to be open to the teachers and teachers were to have an opportunity to appeal what was written in them. The second principle was that upon initiation of a termination, the teacher would have a right to bring representatives and counsel to the discussions. The third principle was giving teachers an opportunity to improve their performance. This right is of greater significance the greater the seniority of the candidates for termination. In addition, the Commission proposed that teachers whose employment is terminated would receive a grant to help them in adjusting to a career change – the size of which is determined by the teacher's seniority.

The teachers' unions' proposals did not mention the topic of termination, but in the Oz LeTmura wage agreement the matter appears in Appendix E, which defines the procedures required in order to terminate a teacher's employment. Several important things are included in the appendix: first, a termination procedure can be launched only after negative assessments of the teacher have been collected in the framework of the annual evaluation conducted at the school. Afterwards the teacher enters a "year of pedagogic accompaniment," in the framework of which various parties will visit the teacher's classes and the teacher will be given an opportunity to improve his or her performance. Failing this, an orderly process of visits to classes begins in the following year, and only at the end of this – if the teacher's performance has not improved sufficiently – it will be possible to terminate employment.

As opposed to the Dovrat Commission recommendations, with regard to the termination issue the Oz LeTmura document makes no distinction between young and veteran teachers, there is no reference to the teacher's previous performance (ostensibly a single negative assessment in evaluation may suffice), and there are no adjustment grants. Therefore,

the settlement reached in the final agreement falls short of the Dovrat Commission's proposals from the aspect of protecting the rights of terminated teachers.

- **Time clocks.** The Dovrat Commission's report included a recommendation that time clocks be punched, which does not appear in "The Crucial Step" and Oz LeTmura documents, but does appear in the wage agreements with the two teachers' unions. Here, too, the wage agreements inclined towards the Commission.

- **Teachers' rooms and physical conditions.** The Dovrat Commission recognized the need to significantly improve the physical conditions afforded to teachers. Attention was focused on personal work rooms for teachers, separate washrooms, and computer and communication services. Funding was even allocated to the topic, and the Ministry of Education was asked to prepare plans for improved teacher rooms. These matters were also mentioned in the teachers' wage agreements, but no clear-cut rules were set.

- **Class size.** Although the Dovrat Commission did not recommend a reduction in class size, it did clarify that a change in the method of funding might be helpful in this matter, insofar as schools serving weaker populations would be allocated sufficient funds to enable them to divide large classes.

The Teachers' Union recommended classes of 25-27 students. On the other hand, the Secondary Teachers' Organization did not refer to the matter in the Oz LeTmura document submitted to the Dovrat Commission. This is surprising in light of the fact that the topic was at the crux of the great teachers' strike, at the end of which the teachers were promised that the government would take action to cut the maximum class size to 32 pupils.

Class size was not included in the wage agreements, but the Ministry of Education appointed a committee to examine the ramifications of the decision to make classes smaller. That committee submitted several recommendations, but only a small minority of them was implemented.

The difficulty of implementation stems mainly from the high cost – including the one-time component of investment in construction – which according to assessments carried out by the Taub Center could reach more than NIS 9 billion (Blass 2008).

There were many other items in the Dovrat Commission's report concerning the training and continuing education of teachers, the school principal's job, and the teachers' physical working conditions. At least some of them were also discussed in the wage agreements. These central points, clearly indicate that the similarity and accord between the Dovrat Commission's recommendations and the documents submitted by the teachers to the Commission – and even more so for the wage agreements that ultimately were signed – far exceeded the points of disagreement.

3. Analysis and Understandings

Why was the teachers' opposition to the recommendations of the Dovrat Commission so sweeping, despite the great similarity between the Commission's report and that of the teachers' unions, and in the agreements ultimately reached between them? Why was the agreement with the Teachers' Organization only signed three years after the agreement with the Teachers' Union?¹⁷ Why did the teachers' unions so resolutely oppose the Dovrat Commission's report and contend that it would lead to grave injury to teachers as well as to massive layoffs? The answer to these questions lies at two levels:

Exclusion of the teachers from the Dovrat Commission's deliberations. As mentioned previously, the Commission's report in large measure expressed a managerial worldview holding that the education system is an organizational-economic system, like any other

¹⁷ The agreement with the Teachers' Union was signed on August 31, 2008, and that with the Teachers' Organization was signed on August 14, 2011, although the first schools that entered the Ofek Hadash framework preceded the agreement with the Teachers' Union by a year.

complex and intricate system, and therefore given to command and control using advanced managerial tools. This is not to say that the Commission ignored the moral, ideological and political aspects so central to societal systems in general and the educational system in particular; nor were they unaware of the complex and conflicted social reality in which the Israeli educational system functions. However, most of them, on the basis of their years of experience and their familiarity with the bitter struggles between the teachers and the Ministries of Education and Finance, were convinced that the teachers' unions, in their professional demands and the restrictions they imposed on school principals in everything concerning compensating good teachers and terminating the employment of bad teachers, are to a large degree one of the primary factors responsible for the sorry state of the educational system. Under these circumstances, it was impossible and would even be a mistake to cooperate with them in the Commission's deliberations.

Due to this preconception, the teachers' representatives were not seated as members of the Dovrat Commission or of the committees that were established, nor were they granted a place in the teams' deliberations as observers – even though representatives of the Ministries of Education and Finance participated in these deliberations. Nonetheless, the Dovrat Commission chairman and the chairman of the Committee on Teacher Pay met with representatives of the teachers' unions once every few weeks, updated them on the principal recommendations, got their responses, and gave them drafts for review and comment. It can, therefore, be said that the teachers' unions were constantly informed of the recommendations that were being formulated and had sufficient time to respond; and respond they did. On some topics their opinion was accepted and on others not. The final recommendations appear to have been ones they could live with,¹⁸ but the attempt to reach agreement with the representatives of the teachers' unions in the final stage of the Dovrat Commission deliberations, when the

¹⁸ Letter by Meir Shani from July 22, 2012.

recommendations were already drawn up – through intensive meetings of the Commission chairman with the heads of the teachers' unions, as well as protracted discussions between representatives of the teachers' unions and Meir Shani, chairman of the Committee on Teacher Pay – was fruitless and in vain.

Could these agreements have been reached if the teachers had been made a part of the Commission? Opinions are divided. Ruth Klinov, for example, believes that the changes proposed by the Dovrat Commission were “far-reaching structural changes, and there was not a chance that the teachers would accept them, whether or not they would have been allowed to serve on the committees [...] As opposed to that, its conclusions regarding less contentious topics were similar to those of the teachers' unions, and the work done by the committee on the topics of pay and working hours helped to reach the agreements with them.” Meir Kraus thinks that “blaming the failure of implementation on the fact that the teachers' representation was not allowed a place along the way limits the scope of the examination that this event warrants and calls forth [...] There is no doubt that the organizations, too, were not handled properly, although I cannot say how this relationship should have been managed, nor am I certain that their full integration in the committees would have been the proper solution.”

A different argument is that the fact that the teachers' unions were not given a place on the Dovrat Commission may perhaps have allowed it to recommend conditions that were potentially good for the system, which would not otherwise have been possible. In fact, it took several years for the teachers' unions to reach agreement with the government on a draft proposal similar to the one drawn up by the Commission. According to this approach, if the teachers had been part of the Commission, it is reasonable to assume that the draft would not have been drawn up in the first place and there would have been no pressure for such a significant systemic change.

Despite these positions, the fact that the agreements ultimately signed were so close to the sides' positions at the start of the process speaks for

itself, and proves that it was possible to reach these agreements at earlier stages. That may have required the Commission to work longer with less “efficient” deliberations, but the reward would have been a narrowing of the bitter struggle that accompanied them. Today, of course, it is entirely impossible to prove which of the positions is more correct.

To this basic practical aspect of how the Dovrat Commission operated (lack of participation on the part of the teachers’ unions), which aroused antagonism towards its recommendations from the start, must be added first and foremost the basic conflict of interest between workers and their employers, which frequently outweighs their common goals; the strained relationship between the heads of the teachers’ unions, especially the chairman of the Secondary Teachers’ Organization, and then-Minister of Education Limor Livnat and the Minister of Education serving after her, Prof. Yuli Tamir; and the deep distrust of the government representatives in the deliberations over the wage agreements. The bitter traditional rivalry between the teachers’ unions and their battles over the loyalty of lower secondary school teachers also made no small contribution to the breakdown of deliberations over one wage agreement, and to the agreement with the Teachers’ Organization’s being signed only three years later.

The decision not to deviate from the existing budgetary framework.¹⁹

It is impossible financially, organizationally, socially, or politically to carry out a reform at the level and scope proposed by the Dovrat Commission without a significant increase in budgetary allocations. Cumulative experience shows that educational reforms in Israel and elsewhere around the world that were intended to improve the educational systems have involved substantial budgetary increases, both for significant increases to the basic budget, not only in the transition

¹⁹ This statement must be slightly qualified, because the Dovrat Commission demanded that the funds deducted in the last cut of the Ministry of Education’s budget be returned. Furthermore, it was noted in the report that in order to implement some of the recommendations, especially on the topic of kindergartens and a long school-day, additional funds would be necessary.

period, but also for major deviations from the original estimations in the implementation budgets. Nonetheless, it often turns out that when there has been a will to persist in reform implementation, the resources, which no one even dreamed of at the time of the reform planning, have been found.

However, as noted previously, the Dovrat Commission chairman was committed to prior understandings with the Prime Minister, Minister of Finance and Minister of Education, and he believed that since the educational system was being managed inefficiently it would be possible to achieve significant improvement even without additional budget allocations. This approach was also expressed in the report itself, which stated: "In our work we found many cases of inefficiency and inefficient use of resources in the education system, such as duplication of organizational entities (staff, districts, authorities), inefficiency in the teachers' training network, and the improper use of resources intended to strengthen weaker populations" (p. 50).

During the deliberations over the various drafts of the report another position was also heard, suggesting that the report should state:

"Nonetheless, it seems to us after in-depth examination that the correction of these flaws and inefficiencies alone cannot lead to the educational system's rising a full step in the level of services that it provides to its students and their learning and educational achievements. Without significant additional resources, it is impossible, simultaneously and in parallel, to significantly improve the teachers' pay, to lengthen the school day, to reduce the number of students in the classrooms, to upgrade the quality of the physical infrastructures, to increase the class sessions and prevent dropout, and to enable whoever has failed to complete a term of study by the age of 18 to do so at a later stage. After a year's work it is clear to us beyond any doubt that such an upward step can be accomplished only gradually and over several years, and it requires a change in society's general set of priorities and an increase in the educational system's share of overall national resources. As noted,

this undertaking may be impossible in the short-term, but it is undoubtedly necessary in the medium- and long-term.”

Ultimately this position was not accepted, even though leading members of the Dovrat Commission supported it.²⁰

Various estimates performed in the framework of the Committee for Budgets and Resources pointed to the extent of the additional budgetary allocation required to implement all of the Commission recommendations. That sum was in the range of NIS 4-5 billion, but the Dovrat Commission chairman and Ofer Brandes, who played a central role in drawing up the Commission recommendations, rejected these estimates. They believed that they were unfounded and unrealistic, that there was no chance that the government decision makers would accept them, and that the calculations they themselves had performed showed it was possible to implement the Commission recommendations even without any additional budget.

The heads of the teachers' unions and others who criticized the Dovrat Commission report immediately pounced on the large discrepancy between the report's recommendations and the resources it allocated to them, directing much of their criticism at that gap. Ultimately, significant sums were added to the education budget of a magnitude similar to the estimates of the Committee on Budgets and Resources in order to simply

²⁰ Ruth Klinov, for example, says that “in effect a lack of flexibility in the founders' group revealed itself, and there was a refusal to change several proposals that were not acceptable to the committee members, even such as were not acceptable to the majority. In particular there were differences of opinion concerning the ability to meet the financial constraint.” Meir Kraus says: “In the matter of the budget there was a mistaken assumption that there are tremendous wasted surpluses within the system, and more efficient use of them would generate the resources required to carry out the reform [...] In the deliberations of the budget committee they examined the various items and the possible sources for diversion and found a few hundreds of millions, whereas to carry out the reform several billions were required. The unwillingness to ask for an increase in budgetary allocation [...] was a mistake.”

fund the wage agreement, without reference to the other recommendations.

In summary. The Dovrat Commission recommendations, which were the deepest and most comprehensive presented before decision makers in many decades, were received with sweeping opposition by the two teachers' unions. While on the face of it it may seem that in the wake of the struggle between the teachers' unions and the Ministry of Education the Commission recommendations were given the kiss of death, in fact their impact can be seen in several areas. First, they led to the establishment of two important bodies: the National Authority for Measurement and Evaluation (RAMA), and the National Institute for Training School Principals (*Avnei Rosha*). In addition, the socioeconomic index drawn up by the Shoshani Committee – which included discriminatory policies towards the Arab Israeli population such as granting privileges to settlements in national priority areas and to new immigrants – was replaced by the “Strauss Index.” This measure removed these components from the index's calculation and included in it the income component, thus becoming more egalitarian – like the rest of the Dovrat Commission recommendations. However, the Commission recommendations had their largest practical influence in the area of teachers' working conditions. Here the power of the combination of the Commission recommendations and the programs for change drawn up by the teachers' unions can be seen. This led to a sober assessment of reality and a similar conception of education's goals which ultimately led to important outcomes with the potential for genuine change in the educational system. Beyond its concrete practical influence, the Dovrat Commission had – and still has – a far-reaching effect in shaping the framework of the discourse and public debate on everything that concerns the basic issues of the education system in Israel.

Appendix

Appendix Table 1. **Comparison between Ofek Hadash and Oz LeTmura wage agreements and the Dovrat Commission's recommendations**

	Dovrat Commission	Ofek Hadash (Grades 1-6)	Ofek Hadash (Grades 7-9)	Oz LeTmurah
Work week ²¹	5	6	6	6
Frontal teaching hours	23-26 ²²	26 ²³	24	24 ²⁴
Other hours	13-17	10	12	16
Total weekly work-hours	40	36	36	40
Time clock	Not discussed	No	No	Yes

²¹ Days of school activity. In the wage agreements with the teachers it was determined that they can work five days a week whereas the school is open six days a week.

²² Twenty-six hours in primary education and 23 hours in secondary education.

²³ Job hours are not deducted from the number of frontal hours. The Teachers' Union's original proposal spoke of 24 frontal hours in primary schools and 21 hours in secondary education. In Ofek Hadash, hours reduced for mothers who teach are taken from the hours at school and not from the frontal hours. Age hours are still deducted from frontal hours, but no additional hours will be deducted due to continuing education studies.

²⁴ Work-hours are deducted from the number of frontal teaching hours, as well as work-hours with the Teachers' Organization.

Appendix Table 1. (continued)

	Dovrat Commission	Ofek Hadash (Grades 1-6)	Ofek Hadash (Grades 7-9)	Oz LeTmurah
Starting salary, BA ²⁵ , NIS	5,500	5,581 financial benefit only	5,581 financial benefit only	5,581
Maximum salary, BA, NIS	10,835	15,382	15,382	15,382
Starting salary, MA, NIS	6,050	5,650	5,650	5,650
Maximum salary, MA, NIS	13,750	15,720	15,720	15,720
Pay components	Seniority, education, jobs, skills, outputs	Seniority, education, skills, outputs, continuing education. benefits, percentage benefits for jobs performed	Seniority, education, skills, outputs, continuing education. benefits, percentage benefits for jobs performed	Seniority, education, skills, outputs, continuing education. benefits, percentage benefits for jobs performed

²⁵ The Dovrat Commission proposed that teachers' pay would be higher than the average wage in the social science professions and higher than the average wage in the economy. In its original proposal the Teachers' Union proposed indexing to the average wage in the economy, and the Teachers' Organization demanded a 60 percent raise. All of the Dovrat Commission's proposals are in 2005 prices.

Appendix Table 1. **Comparison between Ofek Hadash and Oz LeTmura wage agreements and the Dovrat Commission's recommendations**

	Dovrat Commission	Ofek Hadash (Grades 1-6)	Ofek Hadash (Grades 7-9)	Oz LeTmura
Evaluation	To be determined ²⁶	To be determined by Ministry of Education with Teacher's Union and RAMA	To be determined by Ministry of Education with Teacher's Union and RAMA	To be determined by Ministry of Education with Teacher's Union and RAMA
Advancement	Seniority and evaluation – criteria to be determined, tenure requirement, no limit to number of teachers at senior level	Seniority and evaluation – criteria to be determined, tenure requirement, number of teachers at senior level limited	Seniority and evaluation – criteria to be determined, tenure requirement	Seniority and administrative evaluation, jobs performed, limited number of advancements
Differential pay	Level and group bonuses, tied personal bonuses	Not discussed	Not discussed	Grants to 15% for best evaluations, grants to staff of excellent schools

²⁶ The National Authority for Measurement and Evaluation (RAMA) was established in the wake of the Dovrat Commission's recommendations.

Appendix Table 1. (continued)

	Dovrat Commission	Ofek Hadash (Grades 1-6)	Ofek Hadash (Grades 7-9)	Oz LeTmurah
Termination procedure	Set procedure by seniority, can take 1-2 years, adjustment grants, number of annual terminations are limited, evaluation is basis for procedure	Not discussed	Not discussed	Set procedure of not more than 2 years
School size	250-600 in primary school; 400-1000 in secondary school	Not discussed	Not discussed	Not discussed
Class size	No reduction	Gradual reduction to 32	Gradual reduction to 32	Gradual reduction to 32 ²⁷
Physical conditions	Individual work areas, improved washrooms	Individual work areas	Individual work areas	Individual work areas

²⁷ The reduction was determined in the wake of the secondary school teacher's strike, but is not part of the wage agreement.

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**V. SOCIAL SERVICES
AND EXPENDITURES**

The Cost of Social Welfare: Israel in Comparative Perspective

Michael Shalev, Johnny Gal
and Sagit Azary-Viesel*

Abstract

Data collected by the OECD make it possible to compare the share of national resources devoted to social welfare (including health and housing) in Israel with other advanced economies from 1995-2007. Compared to the five Western European countries included in this research, Israel's public social expenditure is low, and in most areas except health, it is similar to the United States. The Israeli government spends relatively little in areas which have the potential for improving the long-term economic well-being of citizens: active labor market policies, housing and support for families with children. The retirement income provided by the state through the social security system is much less generous than in Europe, but spending on public employee pensions is high. The overall magnitude of public social expenditure in Israel fell during the 2000s, at a rate without parallel in the other countries. Retrenchment has been marked in programs that mainly serve the economically vulnerable. Private spending on health and pensions is rising, but remains far below the US and some European countries.

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Early in 2010, in preparation for Israel joining the OECD, the organization published a comprehensive review of Israel's social and labor market policies (OECD 2010). The report emphasized that Israel's poverty rate is higher than that of any other OECD member country. While arguing that changes in policies related to the labor market would be critical for attacking problems of poverty and inequality, the report also emphasized that public social spending is lower in Israel than in OECD countries (with the exceptions of Turkey, Mexico and Korea) and stated, "Cutting Israel's very high rate of poverty will only be achieved with extra resources."

In light of these observations about social spending in Israel, it is important for policy makers and the public to have a clear picture of where Israel stands in a comparative perspective. Did the OECD appropriately take into account differences in demographic needs and economic resources relative to other countries? Assuming that Israel's commitment to social security and redistribution is indeed lower than in other economically developed countries, is this true for all the social needs or only for some? It may also be asked whether Israel's below-average allocation of public resources to social purposes is offset by above-average spending that is private and voluntary in nature.

Evaluations of Israeli social policy by OECD experts are not the only source of criticism in recent years. In July 2011, only a year and a half after the OECD warned Israel, "Each country gets the poverty rate it is prepared to pay for," massive numbers of Israeli citizens mobilized in the streets of Israel behind a demand for less inequality and more social justice. The leaders of the protests and their expert advisors accused the government of retreating from its responsibility for the economic welfare of citizens, neglecting the needs of the disadvantaged and the middle classes alike. They called for revitalization of the welfare state in Israel, and argued that Israel had fallen behind the progressive European countries which it once sought to emulate. Here, too, questions are raised about the level and composition of Israel's social spending from a comparative perspective, but with an additional emphasis – on trends

over time. In which areas, and in relation to which countries, has Israel fallen behind the welfare states of other advanced countries?

1. Background

The Data

By taking advantage of new data that has become available as a result of Israel's membership in the OECD, this chapter seeks to furnish the best available evidence for addressing these questions. One of the most important activities of the OECD is to collect and disseminate standardized, high-quality economic statistics. Since 1996, the organization has also been responsible for what it calls the "Social Expenditure Database," SocX for short. The most recent available SocX data include detailed measures for Israel for the years 1995 through 2007 (for other OECD countries the series extends further back in time). Although some information is also available for more recent years (Adema, Fron, and Ladaïque 2011), its scope is limited and in any event it would be inappropriate to compare Israel to Europe and the United States in the years since 2008, because most of the other countries were deeply affected by economic slowdowns due to the international financial crisis. Using the available detailed data up to 2007, it is possible not only to locate Israel today in the international table of advanced economies, but also to characterize Israeli trends over more than a decade in relation to developments in other countries.

The SocX system is unique because it combines, in a single framework, components of social welfare that were never previously integrated in a cross-national database (Castles 2005; Adema and Ladaïque 2009). First, both arms of the welfare state – services and transfer payments – are included. Second, the role of tax concessions is recognized as an alternative to public provision of services and cash benefits alike. Third, the OECD strives to encompass not only public expenditure in the framework of the welfare state, but also private

spending on collective social protection, whether voluntary or imposed by government.

Along with these impressive achievements, SocX has characteristics and limitations which it is important to note. As far as public social expenditure is concerned, the OECD concept of what is “social” parallels the conventional definition of the welfare state as comprising public provision of services like health, housing and childcare, but not education. Similarly, SocX covers all the standard transfer payments by public authorities, whether based on social insurance (e.g., unemployment benefit), social assistance (like Israel’s Income Security program), or some other criterion (e.g., benefits to the blind). The basic underlying idea is that “social” schemes are distinguished by being financed collectively. However, when this principle is applied to private spending, it rules out many instances that from a purely functional viewpoint are often thought of as social. Examples are voluntary and unsubsidized individual private pensions, or private purchases of services like childcare or medical consultations.

One final technical point must be emphasized. Under the SocX approach to transfer payments, in any given year the cost of a social program is not based on what it actually costs regardless of who pays for it. Instead, the calculation refers to how much money is transferred to beneficiaries. This distinction is particularly salient in the area of old-age allowances and pensions, which in all countries are the most expensive transfer programs. Since countries vary greatly in both their age structure and how pension contributions are fixed, there could be a substantial difference between the ranking of countries based on the amount of contributions they collect each year, and how much money they pay out. SocX only refers to the second of these.

In general, in addition to the fact that the logic underlying the OECD database is not always consistent with accepted approaches, SocX has practical limitations. Simply put, not all countries (including Israel) provide the OECD with complete and fully-compatible data. Accordingly, this chapter takes a conservative approach. It focuses

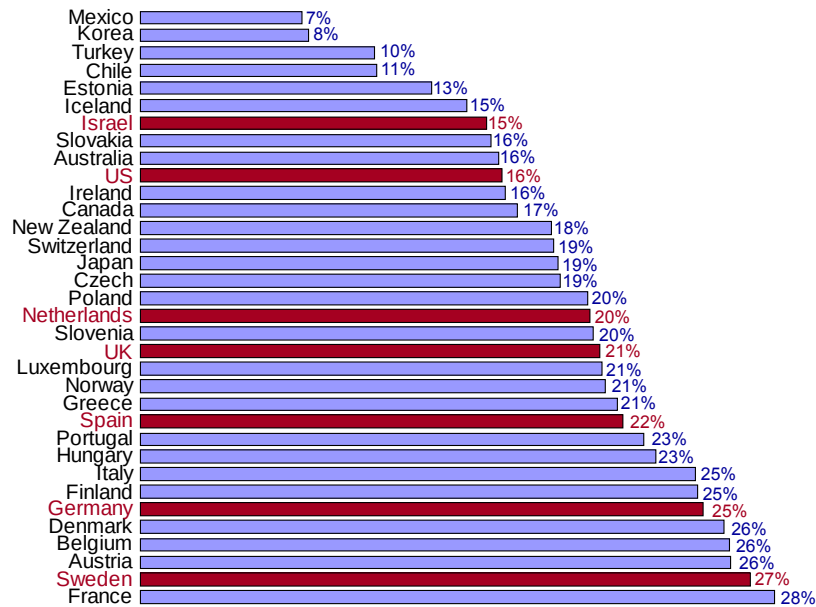
mainly on specific programs and much less on data based on a combination of different factors. Some indications are given of differences across countries in total social expenditure, but due to the technical and practical limitations of the data on private social spending, no estimates are given of its share in total overall social expenditure. Detailed information regarding the concepts and methodology underlying the SocX database, as well as definitions of the different types of social programs which it distinguishes (with Israeli examples) can be found in the Appendices to this chapter.

A final important characteristic of the current study is that the presentation of findings does not include all of the OECD countries for which data are available. To make it easier for readers, the focus is on comparing Israel to half a dozen OECD countries whose welfare states represent the diversity among developed economies with long-established democratic regimes.

Overview

Figure 1 gives a preliminary indication of the wide variation across OECD member states in the proportion of the national product devoted to financing the welfare state. This figure refers only to public social expenditure, which Wilensky (1975) described as the “welfare effort” of governments. The relative amount invested in welfare in Israel (15.5 percent of gross domestic product) is one of the lowest, below the English-speaking countries where the lowest spending is 16-18 percent of GDP. The range of values for Western European countries (except for Switzerland and Iceland) is 20-28 percent, and eight of them devote at least one quarter of their economic resources to public social welfare which is 10 percentage points above the Israeli level. The six countries other than Israel shown with red bars are those on which the chapter focuses. As can be seen, they represent the full spectrum of welfare state expenditure.

Figure 1
Total public expenditure
 as percent of GDP, 2007



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

Table 1 includes a range of more specific indicators based on expenditure taken from the SocX database, and also includes estimates of private expenditure in the two areas – health and pensions. The comparison is based on five important areas of social welfare, and two additional areas combined under the general heading “other risks.” Where appropriate, subdivisions are included to distinguish between public and private programs, or to take into account important differences between types of programs that operate in the same functional area (e.g.,

government support of the labor market through unemployment benefit versus active programs like retraining which are designed to assist the unemployed in improving their chances in the labor market). These titles are defined in Appendix 2, and each is discussed separately in later sections.

Table 1. **Social expenditure in 2007: Israel and six OECD countries**
by category, as percent of GDP

Expenditure type	Israel	US	Germany	Spain	UK	Netherlands	Sweden
Family							
Child allowance	0.7%	0.0%	0.7%	0.1%	0.8%	0.6%	0.8%
Other	1.3%	0.7%	1.2%	1.1%	2.5%	1.4%	2.6%
Labor market							
Unemployment	0.3%	0.3%	1.4%	2.1%	0.2%	1.1%	0.7%
Encouraging employment	0.1%	0.1%	0.7%	0.7%	0.3%	1.1%	1.1%
Other risks							
Survivors	0.7%	0.7%	2.1%	0.6%*	0.1%	0.2%	0.5%
Disability	2.9%	1.3%	1.9%	2.5%	2.4%	2.9%	5.0%
Housing	0.0%	0.0%	0.6%	0.2%	1.4%	0.4%	0.5%
Health							
Public	4.3%	7.2%	7.8%	6.1%	6.8%	6.0%	6.6%
Private	0.5%	5.6%	1.0%	0.5%	0.1%	0.6%	0.0%
Tax expenditure	1.0%	1.9%	1.7%	0.6%	0.4%	0.9%	0.0%
Old-Age	5.3%	9.6%	9.3%	6.5%	10.3%	8.7%	10.6%

* This percent is for 2005.

Table 1. (continued) **Social expenditure in 2007: Israel and six OECD countries**

by category, as percent of GDP

Expenditure type	Israel	US	Germany	Spain	UK	Netherlands	Sweden
Total share of GDP for these items	17.1%	27.5%	28.3%	22.4%	25.4%	23.9%	28.3%
Total share of GDP (excluding health)	12.3%	14.7%	19.4%	15.8%	18.4%	17.4%	21.7%
Total share of GDP: all SocX categories	18.0%	28.6%	29.7%	22.7%	26.7%	27.9%	30.2%
Programs for the elderly							
allocation per elderly person, as percent of GDP per capita							
Social pensions (public)	21%	25%	36%	33%	34%	31%	38%
Occupational pension (private)	10%	35%	4%	0%	29%	24%	12%
In-kind benefits (public)	2%	0%	0%	3%	3%	5%	13%
Pension and benefits for civil servants (public)	21%	17%	7%	4%	0%**	0%**	0%**

** In the UK, Netherlands and Sweden, civil service pensions are not administered by the state, and are therefore classified by the OECD as private occupational pensions.

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

To compare spending across countries, the effects of differences in their size and wealth are controlled by calculating the ratio of expenditure to gross domestic product (GDP). However, some areas of social spending – especially on the elderly – are sensitive to the demographic profile of a country's population. For this reason, the detailed items of old-age spending in the bottom rows of Table 1 have been adjusted to a per elderly basis. They are discussed in detail in the next section.

The countries chosen for the purposes of comparison reflect the approach to comparative analysis of welfare states pioneered by the sociologist Gosta Esping-Andersen (1990) in his book *The Three Worlds of Welfare Capitalism*. This book distinguished three fundamentally different approaches to social welfare that have developed in the advanced economies of the West. Each of these is characterized by a cluster of policies denoted as a “welfare state regime.” In the liberal welfare state regime (liberal in the economic sense), most closely approximated by the United States, the government aims to maximize individual responsibility and minimize the role of the state in social welfare. The social-democratic regime, epitomized by Sweden and the other Nordic countries, is essentially the mirror image of the liberal model. The state offers a wide array of cash benefits and publicly provided services, many of which are targeted to citizens at large and not just the needy. In accordance with these expectations, for eight of the 13 indicators in Table 1 the US and Sweden represent the extreme values (highest or lowest) recorded for the six countries examined. In particular, the Swedish state does much more for the elderly while the US relies heavily on private pension solutions; expenditures on private medicine are very high in the US while almost nonexistent in Sweden. The same is true of “tax expenditures” (revenues that governments forfeit due to income tax exemptions and reductions for social purposes). Strong contrasts are also observed in public expenditure on family benefits and services, labor markets, and disability (those with handicaps, sick leave, occupational injury, and illness). Spending on these four disability

programs combined account for a staggering 10 percent of Sweden's GDP, more than four times the American ratio.

The third welfare regime, termed "conservative," is characteristic of Continental and Southern Europe, represented here by Germany and Spain. This type of welfare state has historical roots in efforts by authoritarian regimes and the Catholic Church to defuse nascent workers' movements and forestall the rise of democracy. Its social policy trademarks are reliance on social insurance schemes designed to protect the earning power of male wage earners, which offer varying levels of protection for different groups (with the most favorable treatment traditionally reserved for civil servants). The conservative regime reflects a preference for community and family responsibility over either the state or the market. This profile can be seen in some of the indicators measured here for Germany and Spain – namely, the marginal role of private (occupational) programs in the pension field, the magnitude of spending on unemployment insurance, and the state's modest commitment to services to families (especially programs geared to supporting the employment of mothers).

In order not to limit the present analysis to countries that exemplify Esping-Andersen's three regimes, two hybrid cases have also been included. The Netherlands combines social-democratic and conservative features, and the United Kingdom was once a welfare state pioneer, but has altered course several times since Margaret Thatcher's neoliberal reforms.

Locating the Israeli welfare state in relation to these affluent Western countries is challenging due to the distinctive features of the Israeli case: the commitment of the state (and earlier, the Zionist movement) to Jewish immigration, settlement and defense; the historic role of non-governmental organizations (like the *Histadrut* and the Jewish Agency) in the social welfare area; and the transformation of the Israeli political economy over the last three decades from statism and collectivism towards the neoliberal model (Rosenhek 2003; Shafir and Peled 2002). While some analysts have argued that Israel is mostly similar to the

Conservative welfare states (Stier, Lewin-Epstein, and Braun 2001; Gal 2010) in terms of the expenditure indicators measured by the OECD, it appears to be most similar to the United States. In order to divide Israel and other countries into distinct groups it is necessary to take into account the degree of similarity in their social spending profiles based on the range of indicators detailed in Table 1.¹ This has been done here using a statistical technique called latent class analysis (Vermunt and Magidson 2002). Note that the larger the number of clusters (groups of countries) generated by this technique, the greater the similarity between the countries found in each cluster. In order to validate the apparent link between Israel and the United States, Israel's classification should be tracked as the number of clusters is increased.

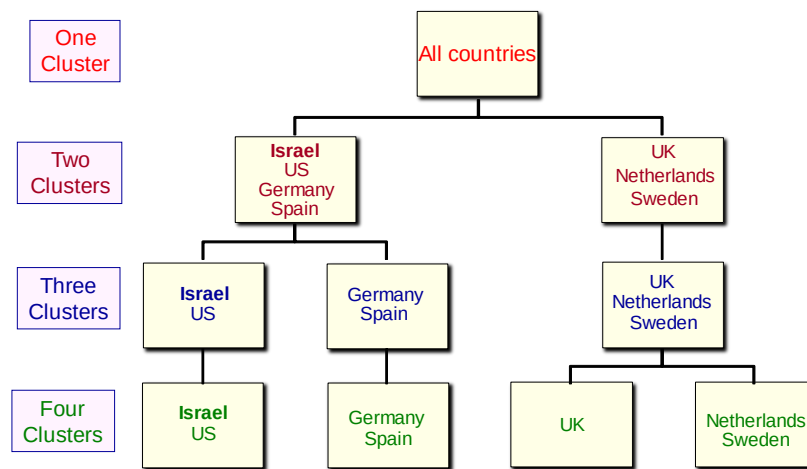
Figure 2 presents results for two, three and four clusters. The first result (for two clusters) groups Israel with the US and other countries, while at the next step (three clusters) the two countries form a separate subgroup. As expected, the three clusters identified at this point fit Esping-Andersen's typology of three different social policy families. When four clusters are generated, the UK – characterized earlier as an ambiguous case – forms a separate cluster. (As shown in Table 1, when it comes to the minimal role of the state in labor markets and the magnitude of private pensions, the UK is much more like the US than Sweden.) Israel, however, remains firmly positioned alongside the US.

In one important parameter of expenditure, the cost of healthcare, Israel and the US are polar cases: the gap between them equals 8 percentage points of GDP. In general, spending on healthcare varies widely from country to country, partly for demographic reasons and partly due to differences in the method of healthcare provision and its cost-efficiency. When this problematic category is set aside, it is easy to see the resemblance between the US and Israel – primarily because these are the only countries that spend under 15 percent of their national GDP on social programs other than health. Nevertheless, so far as the other

¹ In order to avoid double-counting, total old-age spending was not included in the analysis.

country clusters are concerned, aggregate social spending is not necessarily a reliable indicator of the distinctions between welfare regimes. In particular, although social-democratic Sweden is the highest spender, conservative Germany is next – before Spain, an additional example in this study of the conservative welfare regime.

Figure 2
Grouping countries by social expenditure indicators



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

While the statistical analysis reflects unmistakable resemblances between Israel's social expenditure configuration and that of the United States, they are certainly not identical. For example, while private services in Israel have a significant role in pensions and a recently expanding role in healthcare, expenditure on both is still far below expenditure in the US. On the other hand, since public spending on

families and disability in the US is so extremely low, Israel clearly spends more than the US in these areas (but not compared to countries outside of the liberal welfare regime). These divergences in Israel from the liberal welfare regime reflect specific aspects of the Israeli context, such as the state's generosity towards disabled military veterans and its demographic interest in supporting Jewish families with children. What Israel and the United States have in common, compared to other countries is: (1) a particularly modest level of public support (both transfers and services) for the elderly, with the exception of civil servants; (2) a non-intervention government approach to the labor market; and, (3) almost no state involvement in housing. Of course, expenditure patterns do not necessarily reflect important qualitative differences between welfare states (Castles 1994). In this respect, a notable feature of social welfare in Israel is the role of benefits targeted towards specific groups which the state wishes to recognize and reward, such as soldiers and new immigrants. This reliance on benefits for special categories which is designed to reinforce loyalty to the state (Friedman and Shalev 2010; Gal 1999) is difficult to capture using the type of indicators prepared by the OECD and analyzed here.

To conclude the discussion on the similarities and differences between Israel and the other countries in the area of welfare, it is important to note that Table 1 and Figure 2 are based on the SocX data for 2007. An identical analysis was carried out for 1995, the earliest year for which the SocX series provides data for Israel. The results of this analysis are not shown here, but the statistical analysis reveals exactly the same pattern of country clusters found in 2007 (Figure 2).² When the seven countries are ranked on all of the indicators, it emerges that between 1995 and 2007 Israel experienced only two significant shifts – it fell from first position to third on child allowances, and rose from sixth place to third in

² However, the 1995 data for Israel are not fully comparable to those of 2007. Figures are not available for tax expenditures, and the first available year for one of the other indicators is 2001.

spending on disability. In general, changes of this magnitude in countries' social expenditure profile were rare over this period.³

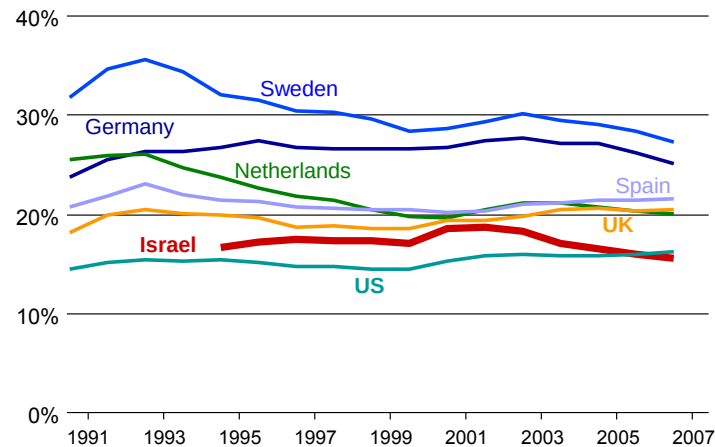
2. General Trends in Social Expenditure

The following section presents general trends in social expenditure over time, this time focusing on the welfare state, that is, on public expenditure. Particular areas of social expenditure (including private expenditure) will be presented in more detail later.

Figure 3 presents all expenditures classified as public by the OECD. As Table 1 shows, in 2007 Israel ranked the lowest, slightly below the United States. Looking at the period as a whole, public expenditure exhibited a downward trend in Sweden and the Netherlands while expenditure in the US, UK and Germany remained stable. The trend in Israel was unique; public expenditure was stable during the latter half of the 1990s, rose sharply in 2001 (due to significantly increased social security transfers, notably during a recession), and since 2003 has declined steadily to a level lower than in 1995.

³ With the seven countries ranked on all indicators, shifts of more than two ranks occurred in only six of the total of 91 cells in the grid.

Figure 3
Total public social expenditure
 as percent of GDP, 1991-2007

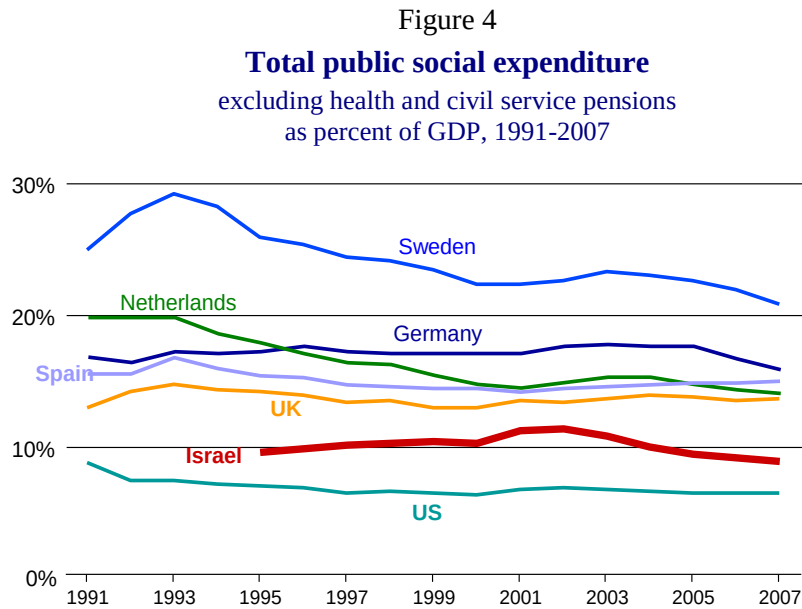


Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

There is reason to suspect, however, that Israel's international ranking and, possibly, its social expenditure trends over time are heavily influenced by two factors mentioned earlier in this chapter. First, public health expenditures in Israel, a significant component (almost 30 percent) of total social expenditure, are low – although it could be argued that this reflects the health system's relative efficiency rather than insufficient allocation of resources. Second, as shown in the previous section, Israeli public-sector employees enjoy particularly generous old-age pensions, although it could be argued that these should not be treated as part of the welfare state, and should be related to as a component of employment conditions in the public sector. Figure 4 eliminates the effect of these two problematic factors. As the figure shows, the narrower definition of public social expenditure places Israel above the United States but not closer to Europe. The figure also highlights the two polar cases, Sweden

and the United States, and brings Germany closer to the rest of Europe. General trends over time are not significantly affected.



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

Before examining detailed data on programs, it is important to relate to the demographic differences between the countries, a factor with significant effects on social expenditure. As Table 2 shows, Israel's demographics differ significantly from the rest of the developed countries. The differences are especially marked compared to Germany; the share of the population under 20 in Israel is almost double the share in Germany, while the share of persons over 65 in Germany's population is almost double their share in Israel. This second fact has special significance for old-age pensions and health expenditures.

Table 2. **Distribution of citizens by age groups, 2009**

Country	Population (millions)	Children		Elderly	
		5-19	Under 5	65-74	75+
Israel	7.5	10%	26%	5%	5%
Sweden	9.3	6%	18%	9%	9%
Netherlands	16.5	6%	18%	9%	7%
Spain	45.9	5%	14%	8%	8%
UK	60.9	6%	18%	9%	7%
Germany	81.9	4%	15%	12%	9%
US	306.7	7%	20%	7%	6%

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

3. Social Old-Age Expenditures

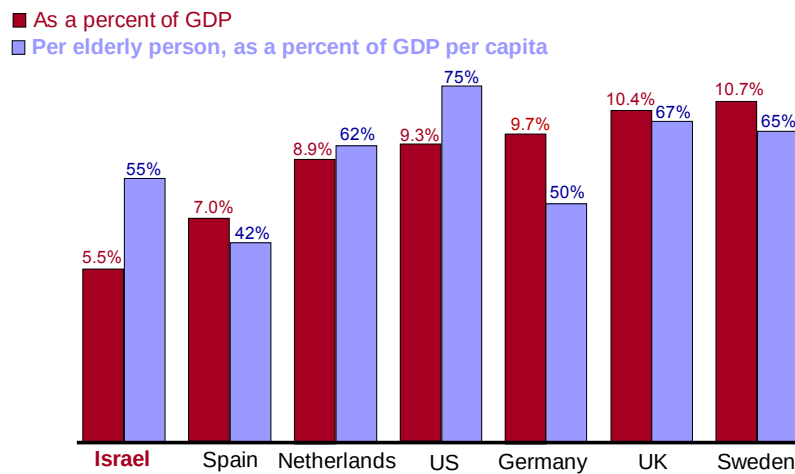
Basic Concepts and Definitions

In all the nations surveyed, with the exception of the United States, old-age spending is the largest category of social expenditure, with health expenditure ranking second (see Table 1).

Figure 5 presents an international comparison of old-age social expenditure over the past few years. For each country two sets of data are presented: total old-age expenditure in GDP and expenditure per elderly person. The data show that in terms of expenditure relative to the national “pie,” Israel ranks last, with total old-age expenditures of only 5.5 percent of GDP – about half their level in Sweden. Five of the seven nations are clustered fairly closely, between 9 percent (the Netherlands) and 11 percent (Sweden). Total expenditure depends, however, on the size of the senior population. The second measure is of expenditure per

elderly person as a share of GDP per capita. Three nations rank very differently on the two measures, with Israel and the US moving up and Germany falling down the ranking. In fact, on the second measure Israel ranks above Spain and even Germany. Whereas on the first measure the US ranks in the middle of the seven countries, on the second measure it ranks highest by a wide margin (and significantly higher than Israel).

Figure 5
Social expenditure on the elderly
2005-2007



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

Between the two indicators, expenditure per elderly as a share of GDP per capita is a better gauge of national old-age expenditure in practice, though it, too, suffers from a significant limitation. The per elderly measure includes three components: (1) the extent to which old-age pensions and services for the elderly cover the entire population (not all old-age support programs are universal, and the extent of such programs

differs significantly from one country to the next); (2) the accessibility and take-up of existing programs (partly determined by their universality; voluntary occupational pension programs will obviously not reach all of the working population); and, (3) the level of pension benefits or the actual cost of the services provided.

The ability to distinguish between the three components based on the OECD SocX database is very limited. Nevertheless, the database does make it possible to distinguish between public and private responsibility. Before turning to this discussion, it is important to clarify a few fundamental concepts concerning different types of social expenditure on the elderly.

Income security for the elderly can be examined from two perspectives: from the perspective of the individual and the authorities. From the individual perspective there are different ways to avoid loss of income after retirement including various kinds of pension and savings plans, not all of which are classifiable as social by OECD criteria. From the state's perspective, there are two possible forms of public responsibility for the economic welfare of the older population: universal pensions and government-paid pensions to retired public employees. In addition, the government may provide or subsidize special health services for the elderly (e.g., nursing services in their homes or in geriatric institutions).

With regard to preventing loss of income, most countries offer three tiers of savings for retirement. The first tier is under the responsibility of the public social security system. In Israel, this includes a modest, uniform old-age pension paid to all retirement-age persons, and income security benefits, given to those without significant sources of income (as determined by the National Insurance Institute) other than the old-age benefit. The second tier is employment-based. It includes pensions and provident funds based on savings set aside by employees and usually also by their employers during their years of employment. (The current study does not relate to provident funds in Israel, which until 2005 were not intended specifically for retirement and the funds could be withdrawn

after fifteen years.) The third tier is voluntary and includes income from savings and supplementary private insurance. To the extent that those who save money are given tax incentives, the return on their savings is included in the OECD's definition of social expenditure.

In discussing old-age benefits this chapter will adopt the international usage of the term pension, which includes not only "occupational" (employment-based) pensions but also transfer payments of the two aforementioned types (uniform old-age pensions and old-age income security benefits for those with no independent income).⁴ The latter will be labeled "social pensions." Another issue is how to divide pension payments between public and private pension expenditures. Clearly, social pensions are to be classified as public. Whether occupational pensions are considered private or public depends, however, on the sector of employment and on the identity of the institution that pays the pension. The rule adopted by the OECD is that pensions paid to public-sector employees are considered public expenditures, on condition that the body paying the pension is in the public sector. Pensions paid to government and municipal employees are therefore classified as public if paid from current budgets, or if the employee and employer contributions to the retirement fund are publicly-managed.

In 2001, the State of Israel stopped adding new public-sector employees to unfunded retirement plans (plans financed by current government budgets), replacing such plans with commercially-managed retirement plans. This reform has yet to apply to current public-sector pensioners, thus there is still an almost complete distinction between former civil servants with public pensions and private-sector pensioners with private pensions. In the future, when the 2001 reform begins to apply to public-sector retirees, their pensions will be reclassified by the OECD from public to private expenditure. This situation illustrates the importance of distinguishing between the two types of occupational

⁴ The decision to classify old-age income security pensions in Israel as old-age expenditures and not as part of the general public safety net system was made by the OECD.

pensions administered by private organizations: those intended for private-sector employees, and those intended for public employees, the latter being government-paid but privately managed.

Table 3 reviews the three major types of pension discussed. When applying this scheme in practice it is necessary to decide how to calculate pension expenditures of each type: based on the contribution of each one to total old-age spending, or else based on expenditure per pensioner. Unfortunately the second method is not feasible since international data are not available on the size of the retired population that distinguish between public- and private-sector pensioners.

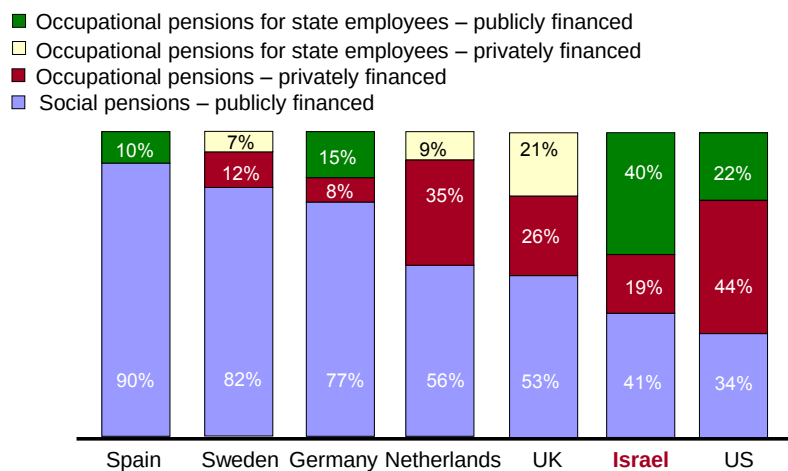
Table 3. **Types of pension as defined by the OECD**

Funding/Type of pension	Social	Occupational
Private	—	Employment-based pensions paid by private organizations to private- or public-sector employees
Public	Social pensions (in Israel, old-age pensions paid by the National Insurance Institute, including income security pensions for those without other income)	Employment-based pensions paid by public organizations (in Israel, unfunded retirement plans for government and municipal employees, paid from current government budgets)

International Differences in the Composition of Pension Expenditures

Figure 6 presents the relative share of each type of pension expenditure without relation to the level of total expenditure on pensions. As the figure shows, social pension expenditures constitute less than half of total pension expenditures in Israel and in the United States – lower than in the other countries under comparison. Unlike in the US, though, in Israel the low share of social pension expenditures is not offset by high private expenditures on employment-based pensions. In Israel, this expenditure is just one-fifth of total spending, although this share is expected to grow significantly in the long-term due to the recent mandatory pension law. In the US, employment-based pensions constitute more than 40 percent of expenditure on pensions.

Figure 6
Composition of pension expenditure
2005-2007



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

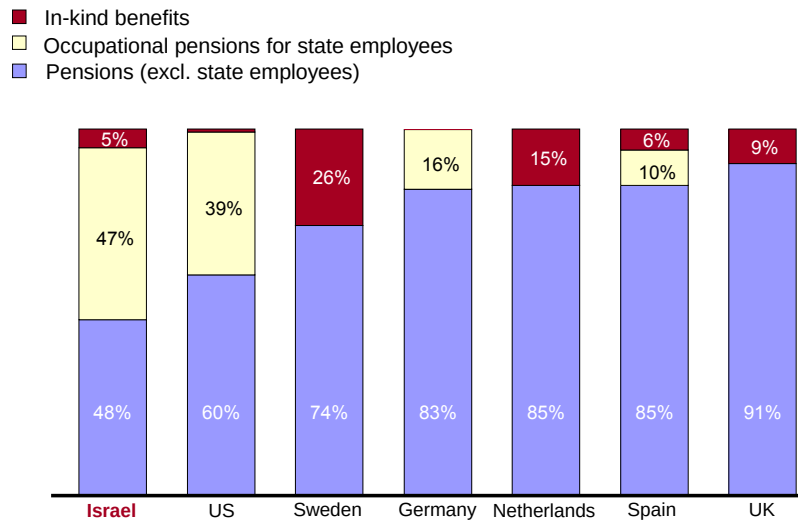
The other two categories of pension expenditure apply to public-sector employees. Public spending on unfunded pensions (pensions paid from current budgets) is higher in Israel than in any of the other countries under comparison: 40 percent of all pension payments, some 2.1 percent of GDP (equal to the percentage of social pension transfers). In the United States this relationship is inverted; private pension spending is twice that of public employee pensions. In Germany and Spain, the percentage of unfunded pensions is even lower than in the US at 16 and 9 percent respectively. The remaining three countries provide for their public employees through employment-based pensions from non-government institutions; their pension expenditures are, therefore, classified as private in the OECD index. It is important to realize, however, that the government, as an employer, funds at least some of these pension expenditures. As the figure shows, whereas in the UK “private” pensions paid to public employees constitute approximately 20 percent of total pension expenditures (the same percentage represented by unfunded pensions in the US), in Sweden and the Netherlands they constitute a much lower share of total pension expenditures.

The main reason for the high share of government spending on public employee pensions in Israel seems to be the high cost of pensions paid to retired military and related personnel (mainly police); approximately 30 percent of the 2009 expenditures on public employees’ pensions in Israel were represented by pensions for retired military personnel (Dahan and Hazan forthcoming, Table 2).

As noted earlier, public old-age expenditures include not only social pensions and employment-based pensions for public employees (if paid by public institutions), but also additional non-pension transfer payments, for example, rent assistance, and, more significantly, in-kind benefits like various public services, home-help services for the elderly, assisted living, and public transportation subsidies. The distribution of these services is shown in Figure 7. Expenditure on old-age services is particularly high in Sweden (2.4 percent of the GDP) and negligible in the United States and Germany. It is also fairly low in Israel, only 0.2

percent of the GDP, although this figure does not include nursing payments paid by the National Insurance Institute which constitute 0.4 percent of the GDP and which the OECD index classifies as disability expenditures.⁵

Figure 7
Components of social expenditure on the elderly
2005-2007



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

⁵ Thanks to Yulia Cogan of the Taub Center for clarifying this issue.

Pension “Generosity”

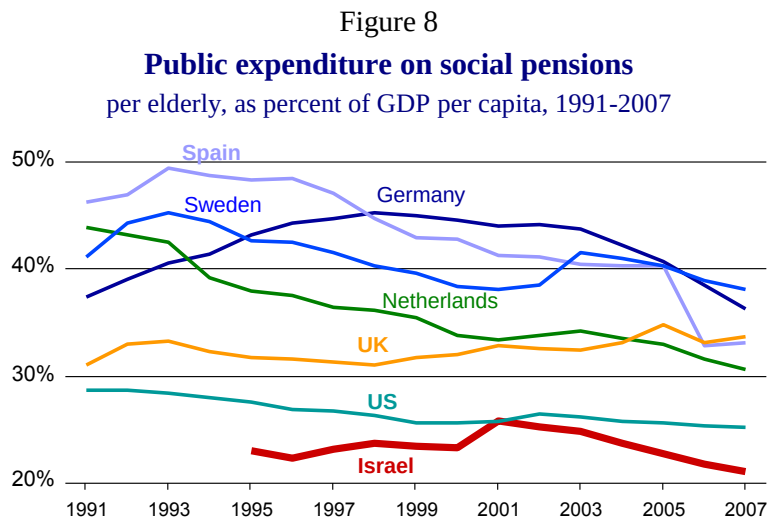
In order to assess trends over time and differences between the countries, the index used must be comparable. The index shown in Table 1 of this chapter is used for this purpose. The term “pension generosity” describes the relationship between the average pension and the average standard of living in a country, measured as total pension expenditure per elderly citizen as a percentage of the GDP per capita. Note that the term “generous” is used here in a value-neutral and relative sense.

Social Pensions

A long-term comparison between the seven countries under discussion shows pension generosity to be consistently lower in Israel than in all other countries including the US. As can be seen in Figure 8, following an adjustment in National Insurance Institute benefits in 2001, pension generosity in Israel (including income security pensions for low-income individuals) reached a high of 26 percent of GDP per capita but has since steadily declined, reaching 21 percent of GDP per capita in 2007. This decline has had serious consequences for many Israeli elderly whose post-retirement income consists entirely of social pensions; according to JDC-Eshel data (*Mashav* database), 65 percent of Israeli elderly do not have employment-based pensions.

Employment-Based Pensions

The OECD distinguishes between two types of private employment-based pension expenditure: mandatory and voluntary. Employment-based pension expenditures are voluntary in most of the countries, with the exception of the UK and the Netherlands, where the largest part of the expenditure is voluntary and an additional portion is mandatory.



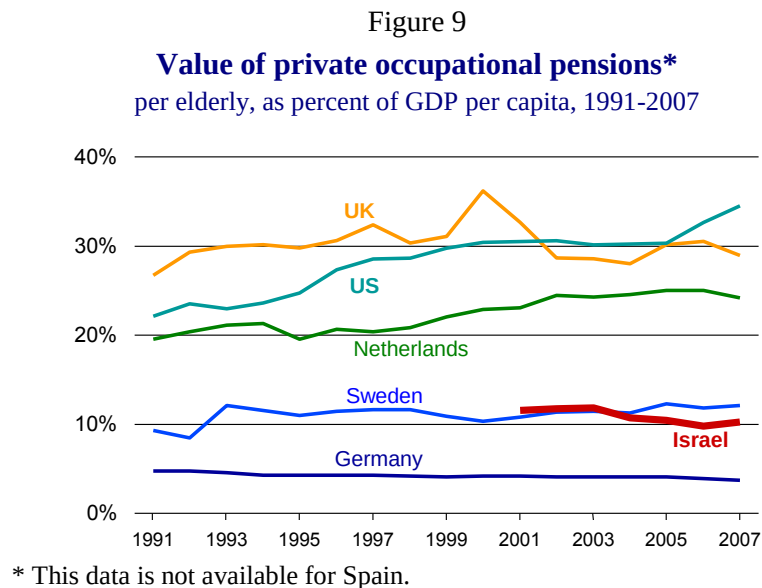
Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

A mandatory pension law was enacted in Israel in 2008. Since the available data do not go beyond 2007, however, all employment-based pension expenditures have been classified as voluntary. It is important to note that pension expenditures are considered private if the funds are managed by a non-governmental organization. The OECD's data for Israel do not currently include private employment-based pensions; the missing data have been taken from the Pensions Department of the

Capital Markets, Insurance and Savings Division at the Israel Ministry of Finance, whose reports are based on annual administrative data from all retirement funds (old and new) paying pensions over the relevant year.

As Figure 9 shows, in 2007 private occupational pension expenditure per elderly was 10 percent of the GDP per capita, placing Israel second to lowest on this measure. Ranking highest on this measure are the US and the UK, although it is important to note that in these two countries high employment-based pensions compensate for low social pensions (see Figure 6).⁶ Israel, by contrast, ranks low with respect to both types of pension, resembling the US in the low generosity of its social pensions and Sweden in the low generosity of its employment-based pensions.



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

⁶ One explanation for the UK's high rate of private expenditure is that in the UK public employees' pensions are managed by private companies and are therefore defined as private.

Although these figures have been presented as reflecting pension generosity, this is not entirely accurate since employment-based pensions are not universal. While no comparable data from other countries are available, in Israel low average expenditures may reflect circumstances where some workers lack employment-based pensions but have generous pensions of other types. Several studies have shown that inequality in the availability of employment-based pensions is more radical than income inequality itself (see for instance, Kristal, Cohen, and Mundlak, 2010). Moreover, according to a study based on a 1997 Central Bureau of Statistics survey (Levanon 2004), only 26 percent of Arab Israeli men receive employment-based pensions, compared with 65 to 70 percent of the Jewish population. The study also indicates significant differences between average pension amounts among different segments of the Jewish population.

4. Other Social Expenditures⁷

A. Policy Regarding Families

Social spending on families comprises two categories: benefits in the form of transfer payments and services. Child benefits are paid in all countries under discussion except the United States.⁸ In Israel, family benefits include maternity grants, paid maternity leave, child support and benefits for single-parent families, like study grants. Family services include funding for nursery schools, public daycare centers, child and family welfare services, and juvenile rehabilitation programs.

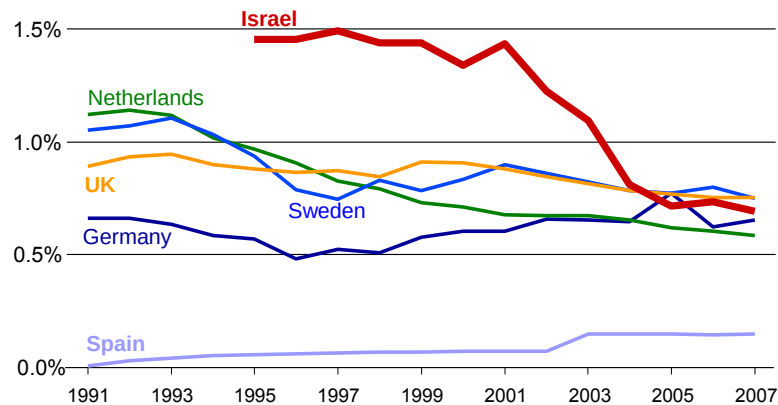
⁷ The present section will not discuss one relevant measure, housing assistance, since (with the exception of the UK) public expenditure in this category is insignificant relative to GDP; in Israel, as in the United States, it is negligible (see Table 1 and the relevant discussion in the introduction).

⁸ The US offers child tax credits in an amount determined by the number of children in a family, similar to tax credits for working mothers in Israel.

Social spending on families was, on average, 2.5 percent of the GDP between 1995 and 2007 but declined toward the end of that period, down to only 2 percent in 2007. Not explained by demographic changes, this decline is due to child benefit cuts.

Figure 10 compares child benefit expenditures as a percentage of GDP in different countries. Until the early 2000s, Israel was exceptional in the scope of resources allocated to child benefit expenditures – approximately 1.5 percent of the GDP. Since 2001, this spending has decreased by half, down to typical European levels (excluding Spain).

Figure 10
Child allowances*
as percent of GDP, 1991-2007



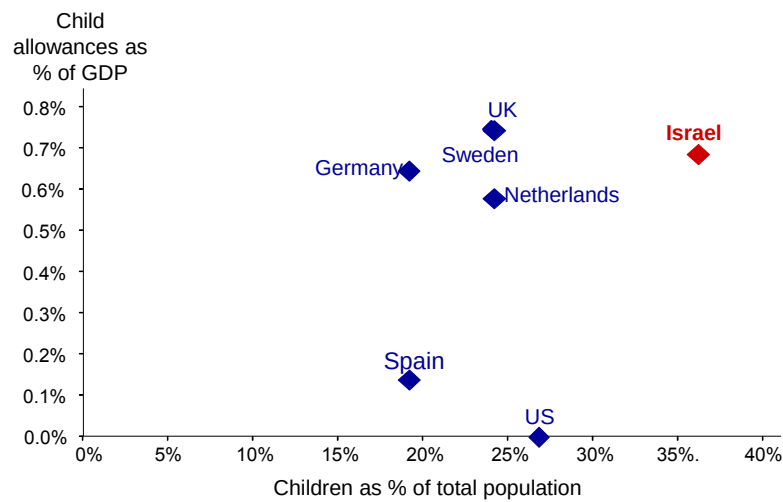
* The US does not have a universal child allowance.

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

Figure 11 shows the relation between Israel's child population and the country's total child benefit expenditures for 2007. While Israel has a much larger child population (relative to the size of the total population) than other Western countries, Israel's child benefit expenditures were comparable to those of Germany, the UK, the Netherlands, and Sweden.

Figure 11
**Relationship between children in the population
 and the level of child allowances, 2007**



Source: Taub Center for Social Policy Studies in Israel.

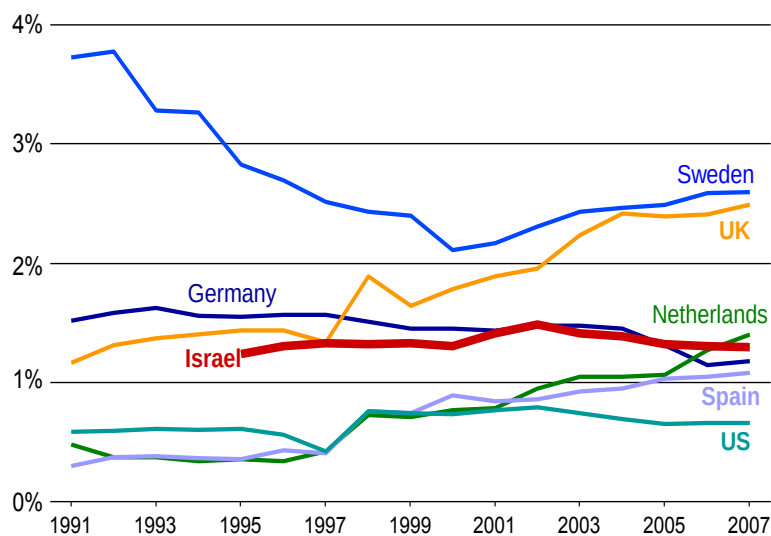
Data: OECD.

Figure 12 compares other benefits and services to families with children in the different countries. Here Israel fares moderately; Sweden and the UK today spend roughly 2.5 percent of GDP. Israel and the other European countries spend approximately half of this amount, and the United States spends only 0.66 percent of GDP (and does not pay universal child benefits either).

Figure 12

Social expenditure on families

excluding child allowances, as percent of GDP, 1991-2007



Source: Taub Center for Social Policy Studies in Israel.

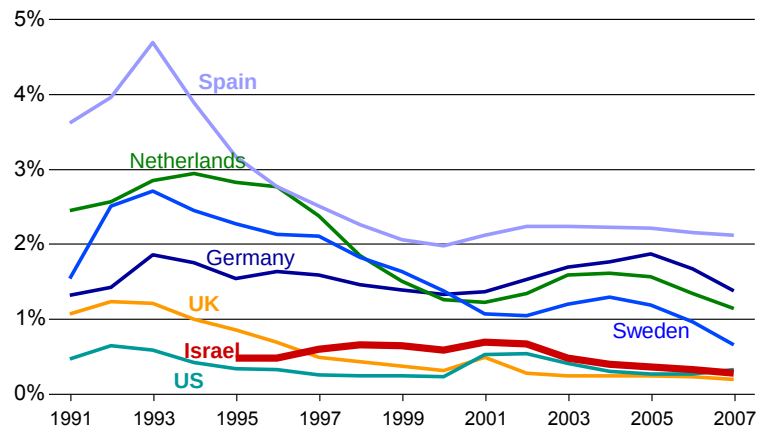
Data: OECD.

B. Labor Market

Labor market expenditures again are comprised of two categories: unemployment benefits and active labor market programs. Unemployment benefits mainly consist of unemployment insurance benefits. Some countries also offer severance pay, compensation for early retirement for cost-saving reasons, etc., although spending on such programs is negligible relative to spending on unemployment insurance benefits. In Israel, this category includes only unemployment benefits paid by the National Insurance Institute. At 0.5 percent of the GDP, Israel's average unemployment expenditure for the period under discussion was rather modest, placing Israel alongside the US and UK.

An obvious question is whether Israel's low unemployment expenditures reflect low unemployment or merely a failure to offer the same unemployment benefits as in some of the other countries. A comparison between unemployment rates in the different countries shows that Israel ranked high; from 1999-2003, Israel ranked second in unemployment (after Spain), and from 2003-2007, Israel declined to third place following a change from a time of plenty to scarcity. At the same time, the steady decline in unemployment expenditure during this period reflects severe damage to the program's accessibility and generosity (Gal 2008). It should be noted that in the most recent years under discussion, the Netherlands, Sweden and Germany also decreased their unemployment expenditures, although these remained much higher than in Israel (at least twice Israel's level in terms of percentage of GDP).

Figure 13
Public expenditure on unemployment
 as percent of GDP



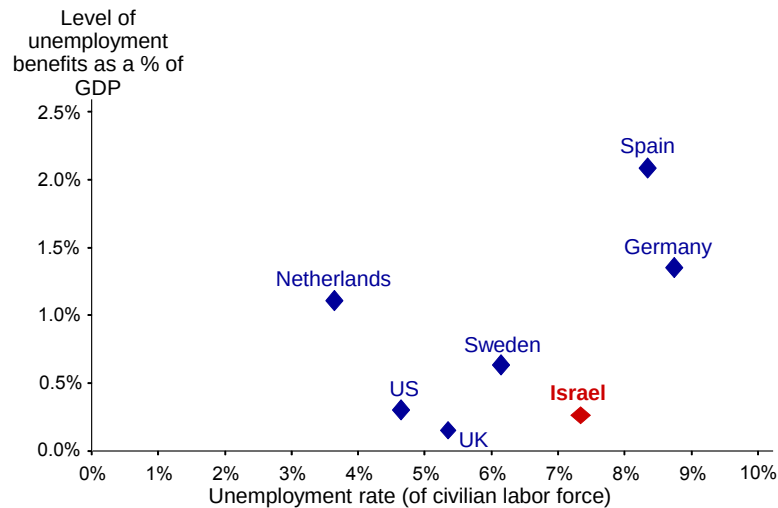
Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

Figure 14 highlights Israel's exceptionally low unemployment expenditure⁹ (relative to unemployment rates) compared with other Western countries. (Note that the data refer to 2007, before the rise of unemployment in many countries due to the global financial crisis.) As the figure clearly shows, Israel had the lowest unemployment expenditures of all countries with high unemployment rates (7 percent or higher).

⁹ In some of the countries (not including Israel) the expenditure line does not include the cost of severance pay which is paid by the state. For more information see Appendix 2.

Figure 14
**The relationship between unemployment
 and unemployment benefits, 2007**



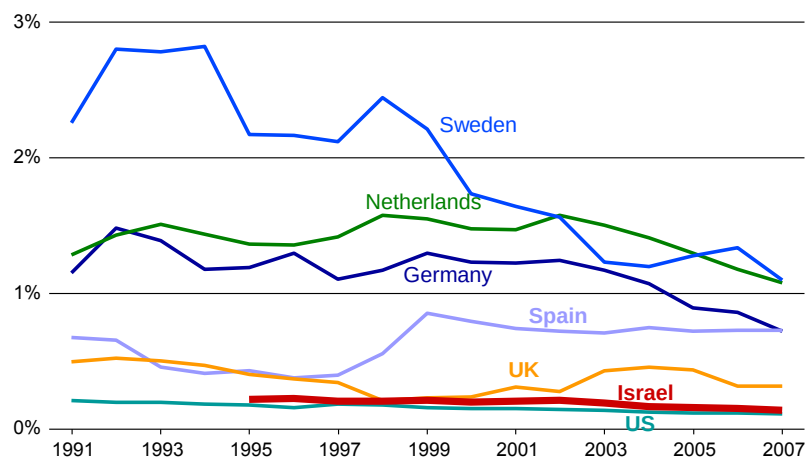
Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

With respect to active labor market social policies, the gap between Israel and the other liberal countries versus the remaining countries under discussion stands out, as Figure 15 shows. Active labor market programs include: employment provided by government and municipal authorities, occupational training programs directed towards specific populations or encouragement of their employment through subsidies to employers, incentives to entrepreneurs, employment creation initiatives, and the like. According to OECD data, the government in Israel invests very little in active labor market programs; in this respect Israel is like the US and unlike most of the other countries under discussion – especially Sweden

and the Netherlands, but also Germany and Spain. The gap between Israel and other countries was even larger in the past, when Swedish active labor market expenditure peaked at almost 3 percent of the GDP.

Figure 15
Expenditure on active labor market policies
as percent of GDP, 1991-2007



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

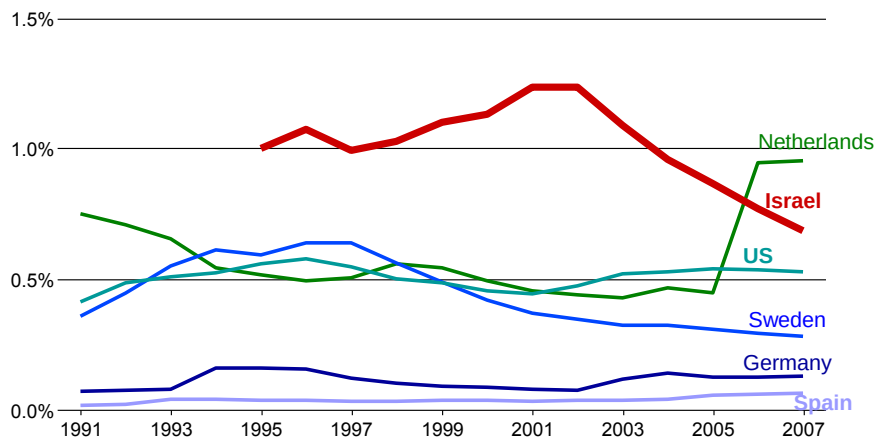
Income Security

In the OECD SocX database, the term “income maintenance” is used to denote what is more accurately termed “income security”: safety net programs (previously called “welfare” in Israel) designed to provide a minimum income to families and individuals whose income is below a minimal subsistence level (Koreh et al. 2007). In most countries, this category includes only direct transfer payments and not in-kind services; in the US, it also includes food stamps for low-income individuals.

International income security comparisons are difficult to make because programs designed to ensure minimum income are classified differently in different OECD countries. In Israel, income security programs targeting special populations – seniors, survivors and people with disabilities – are included separately under these “special” categories and not under the generic “income security” category. The only type of income security included under the generic category is benefits given to working-age individuals exclusive of disability or survivor benefits. Despite this limited application of the term, Figure 16 shows that in the most recent years surveyed, Israel ranked first among the countries surveyed in terms of income security as a percentage of the GDP. The comparison may be unreliable, however, due to the category’s different definitions. Conspicuous in this regard is the UK, which reports no income security expenditures despite having an Income Support program which parallels Israel’s. A comparison between income security generosity in Israel and seven other OECD countries ranks Israel relatively low, positioned close to or below the UK (Koreh et al. 2007: Figures 5-7). The in-depth study by Koreh, Gal, and Cohen shows that in the early 2000s (especially after revisions in 2002-2003), Israel’s income security generosity was among the lowest in all the countries surveyed, although the percentage of beneficiaries out of the total population was relatively high. These data reflect the central importance of the income maintenance safety net in Israel’s overall social security system, as well as the limited nature of the economic protection it provides (Gal and Achdut 2007).

Due to the methodological difficulties described, Figure 16 should be used primarily to follow long-term trends. As the figure shows, Israel has a unique profile, with income maintenance expenditure as percentage of the GDP rising significantly in the late 1990s, peaking in 2002, and then steadily declining by 50 percent. This decline was due to benefit cuts and reduced eligibility as well as to the partial (and temporary) shift to alternative “welfare-to-work” programs.

Figure 16
Public expenditure on income security*
as percent of GDP, 1991-2007



* The UK does not report expenditure on income security.

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

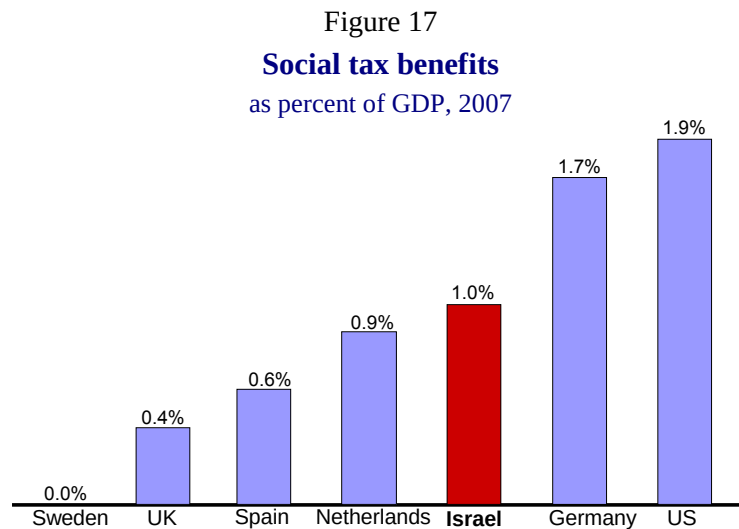
C. Social Tax Expenditures

Tax expenditures are revenues forfeited by the government in order to provide tax exemptions, credits, and deductions (henceforth tax benefits) to certain groups of people or to people who have undertaken certain economic activities. In Israel, tax expenditures for social purposes constitute approximately 20 percent of total tax expenditures and fall under the following categories:

1. Income tax exemptions on nearly all transfer payments, including those paid by the National Insurance Institute and the Ministry of Defense.
2. Exemptions for select groups: tax credits or partial income tax exemptions for recent immigrants, residents of “geographic national priority” areas, the blind and people with disabilities, students, recently discharged soldiers, etc. New immigrants and returning citizens are also exempt from paying some indirect taxes.
3. Income tax exemptions for families: single-parent families, working mothers, parents without earning power, and relatives of institutionalized patients.
4. Miscellaneous: VAT exemptions on fruits and vegetables, income tax deductions for charitable donations, etc.

Tax benefit assessments provided by each country usually underestimate the true extent of benefits because some tax benefits are almost impossible to assess accurately.

Figure 17 shows social tax expenditures as a percentage of the GDP. Data are taken from the OECD database and based on definitions developed by Adema and Ladaïque (2009). Data on Israel are taken from the annual report of the State Revenue Administration at the Israeli Ministry of Finance, adjusted to Adema and Ladaïque's definitions.



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

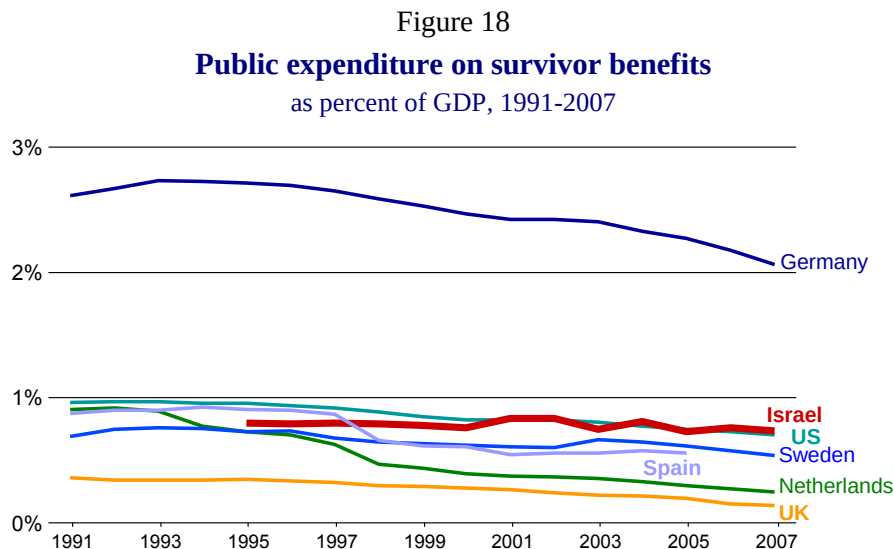
Total social tax expenditures in Israel amount to 1 percent of the GDP. Heading the list is the US with almost double that percentage, followed by Germany. Sweden is at the bottom with no social tax expenditures, reflecting its clear preference for budgetary spending over tax benefits.

D. Other Risks

This section examines two types of program designed not only to protect citizens from general economic hardship but also (or especially) to compensate them for unfortunate events not under their control: the loss of a parent or spouse, and incapacity due to disability.

Survivor Benefits

As Figure 18 shows, Germany has by far the highest percentage of spending on survivor benefits. This is largely due to sharply rising expenditure in the wake of German reunification in 1990, prior to which Germany did not differ significantly from the other countries under discussion.



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

Survivor expenditures are also very high in Israel and in the United States, where they constituted approximately 0.75 percent of GDP during the 2000s. Israel has two major survivor benefit programs: benefits provided by the National Insurance Institute (NII), and benefits to widows and orphans of fallen military personnel provided by the Ministry of Defense. Survivor benefits paid by the Ministry of Defense represent a stable share of more than one quarter of total survivor expenditures in Israel (averaging 28 percent). However, the cost of the two programs has followed different trends. Since 2002, NII expenditures have fluctuated significantly. Those of the Ministry of Defense have remained consistent over the years, except during 2006 and 2007 when the Second Lebanon War increased expenditures significantly.

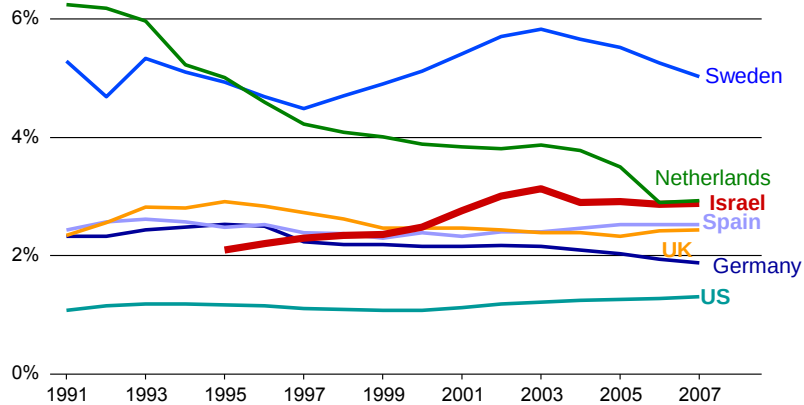
Assistance to Individuals with Disabilities

Disability-related expenditures in Israel include programs under the auspices of the National Insurance Institute to support people with “general” disabilities or occupational injuries, special disability benefits and services (including rehabilitation and nursing) for disabled military veterans, and similar benefits and services to victims of acts of terror.

As Figure 19 shows, public expenditure to support people with disabilities differs significantly across countries, with Israel somewhere between the extremes of the United States (only 1 percent of GDP) and Sweden (5 percent of GDP). Over time, spending in Israel has increased, from 2 percent of GDP in 1995 to a high of over 3 percent in 2003. In recent years Israel (tied with the Netherlands) ranked second on this measure after Sweden. Note, however, that in Israel disability expenditures includes old-age nursing care benefits equivalent to 0.5 percent of the GDP. Also contributing to Israel’s high ranking in this category are the generosity (relative to other disability benefits) and relatively large scope of the special programs for disabled army veterans. According to data supplied by the Israeli government to the OECD, Ministry of Defense benefits constituted 12.5 percent of total disability

expenditure in 2007, but Dahan and Hazan (forthcoming, Table 2) provide a higher estimate.

Figure 19
Public expenditure for people with disabilities
 as percent of GDP, 1991-2007



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

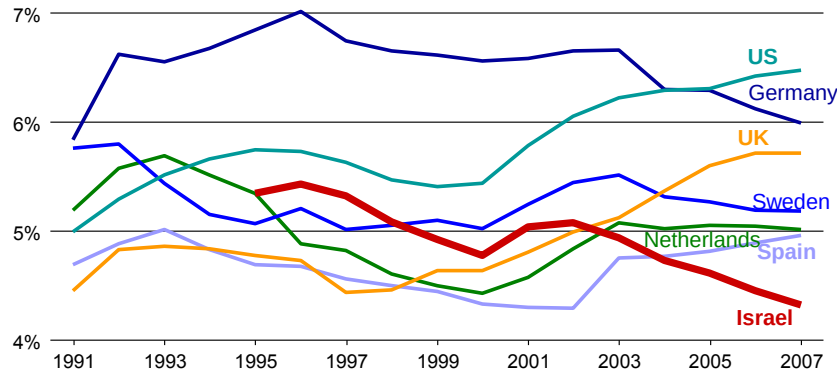
5. Health Expenditure

As noted in the introduction, health is one of the two largest areas of social expenditure in OECD countries (alongside old-age). Health expenditure has been extensively analyzed in other Taub Center publications (e.g., Chernichovsky 2010; Chernichovsky and Regev 2012). The current report provides a brief overview of two aspects of health expenditure: Israel's comparative international standing and the changing balance between private and public health.

First, it should be noted that the extent of national health expenditure in Israel (both public and private) based on the SocX database of the OECD is significantly lower than indicated by the data available to researchers until now provided by the Central Bureau of Statistics (CBS). The two sets of data diverge by approximately 3 percent of GDP, a discrepancy that will be explained shortly. With regard to long-term trends, both sets of data indicate declining health expenditures in the 2000s, although according to CBS data the decline began several years earlier (2002, compared with 2006 according to OECD data; see Chernichovsky 2010, Figure 4). In addition to total national expenditure it is important to distinguish between public and private expenditures, where opposite trends are discernible over time.

Figure 20 shows public health expenditure per standard person (according to a capitation formula weighting for national demographic profile by health risk level) as a percentage of the GDP per capita. In Israel, such expenditure constituted, on average, 4.95 percent of the GDP per standard person between 1995 and 2007, falling twice during this period, once each decade. After 2003, public health expenditure fell slightly in Germany and Sweden as well, but increased in the remaining four countries. In the years 2004-2007, Israel had the lowest public health expenditures of the seven countries under comparison. Countries that had similar expenditure levels (within 5 percent of Israel) early in this period experienced increases later on (approximately 0.5 percent in the Netherlands and in Spain, 1 percent in the United States and the UK). Germany had the highest public health expenditures throughout most of the period under review, although in 2006-2007 the United States exceeded it. Nevertheless, on average Germany retains the lead in this area. At present, public health expenditures in the United States are approximately 1.5 times their level in Israel.

Figure 20
Public expenditure on health
 per standardized person, as percent of GDP per capita, 1991-2007



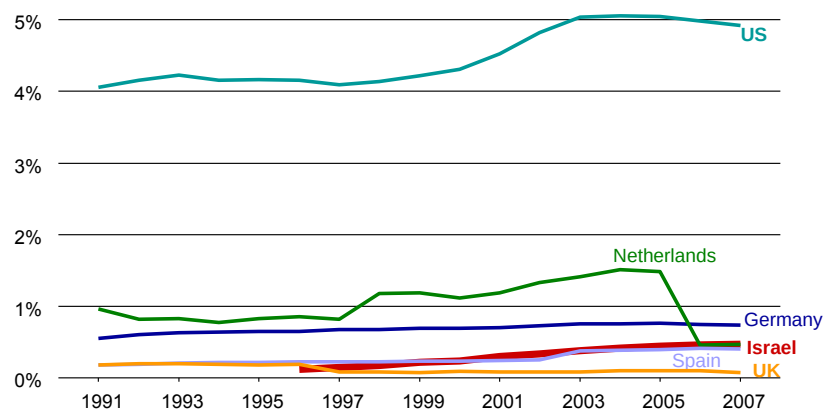
Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

Social expenditure on privately funded health care constitutes only a part of total private health expenditures. Israel's Central Bureau of Statistics provides more comprehensive data, covering all private health expenditures (including private health insurance and spending on private physician fees, medications, surgery, supplementary health insurance, etc.). By contrast, the OECD SocX data presented here cover only spending on private health insurance with a collective component, e.g., insurance provided by employers or involving tax benefits. In Israel, this category covers supplementary insurance plans offered by the health funds or through employers. This difference between the OECD and CBS definitions is the main reason for the significant discrepancy noted in the previous section.

The most striking phenomenon shown in Figure 21 is the massive scope of private health expenditure in the United States, soaring in the early 2000s to 5.5 percent of GDP per capita. Sweden and the UK are on the opposite end of the spectrum with very low or negligible private health expenditure; Germany and the Netherlands are somewhere in the middle. In Israel, as in Spain, private health expenditure has increased steadily over the years, from a very low level to a more significant level of 0.5 percent of the GDP per capita. In Israel, however, this increase combined with steadily declining public expenditure, indicating a trend of encroaching privatization, whereas in Spain both types of expenditure, public and private, have increased steadily.

Figure 21
Private social expenditure on health*
 per standardized person, as percent of GDP per capita, 1991-2007



* Sweden is not included because private health expenditure is negligible.

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

6. *Conclusions*

In the last few years both the OECD and the social protest movement questioned whether the Israeli welfare state is backed by sufficient economic resources to provide citizens with economic security and offset rising inequality. This chapter has presented new data that clarify how much Israel spends on social security, health and social services compared with other advanced economies. It is now time to sum up the answers provided by the OECD database to the questions posed at the outset. Does the government of Israel spend less on social security and social services than countries with comparable economic resources and demographic needs? If so, is this true of all types of programs? Is it possible that government spending is low because private spending compensates for a lean welfare state? From a long-term perspective, is there evidence that the government's commitment to social welfare has been declining? If so, which areas have been most affected, and are trends in Israel similar to those in other countries?

The big picture is that Israel's public spending on social services, relative to the size of its economy (GDP), is low in comparison with the world's richer democracies. This is true even after setting aside health spending, which is relatively low in Israel. In fact, the Israeli pattern of welfare state expenditure in areas other than health is far more similar to the United States than the five Western European countries used as points of comparison in this research. Similar to the US, the Israeli welfare state concentrates on the goals of protecting citizens from risks or compensating them for unexpected misfortunes. The governments of both countries spend relatively little in areas which have the potential for improving the long-term economic well-being of citizens: active labor market policies, housing, and support for families with children. In the last of these areas it is true that Israel spends much more than the US on child allowances, daycare, and other benefits and services designed to support families. Nevertheless, the Israeli commitment in this area is far below the levels found in the UK and Sweden – and this is true even

though children are much more demographically significant in Israel than in any other advanced economy.

Aside from health, cash benefits and services to the elderly are by far the largest social expense. When differences between countries in the size of the elderly population are taken into account, Israel resembles the US in two important respects. First, the retirement income provided by the state through the social security system (which in Israel is combined with special social assistance benefits) is much less generous than the social pensions of other countries. A second common feature is the unusually high commitment of resources in both countries to budgetary pensions for public employees. Here the resemblance in the pension mix ends. In the United States modest public pensions coexist with even larger sums devoted to a private system of occupational pensions. The balancing role of the occupational system is far less evident in Israel, where private pensions may be generous but are relatively limited in their coverage. Optimists believe that this deficiency will be remedied in the future by a legislative change which nominally, at least, has made it mandatory for workers to participate in an occupational pension scheme. At present, however, the combination of generous occupational pensions for relatively privileged public- and private-sector workers, along with the thin protection provided by the universal component of the pension system, necessarily results in considerable inequality among pensioners.

From a dynamic perspective, it is striking that the overall magnitude of public social expenditure in Israel fell during the 2000s at a rate without parallel in the other six countries in this study. The five years after 2002 saw continuous declines, totaling more than 3 percentage points of the domestic product. The latest available estimate (a projection for 2012) is 15.7 percent of GDP, almost identical to the level in 2007, which is the last year investigated in the present study (Adema, Fron, and Ladaïque 2011). Sweden, Germany and the Netherlands, which also experienced decreases in the cost of the welfare state (but milder ones than in Israel), had much higher starting and ending points than Israel.

The findings of this research show that retrenchment has cut across a number of different programs, which have in common that they mainly serve the most economically vulnerable segments of society: large families, the unemployed, retired people without occupational pensions, and families with income below the poverty line. Child allowances, formerly a bulwark of antipoverty policy, were dramatically cut; so was Israel's spending on income security, the safety net for the poorest families. In both cases, no similar trend was observed in the other countries studied. In addition, the average value of social pensions declined without any compensatory rise in occupational pensions; and unemployment benefits fell continuously in years of both higher and lower unemployment. Declines in these last two areas were also found in some other countries, but even after benefits were cut, their expenditure was still far higher than in Israel.

Several other types of social programs surveyed here have managed to escape retrenchment. Public spending on families with children, which includes cash benefits for childbirth and maternity leave as well as childcare services, declined somewhat but at the end of the research period was no lower than it had been in 2000. Expenditure on survivors' benefits is higher than in other countries (apart from the exceptional case of Germany), and in an unusual trend, it has been gradually rising. Finally, benefits to the disabled survived the cuts of 2003-2007, and while the previously sharply rising trend of spending in this area has ceased, it is still higher than in any of the comparison countries except Sweden. Several features appear to unite these diverse areas and distinguish them from those in which the government imposed benefit cuts. None of these programs are conditioned on beneficiaries having low income or suffering economic misfortune. In addition, the protection offered two of the risk groups – survivors and the disabled – depends on whether the misfortune was incurred as a result of military service. If so, the benefits and services offered are far more generous than those which cater to the “general” disabled or “civilian” widows and orphans, and it is

these politically robust programs which have been immune to retrenchment (Gal and Bar 2000; Friedman and Shalev 2010).

Finally, it is important to acknowledge the limitations of this research. Throughout the chapter attention has been drawn to the need to pay attention to definitions and other technical details when considering the findings. In some respects – most notably in the areas of private spending and tax expenditures – the Israeli data are not yet complete. Moreover, not all countries – including Israel – always adhere strictly to OECD standards when reporting their social expenditure. Readers should be equally cautious in inferring the policy implications of the similarities and differences documented here between Israel's social spending and the levels found in other countries. It is particularly important to remember that the amount spent on social programs is not necessarily indicative of their effectiveness in meeting their stated aims, or their cost-efficiency. Moreover, positions in debates over social policy are inevitably shaped by both values and interests, some complementary and others contradictory. Last but not least, expenditure is only one dimension of social policy. The implications of any given spending level for a particular goal – whether it be reducing inequality or improving economic performance – are to a great extent dependent on the fine details of program design and implementation.

Appendices

Concepts and Methods Underlying OECD Data on Social Expenditure (SocX)

A common intuitive understanding is that what makes services or transfers “social” is the function that they perform. From a functional viewpoint, social programs protect individuals or families against risks. These risks could be income loss or inadequacy, other kinds of misfortune (such as illness), or some condition that is costly to individuals but regarded as socially desirable (like having a child or performing military reserve duty).

Formally, the OECD’s concept of social expenditure is based solely on operational criteria. A service or a cash payment is considered social – whether it is delivered by a public or a private body – if it involves some element of redistribution. This need not mean progressive redistribution, i.e., richer people subsidizing poorer ones. The OECD considers all transfer payments and services to be redistributive, and therefore social, unless they operate according to pure market principles. In the case of transfer payments, that would mean strict insurance principles – meaning that beneficiaries hold individual accounts, and pay fees based strictly on the actuarial risk of them actually taking up the benefit. Moreover, even if a benefit met these conditions, it would still be considered social if the government made it mandatory for individuals to take out insurance, or used tax incentives to subsidize people who insure themselves.

In practice, so far as public social expenditure is concerned the OECD concept parallels conventional definitions of the welfare state that include public provision of services like health, housing and childcare, but not education. Similarly, SocX covers all transfer payments by public authorities to individuals and households, which automatically pass the redistribution test because they are financed collectively (whether by general revenues or earmarked taxes). Conversely, the redistribution test

disqualifies voluntary and unsubsidized private pension insurance, purchasing a home, or paying for private childcare or a private medical consultation. However, in many countries governments subsidize these expenses through the tax system, which in theory renders them social. In practice, however, SocX only applies the subsidy criterion to transfer payments, not the purchase of services. As a result, while private pensions are included in social expenditure if they are tax-subsidized, spending on housing and medical services is not. In these cases, only the tax subsidy itself is regarded as social expenditure. Other inconsistencies between theory and practice result from the fact that in practice schemes that meet the redistribution criterion are not considered social by the OECD unless they cover risks that are conventionally understood as social. For example, SocX does not include group schemes for travel insurance or life insurance which are subsidized by employers or provided at below-market rates by insurers interested in volume sales.

One of the most important features of the SocX system is that it covers both private and public social expenditure, including private spending that is mandated by governments. However, in practice two important limitations apply. First, the coverage of private social spending is much less complete, and is far more variable across countries, than is the case for public expenditure. Secondly, the way that the OECD draws the distinction between public and private is based on conventions in the fields of national accounting and public finance. Whether spending is treated as public or private depends on the body that manages the flow of funds, not the body that finances them. While in many cases the provider and the financier are the same body, this is not always the case. Public social insurance institutions like Israel's NII both distribute benefits and collect taxes which finance them. However, pensions received by civil servants, which are traditionally regarded as part of the social security system, exemplify the problem that can arise. Even if a government fully funds a pension plan for its own employees, the resulting benefits are only treated as public expenditure if the pension fund is managed by the government, or else a private financial institution manages the fund but

the government is responsible for any deficit that arises. Thus, for example, when new SocX data become available that reflect the privatization of civil servant pensions in Israel, public expenditure on these will be recorded as zero and they will be treated as a form of private spending.

Another fundamental feature of the treatment of transfer payments is that in any given year the “cost” of a social program is not based on what it costs whoever pays for it, but on how much money is transferred to beneficiaries. This is particularly salient to the area of pensions.

Finally, one of the most intriguing aspects of the SocX system is that it draws a distinction between “gross” and “net” public expenditure – with the difference between the two resulting from the deduction of any government revenues that can be linked to a social expenditure. For example, if transfer payments like child allowances or old-age allowances are taxed, the OECD’s net calculation is based on deducting the resulting income tax revenue from the amount which the government paid out in transfers. Indirect taxation (e.g., sales tax or VAT) is also deducted from the cost of transfer payments to the government, on the assumption that the recipients of cash benefits use them to finance consumption which is taxed. The resulting net calculations narrow the degree of variability in welfare state effort, making even the extreme cases of Sweden and the United States appear quite similar (Adema and Ladaique 2009). This chapter refrains from analyzing net spending because of the distorted impression this could create. The distributional effect of governments “taking back” part of their social spending through taxation depends not only on the extent of the return, but also on the progressivity of the taxes levied.

Methodologically, the OECD relies on local officials to supply it with data in accordance with frameworks devised at the organization’s headquarters in Paris, and there is reason to believe that it cannot always verify the quality and comparability of the information received. Comparability problems are particularly acute when new members join, as Israel did in 2010.

To balance the aspiration of strict comparability with the specificity of each national context, SocX publishes two separate sets of information: one using national concepts and the other based on a comparative framework. The former records the names of the programs underlying the data supplied by each country, and notes major gaps in comparability. In preparing this report everything possible has been done to validate the Israeli data included in SocX, not only by referring to SocX documentation but also by cross-checking its figures against local published and unpublished sources, and obtaining clarifications from the relevant authorities (typically the NII, the CBS, or the Ministry of Finance). For the other countries, SocX documentation has been inspected, comparisons have been carried out between the national and comparative data, and in some cases requests for clarifications were addressed to OECD experts, whose cooperation is gratefully acknowledged.

Appendix Table 1. **Social Expenditure Categories in the OECD Social Expenditure Database (SocX)**

Category	Program	Description	In Israel	Further comments
Old-Age	Social pensions	Publicly funded pensions, excl. public employee pensions	Old-age pensions paid by the NII, including income security pensions	
	Employment-based pensions	Privately funded pensions (employer + employee)	2001 data. No data provided by the OECD. All data taken from the Pensions Department, Capital Markets Division, Israel Ministry of Finance	
	In-kind benefits	Services provided to seniors, not including nursing pensions		
	Public employee pensions	Unfunded or publicly-managed funded pensions for public employees (including military personnel)		In the UK, Sweden, and the Netherlands public employee pensions are paid by privately managed pension funds and are classified as employment-based

Appendix Table 1. (continued)

Category	Program	Description	In Israel	Further comments
Family	Child benefits	Universal non-means-tested benefit to families with children		No such benefits provided in the United States. Spain offers an additional, means-tested benefit, included in the next sub-category ("Other")
	Other	Maternity/paternity leave, maternity grant, family services (e.g., daycare)		
Labor market	Unemployment	Mainly unemployment insurance benefits and severance pay		
	Active labor market programs	Programs to encourage employment (e.g., occupational training programs)	Including the Wisconsin Program and programs to encourage employment in special populations (e.g., people with disabilities, new immigrants).	

Appendix Table 1. (continued) **Social Expenditure Categories in the OECD Social Expenditure Database (SocX)**

Category	Program	Description	In Israel	Further comments
Other risks	Survivor benefits	Programs to provide support to surviving family members	Including special benefits to the parents, widows, and orphans of fallen military personnel	In Spain, changes in criteria increased survivor benefits significantly since 2005 at the expense of social pensions; data for the two subcategories are therefore not shown for recent years
	Disability-related	Disability-related benefits, incl. benefits for the handicapped, occupational injury, and rehabilitation and nursing benefits	Including veteran disability programs and compensation for disabled IDF veterans	
Other	Income security	Income security benefits for low-income individuals	Income security for special populations (e.g., seniors, surviving family members, etc.) is included in the relevant special categories	

Appendix Table 1. (continued)

Category	Program	Description	In Israel	Further comments
	Miscellaneous	In-kind services or low-income individuals and benefits other than income maintenance	Food banks, subsidies on public transport, welfare services, new immigrant rent assistance and grants	Welfare expenditures that do not fit in other categories
Housing		Public housing and programs of rent assistance	Assistance from <i>Amigur</i> only	US has no such expenditure
Health	Public	Government expenditure on health services		
	Private	Household expenditures on collectively funded or government-subsidized private health insurance	Voluntary supplemental health insurance by statutory or private medical insurers (provided by employers or involving tax benefits)	
Tax benefits	Social tax benefits	Welfare benefits through tax exemptions, deductions, and credits to provide support to certain populations.	No data provided by the OECD. All data taken from the State Revenue Administration, Israel Ministry of Finance (see section on tax expenditures)	

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The Privatization of Social Services in Israel: Considerations and Concerns

Reuben Gronau*

Abstract

Privatization of social services has become one of the most controversial issues in socioeconomic discourse in Israel. This chapter examines whether the statistical data supports this concern. The picture of the scope of social services that have been transferred is unclear: in the past decade there has been no significant change in the transfers from the government to the local authorities, the non-profits and the business sector, or in the relative contribution of public bodies involved in the provision of services. The numbers do not point to a trend of replacing internal activities with purchasing of services – something that would indicate a sharp transition from self-operation to outsourcing. Finally, employment data do not indicate a decline in the number of social service employees as a share of the total number of jobs in the Israeli economy (on the contrary, their share has increased). On the other hand, household contribution to the funding of services (especially health services) has increased, affecting equality. Israel's government must make improvement in service quality an overarching objective of its policy. Consumers of social services are often unable to assess the quality of the services they receive, and are unable to select a service provider of their choice. Thus, the key to privatization of social services is the existence of appropriate quality control. Where this is not possible, services ought to remain government-run. Too often privatization fails to improve the quality of services and also distorts resource allocations.

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“Privatized welfare services are no worse than government services –
but neither, I believe, are they better”
(an expert cited in *The Marker*, August 10, 2011).

In 1988, in one of the earliest conferences on privatization in Israel, one speaker began his presentation by saying, “Our topic today is the subject known as ‘privatization’ [English term used in the original, R.G.]. I myself will use the Hebrew term *hafratah*. True, the word may seem odd and sound awkward when spoken or heard, but such is the fate of many terms which we can no longer imagine how we had spoken before they were coined” (Golomb 1988). The speaker’s prophecy was fulfilled and the word has not dropped from the public agenda. There is a special place in the discourse for the “privatization of social services”: the transfer of social service activities from the public to the private sector. In the heat of such debates, however, there has not always been a distinction between the transfer of responsibility for the activities from public to private, to changes in the share of household contribution to the funding of such services or to the changes in the output component that is within the direct control of the public sector. In the heat of the debate, the term “privatization” has been used broadly to include also the transfer of services within the public sector, from the government to public non-profit organizations. In doing so, no distinction has been drawn between, for example, university tuition hikes, the private employment of public school nurses, and efforts to shift the provision of mental health services from the government to health funds – three very different issues with respect to the transfer of government-provided services to the private sector.

The debate over the privatization of social services in Israel has reverberated also in the economic literature. Fershtman (2007) has written extensively on the advantages and disadvantages of privatization. Dahan and Hazan (2010) examined changes in the scope of government spending on social services; and the implications of the privatization of specific social

services has been the focus of Paz-Fuchs and Kohavi (2010) and Paz-Fuchs and Leshem (2012).¹

Privatization is defined as the transfer of economic activity from the public (or government) to the private sector. This shift may have varied aims (like, limiting government involvement in economic activity or the raising of funds), but, like Fershtman (2007), the present chapter will limit its discussion to privatization expressly intended to increase economic efficiency. Efficiency will be defined narrowly in terms of input-output ratio, where output is measured not only quantitatively but also in terms of service quality.

To outside observers, the intensity of the debate over the privatization of social services may appear to be disproportionate to actual information on the phenomenon. Not only is there a lack of data on changes in the cost of services following privatization, but there is only little information on the total scope of privatization in the Israeli economy. Given this dearth of data, the present chapter will try to explore the extent to which the privatization of social services has left its mark on various branches of activity and examine the lessons to be learned from the last 15 years' experience.

1. Social Services: Background

Observers of the debate over the privatization of social services in Israel cannot but notice the discrepancy between the fervor of the debate and the paucity of data on the actual trend. Despite the continual discussion of the subject, there is little agreement on its scope. Some of this disagreement results from varying definitions of privatization. Some limit the use of the term to refer to the transfer of responsibility from the government to the business sector, while others use the term to cover those activities where the responsibility remains with the government but the implementation is given

¹ The implications of government policy concerning social services are regularly discussed in the annual reports of the Taub Center for Social Policy Studies in Israel.

to private bodies. For others privatization includes the transfer of activity between different types of government agencies (e.g., from central government to local authorities); or changes in the mode of employment of public employees (e.g., from direct employment to employment via contractors).

These diverse definitions have implications for differences in measurement. There is no organized list of privatized social services, and unofficial lists that do exist do not include estimates of the financial scope of such services. A recent survey (Paz-Fuchs and Kohavi 2010) lists ten services and activities privatized or facing imminent privatization, including the transfer of mental health services to the health funds; the privatization of homes for those with mental retardation; the planned elimination of several public housing programs; the establishment of a private dental care health fund; and the launching of a private pension clearing system. Based entirely on secondary sources, the survey neglects to note the financial scope of each activity, but it seems that only the first three involve significant budgets.²

In the absence of financial data for privatized service the reliance must be on aggregate data – though here, again, the ambiguities noted make accurate data difficult to obtain. In 2010, total social spending by the government was NIS 189 billion, of which NIS 85 billion was allocated to transfer (social security) payments and NIS 104 billion for the purchase of other social services.³ The main components in service consumption were education and health spending, which comprised 80 percent of services, whereas most transfers were intended for social insurance and welfare

² It is also worth noting that at present both dental health care and the management of retirement saving accounts are part of the business sector, and in this case it is not privatization but nationalization. A follow-up survey (Paz-Fuchs and Leshem 2012) discusses a dozen social service activities, but again, the authors provide no information about the financial scope of these activities.

³ This is according to Central Bureau of Statistics data. According to Taub Center data which aggregate the government's current and development budgets, government spending on social services for 2010 was NIS 129 billion, of which NIS 53 billion went to social security and NIS 76 billion to direct services.

payments. Social services constituted over one half of government consumption and 60 percent of the government's current expenditure.

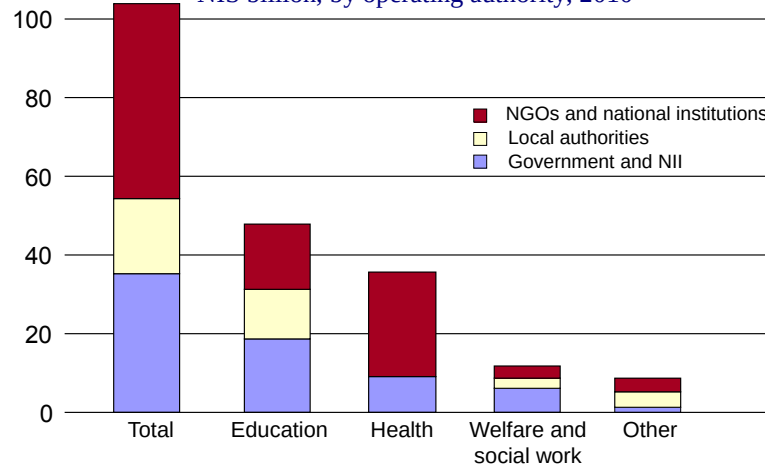
The central government, including the National Insurance Institute (NII), is the main source of funding for social services, but its role in direct service provision is limited. It provides directly only one-third of all services and over 40 percent of its spending on social services is in the form of transfers to other public agencies and organization (local authorities and non-profit organizations).

The major providers of social services in Israel are non-profit organizations, which jointly provide about one half of all public services, including about 75 percent of health services and over one-third of educational services (Figure 1). The central government's portion in the provision of education services is similar to that of non-profits but it provides only a quarter of health services; central government provides over 50 percent of social insurance and welfare services. Local authorities are the third social services provider, providing about 25 percent of all education services, but their share in total provision of the social services does not exceed one-fifth.

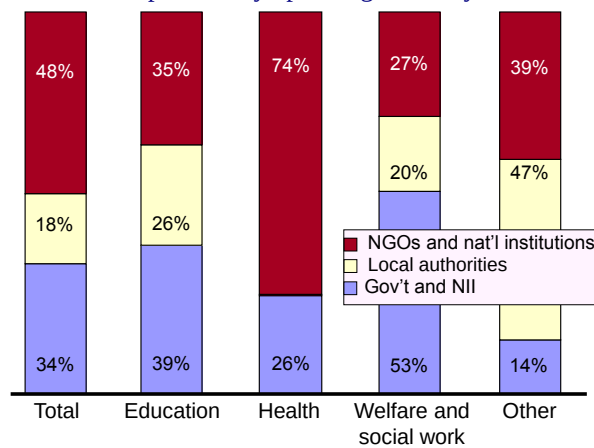
Figure 1

A. Social services consumption

NIS billion, by operating authority, 2010

**B. Distribution of social services consumption**

in percent, by operating authority, 2010

**Source:** Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.**Data:** Central Bureau of Statistics.

Some believe that the seeds of privatization were sown with the launching of Israel's anti-inflation policy in 1985. On the eve of the anti-inflationary stabilization program, government spending constituted 72 percent of Israel's GDP. Cutting the government share in GDP became a central component of the government's economic policy. This was to be achieved by lowering the deficit, curbing inflationary pressures, reducing debt as a share of the GDP, and shifting resources from the government to the private sector. In tandem with these budgetary changes, the government adopted a series of reforms in the monetary, capital, and foreign currency markets, eliminating its dominant role in these markets and increasing the private sector's access to capital markets.⁴ These changes had immediate effect: inflation was curbed, growth was renewed, and the balance of payments and national debt were reduced.

There is no doubt that the government's 1985 reforms had a positive structural effect on Israel's economy. Moreover, during the first decade after the reforms, social services (as a share of the GDP) remained unscathed, with most cuts targeting defense and other government budgets (Ben David 2009, Figure 6).⁵ From 1984 to 2001, social services as a share of government budgets more than doubled (an increase from 19 to 39 percent), and their share in GDP grew from 16 to 20 percent. An important component in this growth was the increase in spending on housing and immigration absorption in the wake of the massive immigration from the former Soviet Union. The immigration also increased demand for social services, due to the large percentage of unemployed and senior immigrants. No less important for the growth in the weight of social services was the government's change in priorities, which was reflected in increased spending on education, health, labor services, and welfare – from 11 to 19

⁴ For a comprehensive survey of the implications of the stabilization policy on the composition of GDP and the labor and capital markets, see Ben-Bassat (2001) and Zeira and Strawczynski (2001).

⁵ With budget cuts and national debt reductions, interest payments also constituted a smaller share of the government budget.

percent of the budget. At the same time, transfer (social security) payments rose from 6.5 to 16 percent of the budget.

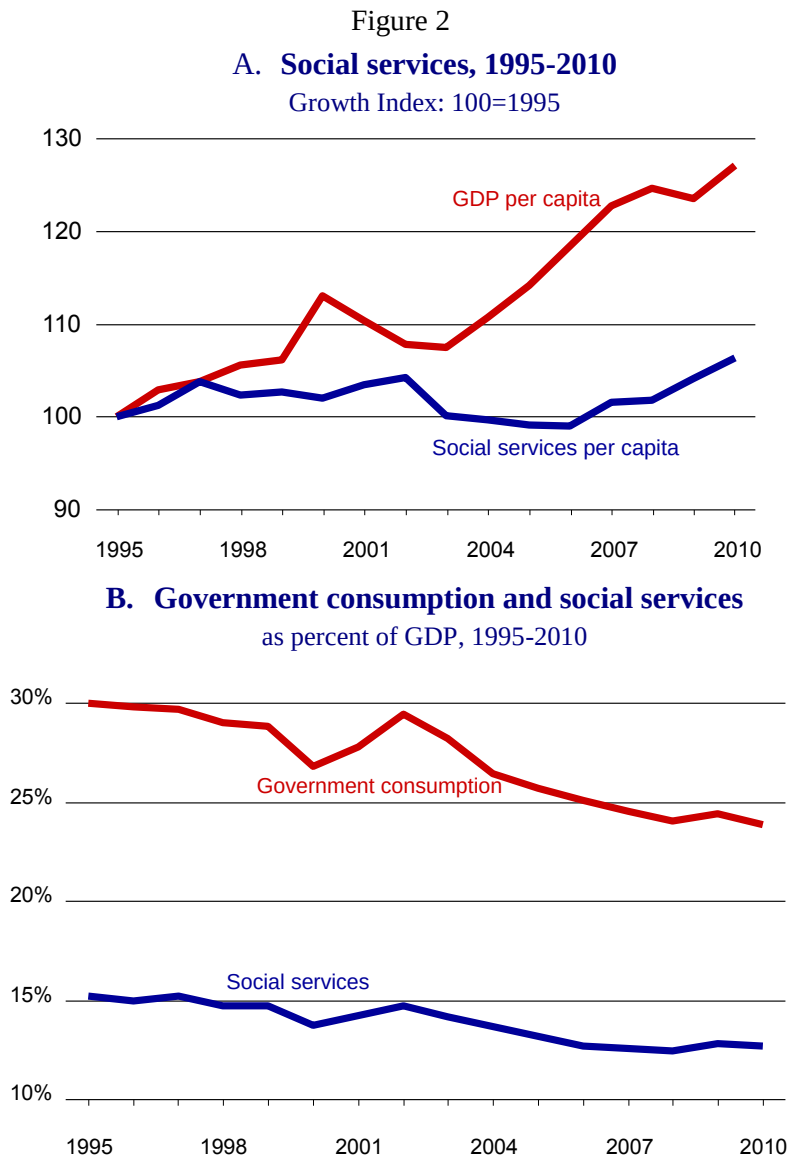
This trend changed in 2001. The economic crisis of 2001-2003 increased pressures for budget cuts. These cuts were required following the decline in tax revenues and the rising national debt, although this time, they also had an ideological characteristic. Whereas the drastic budget cuts of 1985 were not accompanied by a change in tax policy, the 2001 budget cuts were combined with cuts to direct taxes on labor.⁶ The new policy viewed direct tax cuts as an incentive to growth, and the reduction in government size, it was claimed, had a similar beneficial effect.

Figure 2 describes the growth of social services in 1995-2010. Over this period GDP per capita grew by more than a quarter and private consumption grew by almost one-third, whereas social services consumption grew by only 6 percent (over the period total services consumption grew by 46 percent). Thus, while the share in GDP of private consumption grew, the share of social services consumption fell from 15 to 13 percent.⁷ The main components of social service consumption are education and health services; it is doubtful that the declining share of these services relative to income and private consumption conforms to consumers' preferences.⁸

⁶ Reduced public spending as a share of the GDP in the years after 1985 enabled the government to lower the tax burden from 40 to 36 percent in the late 1980s. This rate remained in place until the early 2000s.

⁷ Government consumption as a share of the GDP fell from 30 to 24 percent. Since the concern here is the transfer of activity across sectors, the focus is on government consumption defined broadly to include local authorities and non-profits. These data differ from those of the Taub Center, which focuses on government budgets and therefore include transfer payments from government budgets but exclude local authority spending and independent spending by non-profits. Nevertheless, the trends seen in Figure 2 are similar to those reflected in Taub Center data.

⁸ Economists tend to believe that the income elasticity of demand for these services (like for savings) is greater than unitary, that is, consumption of these services as a share of one's income grows with income.



Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Dahan and Hazan (2010) examined whether these changes to social services followed consumers' preferences by comparing them with changes to services in OECD countries.⁹ According to their analysis, government health expenditure as a share of GDP was lower in Israel than the OECD average, while education expenditure as a share of the GDP was higher – although this is reversed when demographic differences between Israel and OECD countries are taken into account. (In Israel a larger fraction of the population are young, explaining the higher spending on education, and a smaller fraction are elderly, explaining the lower spending on health.) Spending on social security and welfare services is by all measures lower in Israel than in most advanced countries.

2. The Privatization of Social Services: A National Accounting Perspective

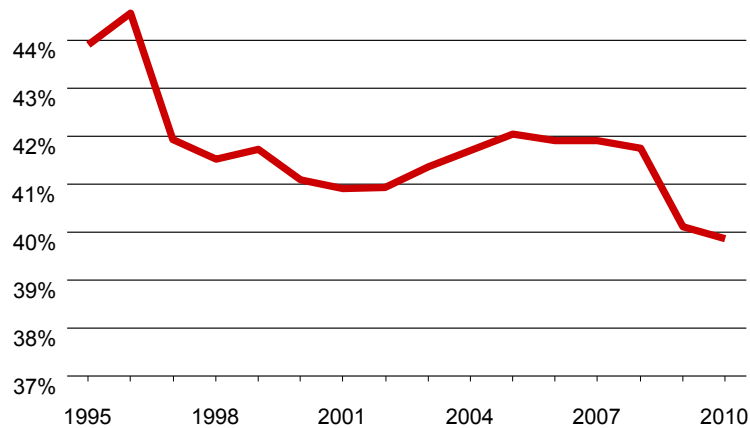
Is it possible to learn about the scope of social services that “changed hands” from the national accounting data? Despite its importance in the public debate, the question is not clearly answered by the macroeconomic data. Privatization, such as it was, is not reflected in data on transfers from government budgets to other units and organizations, in the share of social services provided by the central government, or, finally, in the (net) share of government purchases from the business sector.

Figure 3 describes transfers to other units and organizations as a share of central government spending on social services between 1995 and 2010. Although the data are limited to transfers to other public sector organizations (local authorities and non-profits), they do not indicate an increase in the outsourcing of government services. Though transfers as a share of government spending on social services fell over this period from 44 to 40 percent, most of the decrease had occurred by 2001 with the share remaining

⁹ Dahan and Hazan use OECD data and define total government spending broadly to include both capital account and current account spending. Their comparison period is 1994-2008.

constant since. (Transfers as a share of current account spending fell somewhat more steeply, from 47 to 41 percent, but, again, the decrease dates to the period before 2001.)

Figure 3
Transfers to other units* for social services expenditure
 as percent of expenditure by government sector on social services,
 1995-2010



* Local authorities and NGOs.

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

The changes in the composition of the agency that provide the public services does not indicate a clear trend either. As Figure 4 shows, according to the Central Bureau of Statistics data there have been no significant changes in the share of social services provided respectively by the central government, local authorities, and non-profit organizations. On the contrary, if there was a change, it was the central government's share growing at the expense of other providers: at the expense of non-profit organizations in health and education and at the expense of local authorities

in welfare spending (including social security and welfare, housing, and culture and religion). These findings must be qualified, however, in light of the shifting business orientation of non-profits over this period. Higher education saw an increase in the share of non-funded, tuition- and donation-based colleges, whereas health saw a growth in the business activity of the health funds.¹⁰ This change is not reflected in the data, because the national accounting does not distinguish between business and non-business activities carried out by non-profits.

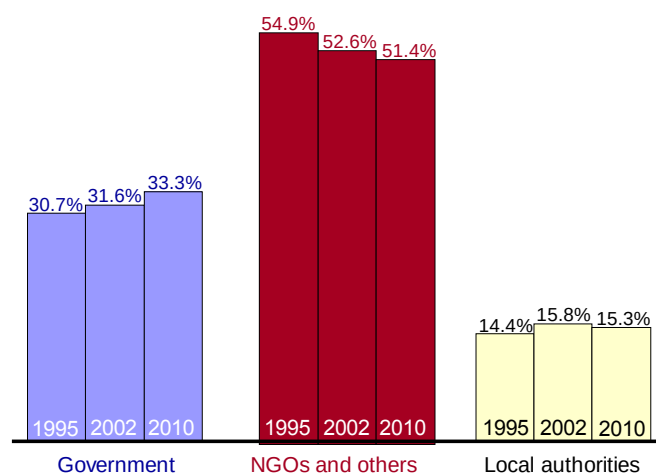
Another important aspect of the public discourse on privatization concerns the production of public services, more specifically the shift from direct government employment to employment via contractors. Since hundreds of thousands of workers are now employed by the government via contractors and manpower firms (estimates in the media range from 100,000 to 300,000 workers), one would expect a significant decrease in the component of labor compensation (salary expenditure) as a share of government consumption on social services and a concurrent increase in government purchasing of services as a share of total government consumption (due to increased purchases from manpower firms). This aspect of privatization is not reflected in national accounting data.

¹⁰ One example that stands out is that of the Assuta network of hospitals and clinics, owned by the Maccabi Health Fund. Assuta Hospital was originally privately owned.

Figure 4

A. Relative weight of the operating authority – education and health

as percent of government sector consumption, 1995, 2002, 2010

**B. Relative weight of the operating authority in consumption of social services**

as percent of government sector consumption, 1995, 2002, 2010

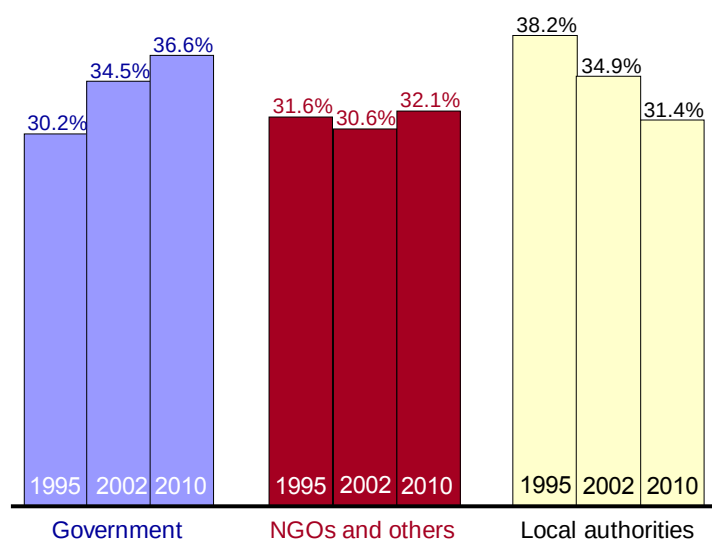
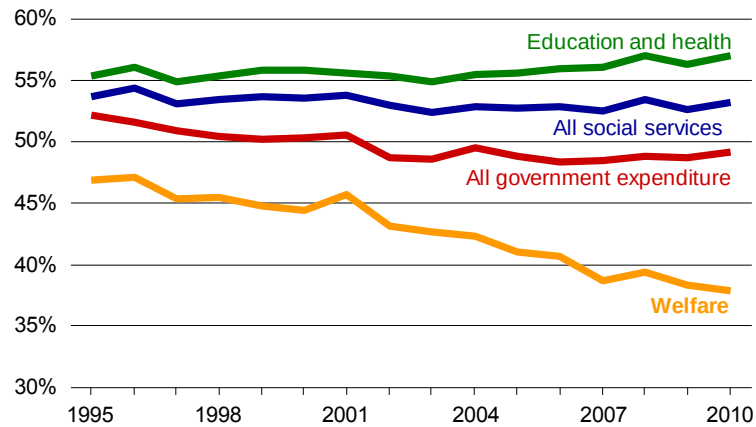
**Source:** Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.**Data:** Central Bureau of Statistics.

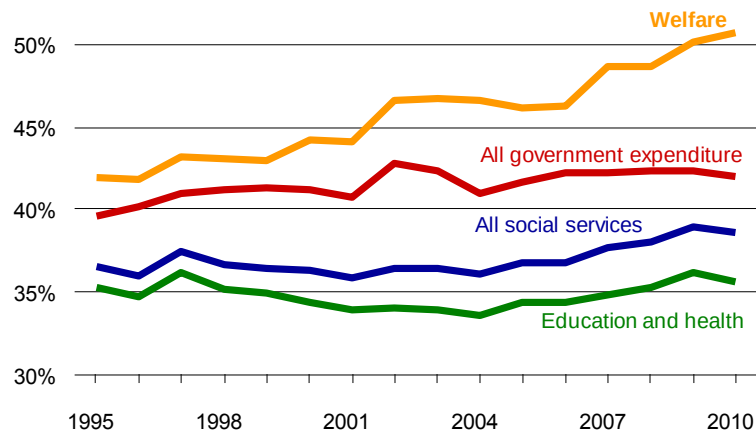
Figure 5 shows changes in the labor compensation component and (net) government purchases as a share of total government consumption over time. Although the data indicate a decrease in the share of labor compensation in government output and a certain rise in the share of purchases, the changes consist of no more than a few percent. The shift in inputs in the production of social service is even smaller and is concentrated entirely in welfare services (the share of wages in these services fell from 47 to 38 percent and the share of purchases rose from 42 to 51 percent).¹¹

¹¹ Yuval Mazar at the Bank of Israel, using OECD data, examined (gross) purchases as a share of government spending and found some increase in the purchase share of the central and local authority government. However, he did not examine changes in purchase share in social service or the share of labor compensation in these services.

Figure 5
A. Component of labor compensation in government consumption of social services
1995-2010



B. Component of net purchase in government consumption of social services
1995-2010



Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

In order to examine whether recent changes in the provision of social services in Israel over the past few years match consumers' preferences, Dahan and Hazan (2010) used as a baseline for comparison consumers' preferences in other advanced countries. Another possible approach is to measure the Israeli public's willingness to contribute to the funding of such services. Admittedly, this approach is also not flawless since household funding of services is not always voluntary, and at times the provision of public services is conditional upon private participation (resulting in an "all-or-nothing" demand curve). Nevertheless, the data may shed light on the optimality, both qualitative and quantitative, of government services, especially as household contribution to services becomes increasingly a central issue in discussions of privatization.

Government consumption is measured in the national accounts as the sum of its expenditure on manpower and net purchases from the business sector.¹² This measure deducts from the gross government purchases the household's direct contribution (direct payments and donations, as distinct from the taxes levied to fund government activity). A more comprehensive measure of government's economic activity is given by gross consumption, including the household's direct participation (i.e., services "sold" to the public).

Figures 6A and 6B correspond to Figures 2A and 2B, respectively, replacing net with gross consumption per capita and household spending on these activities for the years 1995-2010. The figures illustrate the sharp growth in household spending on social services: household expenditure grew significantly faster than both GDP and private consumption (2.7 percent versus 1.6 and 1.8 percent, respectively). Though most of the growth occurred in the latter half of the 1990s, it continued throughout the 2000s as well. As Figure 6B shows, household contribution grew from 10 percent of gross consumption in 1995 to 14 percent in 2010.

¹² As noted, this measure differs from Ben-David's (2009), which is limited to expenditures funded from government budgets, and from the definition of Dahan and Hazan (2010) which includes transfer payments.

As Figure 6C shows, household contribution as a share of overall expenditure barely changed in education and welfare but nearly doubled in health. As a result of this, gross public services succeeded in maintaining their share of the GDP constant until 2002; but from then on, even the growth in the households' participation was unable to offset the decline in government expenditures and as a result the share of the social services in GDP declined from 16 to 15 percent.

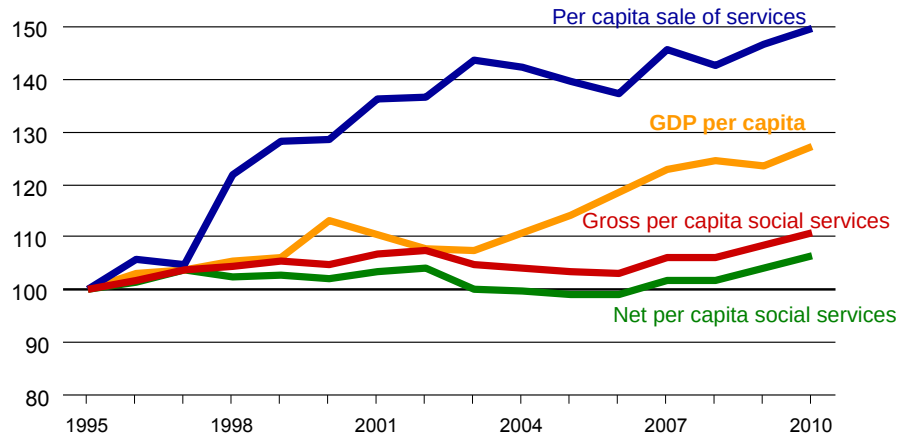
The main beneficiaries of the growth in household spending were non-profit organizations (Figure 6D).¹³ Household contribution as a share of non-profit activity (gross consumption) grew over the period from 14 to 22 percent (mostly because of the increased participation of households in health services) and by 2010 was nearly identical for all social services (education, health and welfare). The growth in household spending (a real increase of 2.4 percent) served to compensate the sector for the decline in government financing, preserving its share in the total social services pie.

¹³ This period saw a concurrent drop in household contribution to services provided by the central government and municipal authorities.

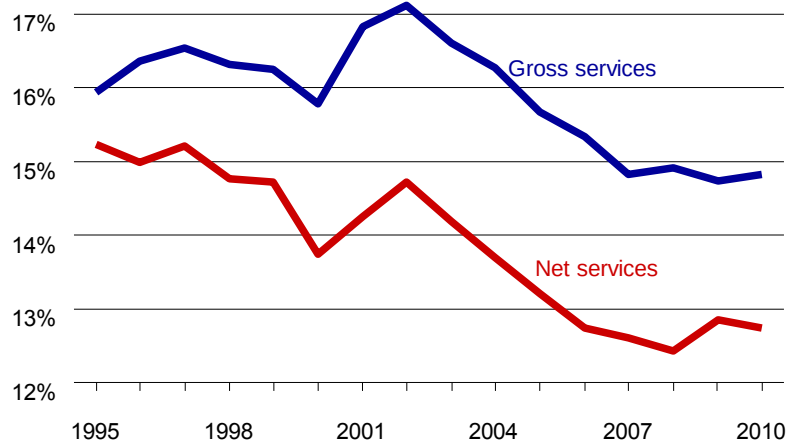
Figure 6

**A. Per capita consumption of social services, gross and net,
1995-2010***

Index: 100=1995



**B. Relative weight of consumption of social services in GDP,
gross and net,
1995-2010***



* Figure 2A and 2B respectively revised.

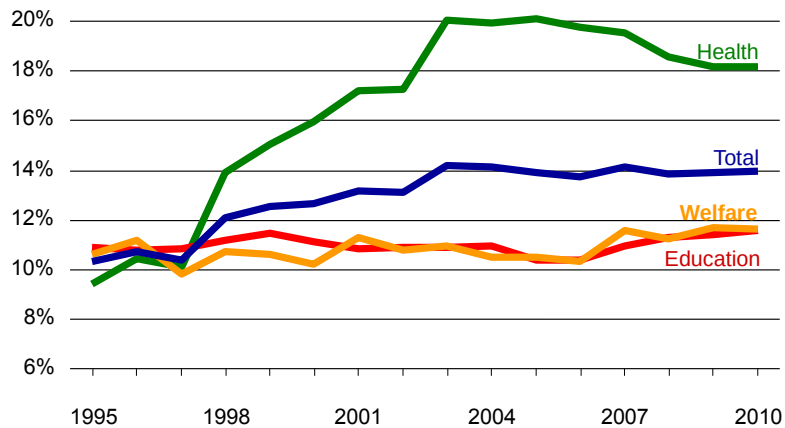
Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

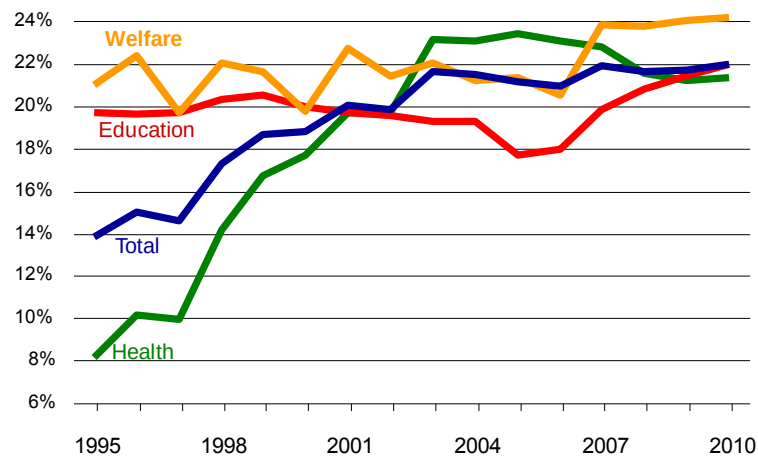
Figure 6 (continued)

C. Public participation in gross consumption of government sector

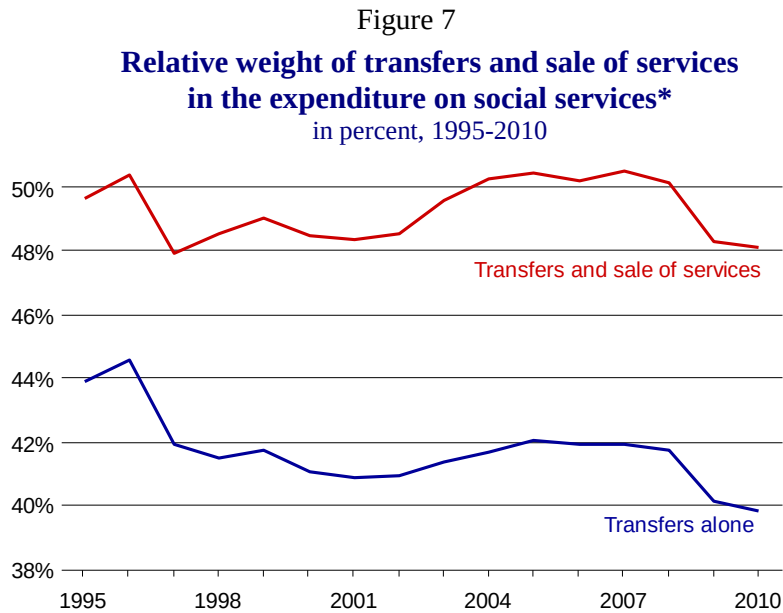
by services, as percent of consumption, 1995-2010

**D. Relative weight of public participation in gross NGO consumption**

by sector, as percent of consumption, 1995-2010

**Source:** Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.**Data:** Central Bureau of Statistics.

Similarly, as Figure 7 shows, direct household contributions offset the decline in government transfers so that the amount of total transfers of this branch did not change.



* Figure 3 revised.

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Replacing net with gross consumption naturally increases the share of service purchases and decreases the share of labor inputs, yet it did not change the trends over time. The changes in the composition of input in the production of education and health services has been minor, while in welfare the data show a long-term trend of decreasing labor inputs and an increase in the share of service purchases.

3. The Privatization of Social Services: A Labor Market Perspective

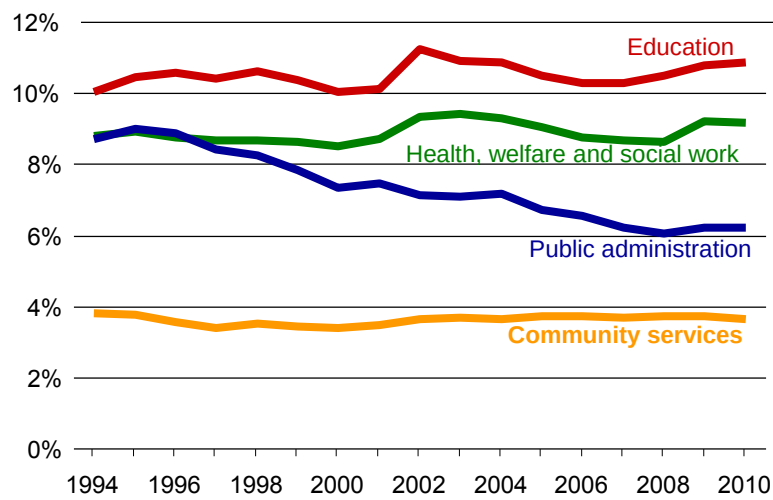
In national accounting terms, the value of social services is determined by the value of the inputs devoted to their production. Since the main production input of social services is labor, salary expenses are an important determinant of their value. Similarly, labor quality is a major determinant of the quality of services. It is therefore important to examine how changes in the provision of social services have affected the labor market. To do so, the analysis is based on wage data provided by the National Insurance Institute which cover all social service employees, both public and private. The data show that despite the decline in government-provided social services as a share of GDP, share of the social services sector in total wage expenses has not changed (Figure 8A). Differences between NII and national accounting data may be due to different definitions, but may also indicate growing private involvement in the provision of social services.¹⁴

Given the decline of social services as a share of the GDP, one would expect employment data to reflect a similar trend. Surprisingly, however, according to NII data, not only did the percentage of social service jobs as a share of total jobs in the economy not fall, it grew from 26 to 30 percent (Figure 8B). This apparent inconsistency is explained by changes in the average wage of social service workers relative to that of private sector employees. Average wage has always been lower in social services than in the business sector, but whereas in the mid-1990s the difference was only 17 percent, in 2010 it was 26 percent. Education is the only sector where average wage kept pace with the rest of the economy; in health and welfare, however, relative wage fell by 13 percent. These trends are especially striking given the changes in the share of salaries in public administration. As Figures 8B and 8C show, the number of public administration positions fell both in absolute and relative terms while wages, already 25 percent

¹⁴ Due to different definitions and a different data base there are discrepancies between the labor costs described in Figure 5A and 8A.

higher than business sector in 1995, soared over the next fifteen years until in 2010 they were nearly 50 percent higher.¹⁵ It is worth noting, however, that most of the erosion in the relative pay of social service employees occurred in the second half of the 1990s, prior to the Ministry of Finance's adoption of the budgetary squeeze policy.

Figure 8
**A. Social services component out of
 total wages in the economy**
 1995-2010



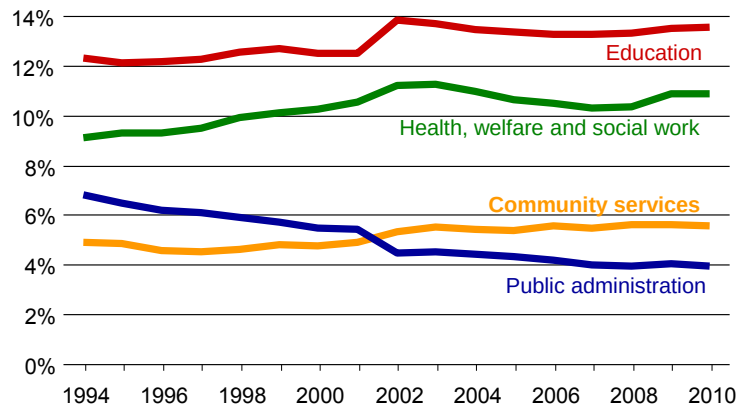
Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

¹⁵ The decline in the number of job positions and the increase in relative pay may be explained by the outsourcing of low-skilled jobs.

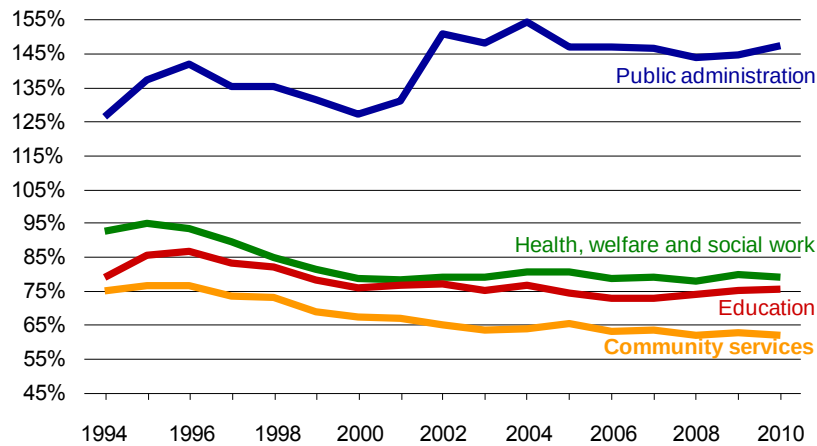
Figure 8 (continued)

B. Percentage of job positions in social services
as percent of all employee positions, 1994-2010



C. Relative wages in the social services

as percent of the average wages in the business sector*, 1994-2010



* The percent difference between average wage in social services and the average wage in the business sector.

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

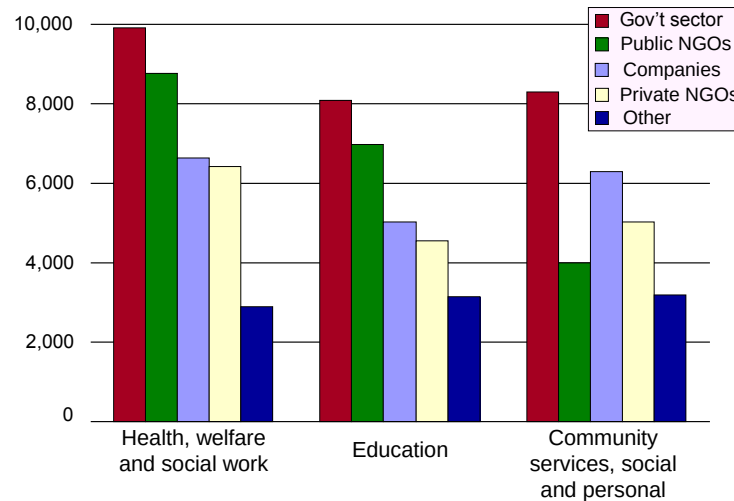
Between 1995 and 2010 real wages increased by 20 percent in the business sector and by only 6 percent in social services. No detailed data are available about the manpower characteristics in each sector, but it is difficult to believe that some radical change in employee characteristics (in terms of education or seniority) explains this difference. It is equally hard to believe that the difference in pay is explained by differences in the bargaining power of public versus private employers or in the degree of unionization of workers in each sector. A third possible explanation sees the erosion in the relative pay of social service workers as a result of privatization – the transfer of activity from central government to the business sector.

Social service employees are employed in roughly equal numbers by the government directly, by government-owned corporations, by public non-profits, and by private non-profit organizations (25 percent each).¹⁶ While the percentages are equal, relative wages are not. In each type of service (health, education, welfare) government employees enjoy significantly higher salaries than workers in the other sectors in each of the service areas (Figure 9), followed by the employees of public non-profits, corporations, private non-profits and others. Average pay in each sector and service area reflects different occupational mixes (e.g., physicians and nurses in health services) but also the different budgetary limitations facing each type of employer. Although the data should for this reason be approached with caution, they lend support to the claims that the shifting of services to private non-profits involves the employment of cheaper labor and that potential gains in efficiency may be lost due to the resultant decline in service quality.¹⁷

¹⁶ The percentage varies, however, across different services. The government employs about 40 percent of all employees in education, whereas government-owned corporations (including hospitals) employ about one half of all health and welfare employees.

¹⁷ Central Bureau of Statistics data about the distribution of jobs by sector go back only to 2007. Changes in distribution and relative pay over the entire 1995-2010 period can therefore not be examined. Changes since 2007 have not been significant.

Figure 9
Average wage in social services
 by branch and sector, 2010



Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

4. The Privatization of Social Services: Some Concerns

As the previous section has shown, quantitative data do not give a clear picture of the extent of privatization in the social services. The data indicate a significant increase in household contribution, but this increase merely compensates the public providers (and primarily non-profits) for the decline in government transfers. The data do not indicate changes in the distribution of activity among public and private providers and among the various public providers (central government, local authorities, and non-profits). Although

a trend of higher (gross) purchases and lower labor inputs is discernible, it is limited to welfare services and not evident in education or health. National accounting data indicate a decline in services as a share of GDP, although this finding refers only to government-funded services; the trend nearly vanishes once household-funded services are taken into account.

The lack of clarity of these findings may have to do with measurement difficulties (e.g., of the kind that occurs when the same organization engages in both for-profit and not-for-profit activities). At times, however, it may appear that the transfer of social services from the public to the private sector is still largely a plan in the making rather than a widespread actual phenomenon.¹⁸ Still, the data evokes an uncomfortable feeling with respect to the privatization process. The most worrying signs have to do with wage differences between categories of employers (the central government, government-owned corporations, private non-profits, public non-profits) and with the eroding average wage of social service workers relative to the average wage in the market.

The deterioration of regulation and the damage to service quality: A major aim of the privatization policy is attaining increased wage flexibility leading to improved service quality at lower cost. Wage differences between government employees and workers in other sectors indicate the potential for cheaper service but also the risk of damage to quality. The risk is underscored by the constant widening of wage differences between social service employees and other workers in the economy. The current 25 percent difference is bound to be reflected in differences in the quality of manpower. The low (and still declining) wage status of social service workers is bound to compromise the level of services and to further deprive the government of strong regulatory power, a precondition of any successful attempt at privatization.

¹⁸ A prominent example is the transfer of mental health services from the government to health funds, a plan which has been in discussion over the last decade and a half, but has not yet reached the implementation stage.

Government services have never been known for strong supervision. Numerous public commissions have criticized the Ministry of Education's supervisory efforts, while in the Ministry of Health regulatory powers, ineffectual from inception, were transferred to a large extent to the supervised body, namely the Israeli Medical Association. Enforcement of labor laws (primarily the minimum wage law) has become a joke¹⁹ and even where supervision and enforcement are effective they lack transparency, preventing consumers from making informed choices.²⁰ In the absence of independent regulators, supervision was left in the hands of the providers: school principals supervise their faculty's teaching quality; hospital administrators supervise the medical staff's service quality, etc. The supervisors grew out of the ranks of the operators in the field. Curtailing the size of government operation due to outsourcing may in turn lead to lower supervisory capacities by depleting the pool of professional personnel from which supervisors can be drawn.²¹ Regulation used to be the weak spot of social services even in the days when supervisors have administrative authority over the regulated parties. One can expect the balance of power between regulators and the regulated to tilt even further when the latter are profit-driven, and where serious information gaps exist between supervisors and those they supervise.²²

In the absence of external regulation, consumers often act as regulators-supreme, especially when they have a choice between several providers. Consumers of welfare services (and at times, consumers of health services)

¹⁹ One recommendation of the OECD's May 2010 labor market survey has been to enhance labor law regulation and enforcement nine-fold.

²⁰ Thus, for example, the government and the local authorities have not published until quite recently the school and hospital quality rankings.

²¹ The chances of recruiting private sector executives to serve as public sector supervisors have been proven to be slim.

²² An extreme case is when the government, aware of its regulatory limitations, transfers supervisory powers to the business sector, as in the case of pre-academic programs in Israel (Paz-Fuchs and Kohavi 2010, Chapter 27). Similar problems have characterized welfare-to-work programs (the *Orot le-Taasuka* program).

are, however, unable to play this role – certainly not when they are children in day care for mentally challenged children or mental health patients. When the consumers are minors it may be hoped that the parents will serve as supervisors, although such supervision is bound to weaken as the child grows older.²³ Similar concerns apply to the mental health system, where the government has attempted to shift supervisory powers to health funds despite examples of ongoing treatment failures at private hospitals.²⁴

The stated goal of the privatization of public services has been to increase efficiency while maintaining output (and perhaps improving quality). The underlying assumption of this model is that the private sector's advantages in terms of employment and wage flexibility and its ability to reward employees based on quality will compensate for the conflicting goals of the government and private providers. This assumption overlooks the effects of budget cuts which also affected the providers in the business sector and the tender system used to select the private providers. The obligatory mechanism is the tender system and the deciding criterion in choosing the provider, especially in a time of budget cuts, is often price.²⁵

²³ Similar worries about regulation over institutions for the mentally challenged were raised in the 2005, 2007, and 2009 State Comptroller Reports.

²⁴ Unlike other illnesses, mental illnesses are usually long-lasting, requiring long-term and recurring hospitalization. As a result, although medical treatment represents only a small fraction of the expenses, hospitalization costs for each patient are significant. Hospitals and health funds have been trying to gain a foothold in mental health services for years as a way to increase their own resources. In the absence of effective supervision by patients and their families there is reason to fear that resources allocated to treatment might be reallocated to other purposes. Paz-Fuchs and Kohavi (2010, Chapter 10 and 13) discuss the consequences of transferring mental health services from government-run clinics to health funds and hospitals, as well as the transfer of methadone treatment centers from the public to the private sector.

²⁵ Price is also an easy parameter to measure as opposed to other parameters of service quality.

The result in some cases is that in order to meet the price in their tender the quality of services must be compromised.²⁶

In a recent statement, the Head of the Budget Division at the Ministry of Finance articulated the ministry's position on the privatization of services as follows: "There must be a distinction between the privatization of provision and the privatization of responsibility. You cannot convince me that ongoing management of welfare services – for example, homes for mentally challenged children – must be provided at government facilities by government workers, including the security guards and the cleaning staff."²⁷ While it is true that workers at such facilities ("including the security guards and the cleaning staff") need not be government employees, the budgetary limitations faced by service providers make it highly likely that not only the security guards and the cleaning staff but also the care workers at such institutions will be of lower quality and provide lower-quality service than their government-employed equivalents.²⁸

The undermining of equality: Reduced government involvement in the provision of social services has shifted a growing burden onto households. Household spending on social services has increased, sometimes because service is now conditional upon payment, sometimes in order to avoid less or lower-quality service. Growing household spending has, in certain cases, prevented a loss of quality although it has come at the expense of the principle of social equality. These trends are reflected in the changing distribution of household expenses over the period in question.

²⁶ Infrastructure tenders often try to improve their terms by renegotiating the concession; this is less common in social services, where numerous firms typically compete for each tender.

²⁷ *The Marker*, August 21, 2011.

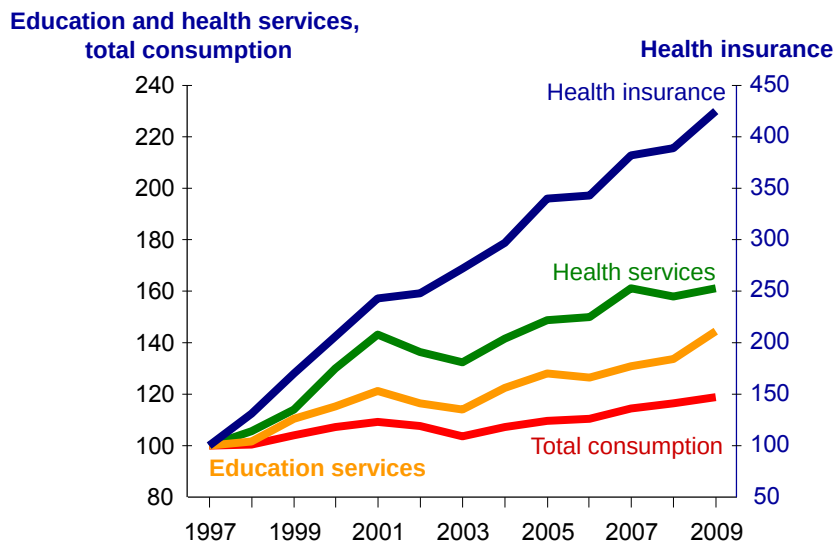
²⁸ A vivid example for the failures of the tender system is provided by recent developments in public transportation. In order to meet the terms of their tenders, operators had to hire drivers at low pay. To improve the resulting poor service quality the government had to revise its tenders by adding drivers' salaries to the terms.

Between 1997 and 2009 household consumption increased by 20 percent while household spending on education increased by 40 percent and household health spending by 60 percent (Figure 10). In other words, education expenses as a share of overall consumption grew from 4.3 to 5.2 percent, while health expenses as share of overall consumption grew from 3.8 to 5.1 percent. Most of the growth in household health expenses was due to private health insurance payments.

Figure 10

Increase in household expenditure on education and health services

Index: 100=1997, 1997-2009



Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

The declining quality of public health services which is reflected in longer waiting lists and worsening hospital conditions has led to an increase in private insurance, to expand coverage and sidestep the limits on choice imposed by public insurers (especially for surgery). Between 1997 and 2009, spending on private health insurance increased more than four-fold and in 2009, its share in total private health spending doubled to 30 percent of expenditure.²⁹

Private spending on education and health is dependent on household income and is thus not equally distributed in the population. As Figure 11 shows, average household spending on education in the uppermost decile is eight times the average in the second decile and 3.7 times the average in the fifth decile.³⁰ Average household spending on health in the uppermost decile is 4.4 times the average in the second decile for health insurance and 2.8 times for other health services.

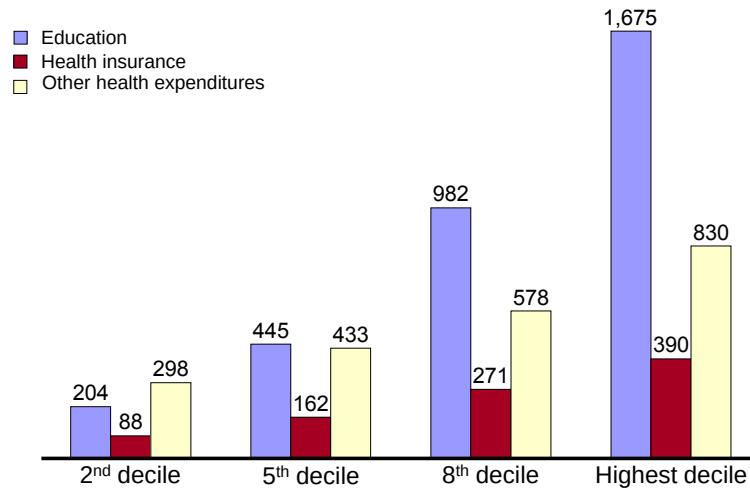
Despite these similarities, private spending on health and on education differs in one crucial respect. Whereas the share of private spending on education in total household consumption grows with total consumption, the share of private spending on health in household consumption falls as total consumption grows.³¹ As Figure 12 shows, private spending on education is 4 percent of household consumption in the second decile, 5.5 percent in the fifth decile, and 9 percent in the upper decile. By contrast, private spending on other health services is 6 percent of household consumption in the second decile and only 4.5 percent in the upper decile.

²⁹ According to a Ministry of Health report on supplementary insurance (2011), supplementary insurance is purchased by about 75 percent of the insured population. Other private health expenses (including spending on dental care) grew between 1997 and 2009 at a rate similar to that of other household expenses.

³⁰ Some of the difference is explained by differences in family size, since family size is positively correlated with income.

³¹ Monetary consumption is considered a more reliable indicator of consumers' income over time.

Figure 11
Household expenditure on education and health services
 NIS, by gross income decile, 2009



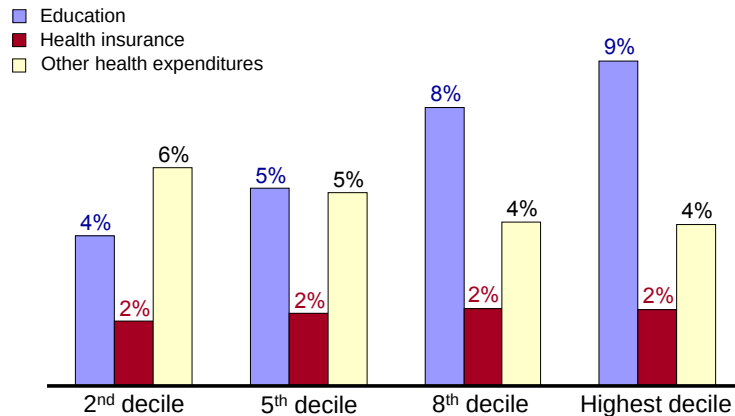
Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.
Data: Central Bureau of Statistics.

Private spending on education and health may be seen as a tax imposed on private consumers. In these terms, cutbacks in government-provided education services impose a progressive tax on households while cutbacks in government-provided health services serve as a regressive tax on households.

Figure 12 shows that spending on health insurance is not sensitive to income levels. If the income elasticity of health insurance is indeed unitary (that is, if consumers want to spend a fixed share of their income on insurance), it follows that the growth in insurance spending in recent years has been the result not of growing households incomes but of the deteriorating quality of public health services. In any case, whether progressive or regressive, the shifting to households of a growing share of

spending on social services distances society from principles of social equality which ought to guide government action.

Figure 12
Household expenditure on education and health services
as percent of all expenditures, by gross income decile, 2009



Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Differences in the quality of services enjoyed by consumers at different income levels are further increased by the positive correlation between household income and local authority resources. Unequally distributed across different communities, local authority resources amplify inequality in social service spending. Education services provide a striking example. As the primary instrument for implementing the government's (pre-academic) education policy, local authorities fund approximately 30 percent of regular education budgets while the central government funds about 60 percent.³² However, as has been shown by Ben-Bassat and Dahan (2009, Figure 7),

³² Central Bureau of Statistics, *Statistical Abstract of Israel*, No. 61 (2010), Table 10.14.

there is a significant gap of approximately 60 percent between spending per pupil in the lowest three socioeconomic clusters (mostly Arab localities) and in the upper seven clusters. While in the upper seven clusters spending per pupil ranged in 2006 from NIS 6,400 to NIS 10,300, in the lowest three clusters spending per pupil was only NIS 4,000 to NIS 5,200. While government funding for the two groups differed only slightly (6 percent), local funding was more than four times higher in the first group than in the second, and parent contributions were more than six times higher. Parent contributions were only 4 percent of total spending in the lower group, and reached roughly 20 percent in the higher group. Comprehensive data on health spending per patient by locality is unavailable, but partial evidence points to similar differences between localities in the center of the country and the periphery.

Effect on resource allocation: Household contributions to the funding of social services have implications beyond their effect on social equality, and affect the macroeconomic efficiency of the industry. To meet households' expectations for improved quality services, service providers must increase inputs. This is reflected in the form of increased capital inputs (improved facilities, computerization and medical equipment) and more personnel. Due to the importance of personnel quality as a determinant of service quality, providers must overcome public-sector labor arrangements in order to reward their employees for effort and improved service. This creates a dual system where some activity conforms to free-market rules while the majority must conform to the old rules. In some cases the split is between different providers, while in other cases (most prominently in hospitals) the two systems exist side by side, where the same provider plays according to two different sets of rules. Flexible employment and performance-based incentives may contribute to efficiency when they become system-wide. Often, however, adamant opposition by labor unions leads to the opposite result, with higher pay in the private sector leading to system-wide pay raises without change to the terms of employment, making services more costly, and sometimes the dual compensation system results in the deterioration of quality in the public sector. This occurs when private

providers succeed in luring away outstanding public employees, or when employees divide their time between public and private employers. In other cases, workers themselves contribute to the decline in service quality in an attempt to enjoy the private sector's higher pay. The emergence and growth of private hospitals and colleges is an instance of the first type of misallocation,³³ and the allegation that physicians have contributed to longer waiting lists illustrates the second.³⁴ The equilibrium where two types of incentive systems exist side by side in the same sector is unstable, and increases the likelihood that it will deepen the differences in service quality.

5. Conclusions and Lessons

The policy of the privatization of social services is a relatively new instrument in the arsenal of government economic policy; but despite its recent appearance it has quickly become one of the most controversial issues in socioeconomic discourse. Privatization involves the transfer of activity from the government to the business sector. Whereas the privatization of infrastructure services has involved the shifting of both provision and overall responsibility to the business sector, the privatization of social services has involved provision alone, with the government retaining overall responsibility, and private firms and organizations serving merely as contractors. The debate regarding who should provide such service sometimes reflects conflicting worldviews about the role of government

³³ Physicians dividing their time between public hospitals (their primary employers) and private hospitals have, in some cases, been the cause of medical malpractice suits. University faculty moonlighting in private colleges have, similarly, a damaging effect on the teaching quality at universities.

³⁴ A slightly different example is provided by the establishment of private law schools. Israel's private law colleges were established because of the strict admission criteria at university-affiliated law schools. However, the same professors who had set those criteria, purportedly to maintain high teaching and academic standards, were those who then flocked to teach at private schools at higher pay.

versus the free-market. The economist in general ignores such concerns and considers the criterion of efficiency alone – assessing whether the transfer of services is likely to reduce their cost or improve their quality.

Economic considerations in favor of leaving responsibility for the provision of social services in the hands of the government have to do with the difference between these services' direct and immediate benefit to individuals and their overall social benefit. Since the former is often only a small component of the latter, consumers' choices may lead to the underproduction of social services. Moreover, the allocation of social services, especially in the form of social security transfer payments, reflects the public's preference for equality. Since equality, like security, is a public good, the government should be responsible for its financing.

Demand for social services depends on the population's demographics, education level and income. In the absence of negotiability, however, the socially and economically desirable level of social services is hard to determine. As for supply, the production costs of social services, as those of private services, depend on the quality and the labor costs of the services in question. The quality of workers providing the service and the degree of effort invested in their provision determines to a large extent the quality of the service itself. A system of quality-rewarding incentives is thus a prerequisite of high-quality services. The absence of such a system in the government sector is the weak point in their provision by the government.

In addition, variance in quality requires a credible system of regulation. Whereas in the private sector consumers exercise ultimate supervisory powers, determining the desirable quality of service and selecting a provider from among those available, in social services, particularly in welfare, consumers often find it difficult to determine the desirable quality of service and face limited choices. Consumers' inability to enforce quality standards calls for strict and skilled external regulation. The catch is that public administrators have largely failed to develop independent supervisory agencies and adequate regulatory methods to ensure appropriate quality levels over time: such is the case in education, health and welfare. In the

absence of adequate supervision, quality levels are left to be determined at the implementation level.

In the private sector, the implementation level is administratively subordinate to decision makers. The supply of social services in Israel is characterized by decentralized service supply channels, with the central government joined by local authorities, the General Federation of Workers (the *Histadrut*) and local non-profits. Roughly one-half of service consumption by the government sector is provided by non-profits, one-fifth by local authorities, and only one-third directly by the central government. Non-profits and local authorities enjoy a great deal of autonomy, and in the absence of administrative oversight the central government often meets difficulties in realizing its goals. It was against this backdrop that an initiative was launched in the 2000s to expand the circle of service providers to include the business sector.

Despite the lively public debate on privatization in the last decade, whose echoes were heard in the social protests of the summer of 2011, information is limited in scope and often contradictory. More specifically, there is almost no comparative research on the cost and quality of services before and after privatization.³⁵

Over the last 15 years the government sector's social service consumption grew more slowly than did both GDP and private consumption. Based on experience from other advanced economies, and assuming that health and education services are no less sensitive to changes in income than other private consumer products this trend did not conform to consumer preferences and was reflected in a growing share of services funded directly by households. The precise extent to which economic activity shifted between sectors is less clear.

Though the money transfers from the central government to other public sectors declined over the period in question, most of the decrease occurred in the late 1990s and not in the last decade. The decrease was offset by

³⁵ One of the only initiatives to withstand rigorous assessment was the *Orot le-Taasuka* welfare-to-work program, eliminated despite its success in returning transfer allowance recipients to employment.

direct household spending. The relative importance of the various public providers of social services (central government, local, non-profits) did not change either. Neither is there an indication that government-provided social services involved the substitution of labor inputs with external purchases on a scale indicating a significant shift from self-operations to outsourcing. Moreover, employment data do not indicate a decline in the share of employees in this industry in total employment. The share of positions in the social services not only didn't decline, it actually experienced a rise.

The most striking employment-related trend was the relative decline in the wage of social service workers, though, again, most of the decline occurred in the late 1990s, before the full adoption of the privatization policy. Whether this change is the result of eroded wages (though most social service workers are unionized) or of a shift from "costly" government employees to "cheap" non-government labor, it is hard to believe that such extreme changes in relative wage do not lead to changes in employee quality and in the workers' effort.

National accounting and employment data raise doubts about the precise extent of the privatization of social services: has privatization been limited in scope, a strategy yet to be fully realized, or have statistics yet to catch up with institutional and organizational changes, therefore not giving a full picture regarding the extent of privatization? Either way, the falling relative wage of employees in the social service industry gives cause for concern that budget cuts may damage the quality of services even more than they affect their scope. This worry is reinforced by the character of tenders for social service concessions, many of which stress the cost criterion above all other requirements, forcing the successful operator to use cheap labor, with negative consequences for quality. Since in many of the services facing privatization consumers cannot supervise for quality (notable examples are health services and shelters for those with mental handicaps), supervision must be carried out by external regulators; and since the transfer of services to non-government providers has also depleted government-employed

supervision and regulation personnel, supervision itself is often outsourced to private companies.

The erosion of the quality of social services is reflected in the composition of household expenditures. Spending on education and health rose since the late 1990s at a faster rate than other consumption components. Especially striking is the exceptional increase in household spending on supplementary health insurance. More than any other type of expense, this expenditure reflects the public's disappointment with the quality of health services offered universally free of direct charge. Since private household spending is differential, depending on the resources available to each household, its increase contradicts with principles of social equality that the government strives to maintain. This expenditure could be regarded as a tax that the government imposes on its citizens by allowing social services to deteriorate. Such "taxation" is progressive in the case of education but regressive in the case of health expenditures. The resulting differences in spending between socioeconomically divergent communities are a further cause of inequality in Israeli society.

The increase in household contribution to the funding of social services has yet another dimension. The increase in private spending has led to the growth of a business sector alongside the public sector, except that each is playing by different rules with a fragile balance between the two. Flexible employment and compensation rules allow the business sector to recruit the best public sector workers. In many other cases, workers divide their time and loyalty between private and public employers, with the quality of public services compromised as a result. At times the same provider hosts both "public" and "private" services at differential prices, encouraging consumers to switch from the former to the latter. In each of these cases, the result is both increased inequality and decreased efficiency.

What are the lessons to be learned from the trends that characterized the social services in the past decade and their privatization?

- Efficiency has two aspects: cost reduction producing a given output or, alternatively, an increase in the output (or quality) at a given cost. The primary lesson from recent trends is that any shifting of activity from the government to other organizations, public or private, ought to involve an improvement in service quality. This should be the objective of privatization and the criterion governing the order of social services to be privatized. This policy should be separated altogether from a policy whose goal is to reduce the social services expenses. International comparisons show that the component of spending on education and welfare (standardized to demographics and income inequality) as a share of GDP is lower in Israel than the OECD average. Restoring education and welfare budgets should be accompanied by efforts to improve service quality.³⁶ Where the transfer of services from government to non-government providers involves a tender, the successful contractor must be chosen on the basis of service quality. Such criteria are harder to define than pricing criteria; but without clear, measurable, and preference-ordered quality criteria, tenders based on pricing criteria are bound to compromise service quality.
- Making service quality the overarching goal of government policy in the social services requires strict supervision of the level of services. The most efficient regulator is the consumer. To enable consumers to play this role, privatization must be accompanied by an expansion of consumer choice among different providers.³⁷ Needless to say, social services should not be controlled by private monopolies, as both

³⁶ The reform efforts accompanying recent pay agreements in the teaching and health systems are a step in the right direction.

³⁷ This principle is put into practice in Israel's National Health Insurance Law which increases competition by allowing consumers to choose among several health funds. In a recent article, Lavy (2010) shows that greater school choice in Tel-Aviv's high school system has decreased drop-out rates and improved pupil achievement.

efficiency and choice require competition. Where consumers lack choice and mobility (as is often the case in social services), quality standards must be enforced with special stringency. Just as Israel's military would not consider privatizing the production of its tanks without the strictest quality control mechanisms in place, so should no social service be privatized without the appropriate quality control. Effective quality control is a precondition of any transfer of services from government to other providers. Where adequate supervision is unavailable and consumers themselves cannot control for quality, service provision should remain with the government.

- Increasing budgets for social services does not exempt the government from reassessing its priorities concerning the provision and funding of such services. The distinction between social services and private ones is not an absolute one; it is dependent on the social return of the service relative to the private return and to the contribution of the service to the public feelings of social equality. Dental care, for example, is not perceived as a social service, and has been an exception to the medical services.³⁸ Similarly, government financing of early childhood education has been limited and the government has been reluctant to accept responsibility for it despite recent legislation. Many other social services have long been directly provided by non-government public agencies, with government involvement limited to funding. Yet other services, such as higher education, are financed partly by the government and partly by private payments and donations.

A central consideration in the rate of financial participation of the government in these services, alongside private participation, is the gap between private return in education and social return, and the difference in the private and social rates of discount. In this respect, current subsidies to higher education at the expense of early childhood education reflect a failure in priorities. Return on educational investments is highest in the formative

³⁸ Recently the Ministry of Health extended public health care to dental care for children below the age of 14 (currently provided by the health funds).

stage of early childhood, whereas the financial burden on parents of young children (who are themselves often younger and therefore less affluent) is often greater than in later stages of parenthood. In higher education, by contrast, especially in the more popular fields of study (law, business, the social sciences), differences between private returns (in terms of increased earning power) and social returns on investment are minimal (some of these subjects are, in fact, characterized by oversupply); investment risks are relatively small; and the ability of many parents to assist their children financially is greater.³⁹ Ironically, the same students who oppose university tuition hikes are the same ones who in a matter of a few years will bear the much greater burden of childcare expenses.

In the past, higher consumer contributions to the funding of services were intended to offset the decline in government funding, and to prevent the erosion of quality. Naturally, this trend has been perceived as increasing indirect “taxation” and as detrimental to equality. To win public support for this increased direct burden on households, such steps must be accompanied by commensurate increases in government funding.⁴⁰ Increasing consumer funding would increase their bargaining power regarding service quality and offer providers competitive incentives. Improving the quality of government-provided social services would curb the emergence of private organizations (such as private hospitals and colleges) which threaten the public system. Differential allocation of government budgets may compensate for the inequality caused by increased household contributions.⁴¹

³⁹ In the absence of a private credit market, students who cannot fund their studies may be offered publicly subsidized credit.

⁴⁰ Supplementing university tuition hikes with increased government funding was a central recommendation of the Shochat Committee on Reform in Higher Education (2007). The recommendation was rejected, however, by student unions. The tuition hike recommended by the Shochat Committee was NIS 5,000 annually, or NIS 15,000 for a full three-year baccalaureate degree. By comparison, unsubsidized childcare centers often charge NIS 25,000 a year.

⁴¹ Academic scholarships may compensate for increased university tuition; “balancing grants” may compensate for unequal resource distribution at the

The sooner the government internalizes these principles, the sooner “privatization” will cease to be a pejorative term. The resultant growth in the variety of service providers may, in fact, prove to be a boon for Israeli society.

municipal level. The government’s most recent pay agreement with the Israeli Medical Association illustrates how the government can compensate for differences in the quality of health services in regions of varying socioeconomic status.

Appendices

Appendix Table 1. **Social services consumption, by operating authority**
in NIS billion, 2010

	Total		Education		Health		Welfare	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Gov't and NII*	36.46	35.27	18.94	18.66	9.80	9.10	7.72	7.51
Local authorities	20.85	19.14	13.86	12.57	0.15	0.13	6.84	6.45
NGOs and national institutions	63.32	49.39	21.25	16.58	33.36	26.21	8.71	6.60
Total	120.63	103.80	54.05	47.81	43.31	5.44	23.26	20.56
in percent								
	Total		Education		Health		Welfare	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Gov't and NII*	30%	34%	35%	39%	23%	26%	33%	37%
Local authorities	17%	18%	26%	26%	0%	0%	29%	31%
NGOs and national institutions	52%	48%	39%	35%	77%	74%	37%	32%

* National Insurance Institute.

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Appendix Table 2. **Index of social services consumption of the government sector and its share of GDP**

Index: 100=1995, 1995-2010

	GDP per capita	Social services per capita- net	Social services per capita- gross	Consumer participation in social service expenditure	Service weight net in GDP	Service weight gross in GDP
1995	100	100	100	100	15.2%	15.9%
1996	103	101	102	106	15.0%	16.4%
1997	104	104	104	105	15.2%	16.5%
1998	106	102	104	122	14.8%	16.3%
1999	106	103	105	128	14.7%	16.3%
2000	113	102	105	128	13.7%	15.8%
2001	110	103	107	136	14.3%	16.8%
2002	108	104	108	137	14.7%	17.1%
2003	108	100	105	144	14.2%	16.6%
2004	111	100	104	142	13.7%	16.3%
2005	114	99	103	139	13.2%	15.7%
2006	118	99	103	137	12.7%	15.3%
2007	123	102	106	145	12.6%	14.8%
2008	125	102	106	143	12.4%	14.9%
2009	124	104	109	147	12.8%	14.7%
2010	127	106	111	150	12.7%	14.8%

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.**Data:** Central Bureau of Statistics.

Appendix Table 3. **Rate of transfers to other units and consumer participation in government sector expenditure for social services, 1995-2010**

as percent of total expenditure

	As percent of transfers out of current expenditure	As percent of transfers out of total expenditure	Percent of consumer participation out of total expenditure	As percent of transfers and consumer participation of total expenditure
1995	47%	44%	6%	50%
1996	48%	45%	6%	50%
1997	44%	42%	6%	48%
1998	43%	42%	7%	49%
1999	44%	42%	7%	49%
2000	43%	41%	7%	48%
2001	42%	41%	7%	48%
2002	42%	41%	8%	48%
2003	43%	41%	8%	50%
2004	43%	42%	9%	50%
2005	44%	42%	8%	50%
2006	43%	42%	8%	50%
2007	43%	42%	9%	50%
2008	43%	42%	8%	50%
2009	42%	40%	8%	48%
2010	42%	40%	8%	48%

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Appendix Table 4. **Distribution of social services consumption by operating authority, 1995-2010**

	Net			Gross		
	Gov't	Local authorities	NGOs / others	Gov't	Local authorities	NGOs / others
1. Total						
1995	31%	19%	51%	29%	19%	53%
1996	31%	19%	50%	29%	18%	52%
1997	31%	19%	50%	29%	18%	52%
1998	32%	19%	49%	29%	19%	52%
1999	31%	20%	49%	29%	19%	53%
2000	32%	20%	49%	29%	29%	53%
2001	32%	20%	48%	29%	19%	52%
2002	32%	19%	48%	29%	18%	52%
2003	32%	20%	48%	29%	18%	53%
2004	32%	19%	49%	29%	18%	53%
2005	31%	19%	50%	28%	18%	54%
2006	31%	19%	50%	28%	18%	54%
2007	32%	19%	49%	29%	18%	54%
2008	33%	19%	48%	29%	18%	53%
2009	33%	18%	48%	30%	17%	53%
2010	34%	18%	48%	30%	17%	52%

Appendix Table 4. (continued) **Distribution of social services consumption by operating authority, 1995-2010**

	Net			Gross		
	Gov't	Local authorities	NGOs / others	Gov't	Local authorities	NGOs / others
2. Education and Health						
1995	31%	14%	55%	29%	14%	57%
1996	32%	14%	54%	30%	14%	56%
1997	31%	14%	54%	29%	14%	57%
1998	32%	15%	54%	29%	14%	56%
1999	31%	15%	53%	28%	15%	57%
2000	32%	15%	53%	29%	15%	57%
2001	32%	16%	52%	29%	15%	56%
2002	32%	16%	53%	28%	15%	57%
2003	31%	16%	53%	28%	15%	57%
2004	31%	16%	53%	28%	15%	58%
2005	31%	15%	54%	27%	14%	59%
2006	31%	15%	54%	28%	14%	58%
2007	32%	15%	53%	28%	14%	57%
2008	32%	15%	52%	29%	14%	57%
2009	33%	15%	52%	29%	14%	57%
2010	33%	15%	51%	30%	14%	56%

Appendix Table 4. (continued)

	Net			Gross		
	Gov't	Local authorities	NGOs / others	Gov't	Local authorities	NGOs / others
3. Housing, Culture and Religion, Social Security and Welfare						
1995	30%	38%	32%	28%	36%	36%
1996	31%	39%	31%	28%	37%	35%
1997	31%	39%	30%	29%	37%	34%
1998	31%	40%	29%	29%	38%	34%
1999	31%	40%	29%	29%	38%	34%
2000	32%	38%	30%	29%	37%	34%
2001	33%	37%	30%	30%	35%	34%
2002	34%	35%	31%	32%	34%	35%
2003	34%	34%	31%	31%	33%	36%
2004	35%	34%	31%	33%	32%	35%
2005	34%	34%	31%	32%	33%	36%
2006	33%	35%	33%	30%	33%	37%
2007	34%	34%	33%	31%	31%	38%
2008	34%	34%	32%	31%	32%	37%
2009	36%	31%	33%	33%	29%	38%
2010	37%	31%	32%	33%	29%	37%

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Appendix Table 5A. **Labor compensation and net outsourcing costs, as percent of government social services consumption, 1995-2010**

	Labor compensation				Net outsourcing costs			
	Total gov't expenditure	Total social service	Education and health	Welfare	Total gov't expenditure	Total social service	Education and health	Welfare
1995	52%	54%	55%	47%	40%	37%	35%	42%
1996	52%	54%	56%	47%	40%	36%	35%	42%
1997	51%	53%	55%	45%	41%	37%	36%	43%
1998	50%	53%	55%	45%	41%	37%	35%	43%
1999	50%	54%	56%	45%	41%	36%	35%	43%
2000	50%	54%	56%	44%	41%	36%	34%	44%
2001	51%	54%	56%	46%	41%	36%	34%	44%
2002	49%	53%	55%	43%	43%	36%	34%	47%
2003	49%	52%	55%	43%	42%	36%	34%	47%
2004	49%	53%	55%	42%	41%	36%	34%	47%
2005	49%	53%	56%	41%	42%	37%	34%	46%
2006	48%	53%	56%	41%	42%	37%	34%	46%
2007	48%	52%	56%	39%	42%	38%	35%	49%
2008	49%	53%	57%	39%	42%	38%	35%	49%
2009	49%	53%	56%	38%	42%	39%	36%	50%
2010	49%	53%	57%	38%	42%	39%	36%	51%

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Appendix Table 5B. **Labor compensation and gross outsourcing costs, as percent of government social services consumption, 1995-2010**

	Labor compensation			Gross outsourcing costs		
	Total social services	Education and health	Welfare	Total social services	Education and health	Welfare
1995	48%	50%	42%	43%	42%	48%
1996	48%	50%	42%	43%	42%	48%
1997	48%	49%	41%	44%	43%	49%
1998	47%	48%	41%	44%	43%	49%
1999	47%	49%	405	44%	43%	49%
2000	47%	48%	405	44%	43%	50%
2001	47%	48%	41%	44%	43%	50%
2002	46%	48%	385	45%	43%	52%
2003	45%	47%	385	45%	44%	53%
2004	45%	47%	385	45%	43%	52%
2005	45%	47%	37%	465	44%	52%
2006	46%	48%	36%	45%	44%	52%
2007	45%	48%	34%	46%	44%	55%
2008	46%	49%	35%	47%	45%	54%
2009	45%	48%	34%	47%	45%	56%
2010	46%	49%	33%	47%	45%	56%

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Appendix Table 6. **The social services component in wages and job positions in the economy, 1994-2010**

	Social services wage expenditures as percent of total wage expenditure				Social services positions as percent of total positions			
	Edu.	Health, welfare and social work	Com- munity service	Public admin	Edu.	Health, welfare and social work	Com- munity service	Public admin
1994	10%	9%	4%	9%	12%	9%	5%	7%
1995	10%	9%	4%	9%	12%	9%	5%	6%
1996	11%	9%	4%	9%	12%	9%	5%	6%
1997	10%	9%	3%	8%	12%	9%	5%	6%
1998	11%	9%	4%	8%	13%	10%	5%	6%
1999	10%	9%	3%	8%	13%	10%	5%	6%
2000	10%	9%	3%	7%	13%	10%	5%	5%
2001	10%	9%	3%	7%	12%	11%	5%	5%
2002	11%	9%	4%	7%	14%	11%	5%	4%
2003	11%	9%	4%	7%	14%	11%	6%	5%
2004	11%	9%	4%	7%	13%	11%	5%	4%
2005	11%	9%	4%	7%	13%	11%	5%	4%
2006	10%	9%	4%	7%	13%	11%	6%	4%
2007	10%	9%	4%	6%	13%	10%	6%	4%
2008	11%	9%	4%	6%	13%	10%	6%	4%
2009	11%	9%	4%	6%	14%	11%	6%	4%
2010	11%	9%	4%	6%	14%	11%	6%	4%

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Appendix Table 7. **Average wages in the social services**
as percent of the average wage in the economy,
1994-2010

	Education	Health, welfare and social work	Community services	Public administration
1994	79%	92%	75%	126%
1995	85%	95%	77%	137%
1996	87%	93%	77%	142%
1997	83%	90%	74%	135%
1998	82%	85%	73%	135%
1999	78%	81%	69%	132%
2000	76%	79%	67%	127%
2001	77%	78%	67%	131%
2002	77%	79%	65%	151%
2003	75%	79%	64%	148%
2004	77%	80%	64%	154%
2005	74%	81%	66%	147%
2006	73%	79%	63%	147%
2007	73%	79%	63%	147%
2008	74%	78%	62%	144%
2009	75%	80%	63%	145%
2010	76%	79%	62%	147%

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

Appendix Table 8. **Positions, wages and labor costs in social services by industry and sector, 2010**

	Total	Gov't sector	Public NGOs	Private companies	Private NGOs	Other
Salaried positions (thousands)	879.5	211.8	210.9	252.1	178.0	35.7
Education	396.9	164.3	118.2	36.2	69.8	8.4
Health, welfare, social work	319.1	29.1	54.5	159.6	60.2	15.7
Community services, social and personal	163.5	18.4	29.2	56.3	48.0	11.6
Average wage (NIS)	6,638	8,341	7,039	6,327	5,316	3,062
Education	6,750	8,071	6,986	5,015	4,573	3,144
Health, welfare, social work	7,073	9,606	8,780	6,633	6,407	2,913
Community services, social and personal	5,521	8,278	4,007	6,302	5,028	3,204
Total expenditure on salaries (NIS billion)	70.1	21.2	17.1	19.1	11.4	1.3
Education	32.15	15.91	9.91	2.18	3.83	0.32
Health, welfare, social work	27.08	3.46	5.74	12.70	4.63	0.55
Community services, social and personal	10.83	1.83	1.40	4.26	2.90	0.45

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.**Data:** Central Bureau of Statistics.

Appendix Table 9. **Household expenditure index on education and health, 1997-2010**

Index: 100=1997

	Total consumption	Education	Health services	Health insurance
1997	100	100	100	100
1998	100	102	106	131
1999	104	110	114	170
2000	107	115	130	206
2001	109	121	143	243
2002	108	116	136	248
2003	104	114	132	272
2004	107	123	142	297
2005	110	128	149	340
2006	110	127	150	343
2007	114	131	161	382
2008	116	133	158	389
2009	119	144	161	425

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.**Data:** Central Bureau of Statistics.

Appendix Table 10. **Expenditure on education and health services out of total household expenditure, 2009**

by gross income deciles

	Deciles				
	1	2	3	4	5
Households in population (thousands)	212.8	213.0	212.3	212.5	212.7
Average persons in household	1.82	2.80	3.16	3.23	3.49
Average standard persons in household	1.79	2.39	2.62	2.65	2.83
Wage-earners in household	0.23	0.41	0.78	0.95	1.20
Monetary consumption expenditure (NIS)	3,963	5,025	6,418	7,527	8,263
Consumption expenditures – Total	5,582	6,740	8,518	9,785	10,842
Health	313	386	414	474	595
Health insurance	79	88	114	141	162
Other health expenditures	234	298	300	333	433
Education	177	204	305	363	445
Relative money consumption expenditure					
Health	7.9%	7.7%	6.5%	6.3%	7.2%
Health insurance	2.0%	1.8%	1.8%	1.9%	2.0%
Other health expenditure	5.9%	5.9%	4.7%	4.4%	5.2%
Education	4.5%	4.1%	4.8%	4.8%	5.4%

Appendix Table 10. (continued)

Deciles					
6	7	8	9	10	Total
212.5	213.0	212.2	212.8	212.5	2,126.2
3.63	3.66	3.78	3.90	3.92	3.34
2.92	2.94	3.03	3.11	3.12	2.74
1.46	1.67	1.82	2.05	2.08	1.27
9,621	11,558	12,969	14,864	18,949	9,914
12,630	14,834	16,755	19,486	24,937	13,009
656	719	849	1,044	1,220	667
190	226	271	312	390	197
466	493	578	732	830	470
643	789	982	1,176	1,675	676
6.8%	6.2%	6.5%	7.0%	6.4%	6.7%
2.0%	2.0%	2.1%	2.1%	2.1%	4.4%
4.8%	4.3%	4.5	4.9%	4.4%	4.7%
6.7%	6.8%	7.6%	7.9%	8.8%	6.8%

Source: Reuben Gronau, *State of the Nation Report 2011-2012*, Taub Center.

Data: Central Bureau of Statistics.

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Public Expenditure Tables

Yulia Cogan

*The Taub Center Expenditure 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		GDP
	Total	excl. interest payments and debt repayment	
1. Total budget: current and development			
1980	23.9	31.7	17.8
1985	18.2	32.1	15.5
1989	26.1	42.0	16.4
1996	36.8	53.2	19.9
2000	38.4	54.9	18.1
2005	35.3	51.6	16.3
2006	34.3	50.6	15.6
2007	34.3	50.8	15.3
2008	34.8	51.4	15.3
2009	35.9	51.7	15.7
2010	36.1	53.1	15.8
2011	35.9	53.4	15.6
2012	36.0	53.2	15.6
2. Current budget			
1980	26.4	30.4	15.1
1985	24.6	32.3	14.4
1989	34.0	42.8	15.6
1996	43.4	51.3	16.9
2000	45.9	54.2	16.4
2005	43.9	52.1	15.3
2006	43.3	51.3	14.9
2007	43.7	51.4	14.6
2008	45.1	52.5	14.7
2009	46.0	53.2	15.1
2010	47.6	54.9	15.4
2011	48.1	55.5	15.2
2012	48.0	55.4	15.1

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

		of which: Interest payments and debt repayment	<u>Total excluding interest and debt repayment</u>			
	Total		Total	Social services	Defense	Other
1. Total budget: current and development						
1980	100.0	24.5	100.0	31.7	39.5	28.8
1985	100.0	43.4	100.0	32.1	40.2	27.7
1989	100.0	37.8	100.0	42.0	33.1	24.9
1996	100.0	30.8	100.0	53.2	24.5	22.3
2000	100.0	30.0	100.0	54.9	24.0	21.1
2005	100.0	31.6	100.0	51.6	25.3	23.1
2006	100.0	32.1	100.0	50.6	25.7	23.7
2007	100.0	32.5	100.0	50.8	25.8	23.4
2008	100.0	32.3	100.0	51.4	24.8	23.8
2009	100.0	30.6	100.0	51.7	23.8	24.4
2010	100.0	32.0	100.0	53.1	23.3	23.6
2011	100.0	32.8	100.0	53.4	22.5	24.1
2012	100.0	32.5	100.0	53.2	21.4	25.4
2. Current budget						
1980	100.0	13.3	100.0	30.4	44.5	25.0
1985	100.0	24.1	100.0	32.3	43.6	24.1
1989	100.0	20.6	100.0	42.8	35.4	21.8
1996	100.0	15.5	100.0	51.3	27.6	21.0
2000	100.0	15.4	100.0	54.2	26.1	19.7
2005	100.0	15.8	100.0	52.1	27.2	20.7
2006	100.0	15.7	100.0	51.3	27.4	21.3
2007	100.0	15.0	100.0	51.4	27.5	21.1
2008	100.0	14.1	100.0	52.5	26.4	21.1
2009	100.0	13.5	100.0	53.2	25.4	21.4
2010	100.0	13.3	100.0	54.9	24.8	20.3
2011	100.0	13.2	100.0	55.5	24.0	20.5
2012	100.0	13.4	100.0	55.4	23.0	21.5

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

	Total	Income maintenance	In-kind services			
			Total	Education	Health	Other *
1. Total budget: current and development						
1980	100.0	30.7	69.3	30.9	21.1	17.3
1985	100.0	41.0	59.0	28.6	19.9	10.5
1989	100.0	42.4	57.6	28.4	19.0	10.1
1996	100.0	33.4	66.6	30.3	17.4	18.8
2000	100.0	39.3	60.7	30.4	15.0	15.3
2005	100.0	39.5	60.5	30.4	17.2	12.9
2006	100.0	40.2	59.8	30.4	17.4	12.0
2007	100.0	39.8	60.2	31.7	16.2	12.4
2008	100.0	40.3	59.7	31.3	16.7	11.7
2009	100.0	41.1	58.9	31.3	16.6	11.0
2010	100.0	41.0	59.0	31.9	17.0	10.1
2011	100.0	41.2	58.8	32.3	16.5	10.0
2012	100.0	40.9	59.1	30.9	16.9	11.2
2. Current budget						
1980	100.0	36.0	64.0	34.5	23.7	5.8
1985	100.0	44.2	55.8	30.2	20.9	4.8
1989	100.0	44.5	55.5	29.3	19.7	6.6
1996	100.0	39.1	60.9	33.9	19.3	7.7
2000	100.0	43.3	56.7	32.3	16.1	8.3
2005	100.0	42.0	58.0	31.7	18.1	8.2
2006	100.0	42.2	57.8	31.3	18.0	8.5
2007	100.0	41.8	58.2	32.7	16.8	8.6
2008	100.0	42.1	57.9	32.0	17.2	8.7
2009	100.0	42.7	57.3	31.8	16.9	8.6
2010	100.0	42.2	57.8	32.0	17.1	8.6
2011	100.0	42.3	57.7	32.4	16.6	8.6
2012	100.0	42.2	57.8	31.4	17.3	9.1

* Primarily personal social services, absorption, and housing.

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

	Total	Income main- tenance	In-kind services						
			Total	Education	Health	Welfare	Employ- ment	Absorp- tion	Housing
1. Total budget: current and development NIS million, 2011 prices)									
1980	51,985	12,825	39,160	18,540	12,697	2,186	311	349	5,078
1985	52,469	16,725	35,743	17,847	12,373	1,913	298	392	2,920
1989	61,008	22,462	38,546	19,269	12,918	2,664	435	836	2,423
1996	109,186	34,827	74,359	33,295	19,150	4,028	556	2,246	15,084
2000	119,609	46,155	73,453	36,159	17,794	5,401	706	2,500	10,893
2005	111,928	45,686	69,242	34,667	19,558	6,241	869	1,413	6,494
2006	115,500	47,144	68,357	34,715	19,837	6,417	1,078	1,508	4,801
2007	118,951	48,052	70,899	37,326	19,024	6,967	1,167	1,330	5,085
2008	120,463	49,112	71,350	37,423	20,024	7,256	1,230	1,340	4,077
2009	127,786	52,419	75,366	40,055	21,234	7,795	1,266	1,318	3,699
2010	133,353	54,587	78,766	42,605	22,688	8,341	1,254	1,340	2,538
2011	136,094	56,003	80,091	43,988	22,476	8,542	1,322	1,342	2,422
2012	139,316	56,926	82,390	43,108	23,596	9,087	1,709	1,265	3,626
Average annual percent changes									
1980-1985	0.2	5.5	-1.8	-0.8	-0.5	-2.6	-0.8	2.4	-10.5
1985-1989	3.8	7.7	1.9	1.9	1.1	8.6	9.9	20.8	-4.6
1989-1996	8.7	6.5	9.8	8.1	5.8	6.1	3.5	15.2	29.9
1996-2000	2.3	7.3	-0.3	2.1	-1.8	7.6	6.2	2.7	-7.8
2000-2005	-0.8	-0.2	-1.2	-0.8	1.9	2.9	4.2	-10.8	-9.8
2005-2010	3.0	3.6	2.6	4.2	3.0	6.0	7.6	-1.1	-17.1
2010-2012	2.2	2.1	2.3	0.6	2.0	4.4	16.8	-2.8	19.5

* 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; the Development Budget expenditures are deflated by the Construction Price Index.

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

	Total	Income main- tenance	In-kind services						
			Total	Education	Health	Welfare	Employ- ment	Absorp- tion	Housing
2. Current budget (NIS million, 2011 prices)									
1980	46,152	12,825	33,328	17,965	12,338	2,149	311	349	216
1985	49,176	16,725	32,451	17,548	12,139	1,885	298	392	188
1989	58,467	22,462	36,005	18,997	12,753	2,640	435	836	344
1996	91,601	34,827	56,774	31,629	17,983	3,974	556	2,246	387
2000	106,910	46,155	60,755	34,653	17,223	5,356	706	2,500	317
2005	107,715	45,686	62,029	33,944	19,344	6,221	869	1,413	239
2006	109,983	47,144	62,839	34,068	19,548	6,403	1,078	1,508	234
2007	113,159	48,052	65,108	36,639	18,790	6,957	1,167	1,330	224
2008	115,599	49,112	66,487	36,725	19,742	7,240	1,230	1,340	210
2009	123,087	52,419	70,667	39,234	20,857	7,772	1,266	1,318	221
2010	129,310	54,587	74,723	41,432	22,164	8,305	1,254	1,340	228
2011	132,274	56,003	76,271	42,874	21,093	8,522	1,322	1,342	228
2012	134,792	56,926	77,866	42,340	23,291	9,060	1,709	1,265	201
Average annual percent changes									
1980-1985	1.3	5.5	-0.5	-0.5	-0.3	-2.6	-0.8	2.4	-2.7
1985-1989	4.4	7.7	2.6	2.0	1.2	8.8	9.9	20.8	16.2
1989-1996	6.6	6.5	6.7	7.6	5.0	6.0	3.6	15.2	1.7
1996-2000	3.9	7.3	1.7	2.3	-1.1	7.7	6.2	2.7	-4.9
2000-2005	0.1	-0.2	0.4	-0.4	2.3	3.0	4.2	-10.8	-5.5
2005-2010	3.7	3.6	3.8	4.0	2.8	5.9	7.6	-1.1	-0.9
2010-2012	2.1	2.1	2.1	1.1	2.5	4.5	16.8	-2.8	-6.1

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

	Total	Income main- tenance	In-kind services						
			Total	Education	Health	Welfare	Employ- ment	Absorp- tion	Housing
1. Total budget: current and development (NIS, 2011 prices)									
1980	13,406	3,307	10,099	4,781	3,274	564	80	90	1,309
1985	12,395	3,951	8,444	4,216	2,923	452	71	93	690
1989	13,503	4,972	8,531	4,265	2,859	590	96	185	536
1996	19,206	6,126	13,080	5,856	3,369	709	98	395	2,653
2000	19,018	7,339	11,679	5,749	2,829	859	112	398	1,732
2005	16,584	6,592	9,991	5,002	2,822	901	125	204	937
2006	16,374	6,684	9,691	4,922	2,812	910	153	214	681
2007	16,567	6,692	9,874	5,199	2,650	970	163	185	708
2008	16,482	6,720	9,762	5,120	2,740	993	168	183	558
2009	17,071	7,003	10,068	5,351	2,837	1,041	169	176	494
2010	17,492	7,160	10,332	5,589	2,976	1,094	164	176	333
2011	17,530	7,214	10,317	5,666	2,895	1,100	170	173	312
2012	17,652	7,213	10,439	5,462	2,990	1,151	217	160	459
Average annual percent changes									
1980-1985	-1.6	3.6	-3.5	-2.5	-2.2	-4.3	-2.5	0.6	-12.0
1985-1989	2.2	5.9	0.3	0.3	-0.6	6.9	8.1	18.9	-6.1
1989-1996	5.2	3.0	6.3	4.6	2.4	2.7	0.2	11.4	25.7
1996-2000	-0.2	4.6	-2.8	-0.5	-4.3	4.9	3.5	0.2	-10.1
2000-2005	-2.7	-2.1	-3.1	-2.7	-0.1	1.0	2.2	-12.5	-11.6
2005-2010	1.1	1.7	0.7	2.2	1.1	4.0	5.6	-2.9	-18.7
2010-2012	0.5	0.4	0.5	-1.1	0.2	2.6	14.8	-4.5	17.5

* 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; the Development Budget expenditures are deflated by the Construction Price Index.

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

	Total	Income main- tenance	In-kind services						
			Total	Education	Health	Welfare	Employ- ment	Absorp- tion	Housing
2. Current budget (NIS, 2011 prices)									
1980	11,902	3,307	8,595	4,633	3,182	554	80	90	56
1985	11,617	3,951	7,666	4,145	2,868	445	71	93	44
1989	12,940	4,972	7,969	4,204	2,823	584	96	185	76
1996	16,112	6,126	9,987	5,564	3,163	699	98	395	68
2000	16,999	7,339	9,660	5,510	2,738	852	112	398	50
2005	15,543	6,592	8,951	4,898	2,791	898	125	204	34
2006	15,592	6,684	8,909	4,830	2,771	908	153	214	33
2007	15,760	6,692	9,068	5,103	2,617	969	163	185	31
2008	15,816	6,720	9,097	5,025	2,701	991	168	183	29
2009	16,443	7,003	9,440	5,241	2,786	1,038	169	176	29
2010	16,962	7,160	9,802	5,435	2,907	1,089	164	176	30
2011	17,038	7,214	9,824	5,523	2,832	1,098	170	173	29
2012	17,079	7,213	9,866	5,365	2,951	1,148	217	160	25
Average annual percent changes									
1980-1985	-0.5	3.6	-2.3	-2.2	-2.1	-4.3	-2.5	0.6	-4.4
1985-1989	2.7	5.9	1.0	0.4	-0.4	7.0	8.1	18.9	14.4
1989-1996	3.2	3.0	3.3	4.1	1.6	2.6	0.2	11.4	-1.6
1996-2000	1.3	4.6	-0.8	-0.2	-3.5	5.1	3.5	0.2	-7.2
2000-2005	-1.8	-2.1	-1.5	-2.3	0.4	1.1	2.2	-12.5	-7.3
2005-2010	1.8	1.7	1.8	2.1	0.8	3.9	5.6	-2.9	-2.8
2010-2012	0.3	0.4	0.3	-0.6	0.8	2.6	14.8	-4.5	-7.7

Table 6. **Income maintenance expenditures**
by main component*

	Total	Old-age and survivors	Child allowances	General disability	Unem- ployment	Income support	Other NII	Nazi victims
NIS million, 2011 prices								
1980	12,825	5,764	3,873	1,410	233	0	1,139	407
1985	16,725	7,710	4,325	2,183	436	558	1,188	325
1989	22,462	9,794	5,175	2,610	1,675	683	2,010	516
1996	34,827	13,783	7,727	4,178	2,411	2,051	3,578	1,098
2000	46,155	17,247	8,879	6,346	3,785	3,677	4,745	1,476
2005	45,686	19,155	5,283	8,832	2,348	3,253	5,355	1,462
2006	47,144	19,808	5,738	9,348	2,258	3,027	5,462	1,501
2007	48,052	19,989	5,707	10,063	2,017	2,777	5,868	1,630
2008	49,112	20,224	5,608	10,239	2,020	2,626	6,332	2,064
2009	52,419	21,192	5,926	10,608	3,217	2,637	6,618	2,221
2010	54,587	22,552	6,418	11,160	2,622	2,614	6,887	2,334
2011	56,003	23,265	6,893	11,289	2,499	2,474	7,091	2,492
2012	56,926	23,356	6,844	12,098	2,517	2,341	7,464	2,305
Average annual percent changes								
1980-1985	5.5	6.0	2.2	9.1	13.3	0.0	0.9	-4.4
1985-1989	7.7	6.2	4.6	4.6	40.0	5.2	14.0	12.3
1989-1996	6.5	5.0	5.9	7.0	5.3	17.0	8.6	11.4
1996-2000	7.3	5.8	3.5	11.0	11.9	15.7	7.3	7.7
2000-2005	-0.2	2.1	-9.9	6.8	-9.1	-2.4	2.4	-0.2
2005-2010	3.6	3.3	4.0	4.8	2.2	-4.3	5.2	9.8
2010-2012	2.1	1.8	3.3	4.1	-2.0	-5.4	4.1	-0.6

* Deflated by the Consumer Price Index.

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

	Total	Old-age and survivors	Child allowances	General disability	Unem- ployment	Income support	Other NII	Nazi victims
1980	100.0	44.9	30.2	11.0	1.8	0.0	8.9	3.2
1985	100.0	46.1	25.9	13.1	2.6	3.3	7.1	1.9
1989	100.0	43.6	23.0	11.6	7.5	3.0	8.9	2.3
1996	100.0	39.6	22.2	12.0	6.9	5.9	10.3	3.2
2000	100.0	37.4	19.2	13.7	8.2	8.0	10.3	3.2
2005	100.0	41.9	11.6	19.3	5.1	7.1	11.7	3.2
2006	100.0	42.0	12.2	19.8	4.8	6.4	11.6	3.2
2007	100.0	41.6	11.9	20.9	4.2	5.8	12.2	3.4
2008	100.0	41.2	11.4	20.8	4.1	5.3	12.9	4.2
2009	100.0	40.4	11.3	20.2	6.1	5.0	12.6	4.2
2010	100.0	41.3	11.8	20.4	4.8	4.8	12.6	4.3
2011	100.0	41.5	12.3	20.2	4.5	4.4	12.7	4.5
2012	100.0	41.0	12.0	21.3	4.4	4.1	13.1	4.0

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

	Total	General	Pre-schools	Primary	Secondary	**Post-secondary	Tertiary	Vocational training	Yeshivas
NIS million, 2011 prices									
1980	17,965	1,877	696	5,110	4,499	822	4,027	619	314
1985	17,548	1,654	831	4,490	4,799	886	3,624	594	669
1989	18,997	1,436	959	5,000	5,579	1,081	3,445	586	909
1996	31,629	2,257	1,757	8,435	9,332	1,890	5,669	910	1,381
2000	34,653	2,454	2,454	9,200	10,088	2,077	6,376	896	1,417
2005	33,944	2,437	2,437	9,979	9,784	1,755	6,126	650	706
2006	34,068	2,259	2,641	10,312	9,564	1,879	6,056	581	775
2007	36,639	2,301	2,665	11,644	9,764	1,991	6,649	567	1,059
2008	36,725	2,177	2,888	11,927	10,096	2,010	6,080	505	1,043
2009	39,234	2,331	3,111	12,196	10,328	2,070	7,319	575	1,303
2010	41,432	3,078	2,759	14,003	10,546	1,918	7,180	653	1,294
2011	42,874	3,097	2,894	14,886	11,040	1,886	7,201	659	1,202
2012	42,340	2,920	2,835	14,928	11,229	1,756	6,915	585	1,172
Average annual percent changes									
1980-1985	-0.5	-2.5	3.6	-2.6	1.3	1.5	-2.1	-0.8	16.3
1985-1989	2.0	..	..	..	..	..	-1.3	-0.3	8.0
1989-1996	7.6	6.7	9.0	7.8	7.6	8.3	7.4	6.5	6.1
1996-2000	2.3	2.1	5.1	2.2	2.0	2.4	3.0	-0.4	0.7
2000-2005	-0.4	-0.1	3.2	1.6	-0.6	-3.3	-0.8	-6.2	-13.0
2005-2010	4.1	4.8	1.9	7.0	1.5	1.8	3.2	0.1	12.9
2010-2012	1.1	-2.6	1.4	3.2	3.2	-4.3	-1.9	-5.4	-4.8

* Deflated by the Consumer Price Index.

** Including teacher training and continuing education.

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

	Total	Gov't financing of health insurance			Direct expenditures				
		Parallel tax	Copayments	Other transfers	General hospitals **	Psychiatric care	Long-term care	Public health and other ***	Other ****
NIS million, 2011 prices									
1980	12,338	5,015	..	1,986	1,399	969	527	750	1,691
1985	12,139	6,603	214	1,451	573	686	489	605	1,519
1989	12,753	8,183	937	356	172	771	633	531	1,169
1996	17,983	9,234	2,446	1,381	245	1,331	935	830	1,581
2000	17,223	0	10,783	661	203	1,335	1,224	1,301	1,715
2005	19,344	0	11,988	935	192	1,719	1,367	1,166	1,977
2006	19,538	0	11,333	755	196	1,625	1,426	1,191	2,011
2007	18,780	0	11,399	699	152	1,709	1,444	1,147	2,228
2008	19,731	0	11,956	903	79	1,728	1,474	1,246	2,344
2009	20,846	0	12,386	764	144	1,827	1,565	1,550	2,609
2010	21,151	0	13,303	779	259	1,854	1,515	1,606	2,835
2011	23,315	0	15,315	820	531	1,135	1,496	984	3,035
2012	23,291	0	15,691	853	558	695	1,520	941	3,033
Average annual percent changes									
1980-1985	-0.3	5.7	..	-6.1	-16.4	-6.7	-1.5	-4.2	-2.1
1985-1989	1.2	5.5	44.6	-29.6	-25.9	3.0	6.7	-3.2	-6.3
1989-1996	5.0	1.7	14.7	21.3	5.2	8.1	5.7	6.6	4.4
1996-2000	-1.1	..	44.9	-16.8	-4.6	0.1	7.0	11.9	2.1
2000-2005	2.3	..	2.1	7.2	-1.1	5.2	2.2	-2.2	2.9
2005-2010	2.8	..	2.1	-3.6	6.2	1.5	2.1	6.6	7.5
2010-2012	2.5	..	8.6	4.6	..	-38.8	0.2	..	

* Deflated by the Consumer Price Index.

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

*** Since 2011 this item includes "public health expenditures" only.

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

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

	Education	Health	Total Education and Health
1980	4.7	4.3	4.5
1985	2.3	2.6	2.4
1989	1.8	1.6	1.7
1996	4.6	5.6	4.9
2000	3.6	2.8	3.4
2005	2.0	1.0	1.6
2006	1.8	1.4	1.7
2007	1.9	1.2	1.6
2008	1.9	1.4	1.7
2009	2.0	1.8	2.0
2010	2.7	2.3	2.6
2011	2.5	2.2	2.4
2012	1.8	1.3	1.6

Definitions and Sources

Definitions

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

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

The expenditures pertain to fiscal years that correspond to calendar years (January-December).¹ Data are shown in constant 2011 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. In 2011 there was a structural change to the budget of the Ministry of Health. The change is expressed in two appendixes of direct expenditures – the general inpatient line no

longer includes inpatient hospitalization expenditures rather spending on general administration and the public health service outlays no longer includes additional outlays.

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

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

Sources

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

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

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

Central Bureau of Statistics, *The Central Database*, various volumes.

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

Ministry of Finance, The Accountant General *Financial Statements*, various years.

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

National Insurance Institute, *Quarterly Statistics*, various periods.

National Insurance Institute, *Working Budget and Explanatory Notes*, various years.

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

VI. HEALTH

Israel's Healthcare System

Dov Chernichovsky and Eitan Regev*

Abstract

The recently resolved labor dispute between Israeli physicians and the state cast a shadow on the Israeli healthcare system's achievements of the past two years: the dental care reform, the reduced copayment burden, and other easing of the financial burden, e.g., the elimination of the Tipat Halav fee. Manpower increases were recently authorized for the system, and access to healthcare in Israel's periphery is expanding. Some of these measures represent promises to the public which, hopefully, the government will be able to keep. These changes do not, however, have the power to bring about structural change in terms of financing, organizing or managing the system. The recent wage agreements may conceivably increase the share of public funding in Israel's national health expenditure; but such a development would merely reflect a lack of long-term government policy. The public system is eroding and administered from crisis to crisis. An analysis of household healthcare expenditure indicates that those who need and are able to leave the public system do so. Decades of achievement in the realm of equity and efficiency are eroding, and public health may ultimately suffer. Within the overall context of worthwhile initiatives and long-term policy with far-reaching consequences for Israel's social services system, an assessment should be made of the reform proposed for long-term care insurance in Israel – a sphere that by default, rather than by a process of careful consideration, is regarded as a healthcare system issue.

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Within Israel's healthcare system one can still detect the impact of a lengthy physicians' strike that had unprecedented consequences, most notably a loss of physician unity around the issue of Israeli medicine's future. The strike and its repercussions undermined, to a certain degree, several outstanding achievements of the healthcare system of the past two years. The dental care reform that took effect in 2010 and continued into 2011 ensured public entitlement to free dental care for children up to age ten – a trend that is set to expand. In 2011, a reduction in the private funding burden was approved, and copayments for generic drugs were lowered from 15 to 10 percent. Additional financial relief was instituted in several service areas, including a repeal of the *Tipat Halav* Mother-Infant Care Center fee. Additional hospital beds and job positions were also recently approved, as well as increased physician training quotas – including continued development of the new medical school in northern Israel and quotas for nursing staff. Healthcare access in the periphery has been expanded through a program aimed at creating emergency centers, recruiting nurses and increasing the number of MRI machines in the system. Some of these measures represent promises to the public, which it is to be hoped the government will be able to keep. In addition, at this time, efforts were being made to incorporate mental health care into the general healthcare framework and to expand the circle of those eligible for continuing care. Notwithstanding reservations regarding the Health Ministry's approach to the issue of continuing care (to be discussed in greater detail later in this chapter), these initiatives are welcome ones.

It should be noted, however, that these changes – including the outcomes of the strike – are insufficient to bring about fundamental structural changes – changes in whose absence the various achievements of the system may be erased over time. For example, achievements in dental health efficiency and equity will be reversed if system-wide efficiency is lost, and this in turn might harm those households that currently enjoy publicly-subsidized dental care. Although, in the wake of the new wage agreements, the share of public funding in Israel's national

health expenditure is likely to rise, this change reflects an absence of long-term governmental policy vis-à-vis the system. The budget that the Ministry of Finance has been allocating to the healthcare system for the past decade and a half is a savings-oriented one that reflects a lack of long-term thinking. Up until now the system has been administered from crisis to crisis, with intervals of gradual erosion of resources until a breaking point, when public outcry generally erupts. When this happens the government is forced to increase the healthcare budget and to temporarily correct the erosion that has occurred, in a patchwork manner. Last year's physicians' strike constituted one of these breaking points. Governmental intervention is characterized by point-specific measures that are not part of any long-term strategy.

The diversion of voluntary insurance funds – intended to ensure comprehensive healthcare for policyholders – to private treatment frameworks continues to create distortions within the system, and it is doubtful whether the workplace time-clock instituted for physicians will be able to solve these fundamental problems. Israel is witnessing the emergence of separate healthcare systems for the poor and for the rich, as indicated by family expenditure surveys. More and more highly-educated and high-income people, including families with children, are choosing to pay privately for the same services available publicly. One outcome of this situation has been a continual and steep rise in prices within the private healthcare market, which significantly offsets rising public expenditure on these services.

This chapter contains four sections. Section 1 offers a comparative look at Israel's healthcare system relative to other countries over time. Section 2 deals with the prolonged physicians' strike, against the background of the healthcare manpower crisis. Section 3 discusses private healthcare expenditure as an expression of the system's functional status, and the way in which such expenditure contributes to disparities and poverty. Section 4 focuses on long-term care funding in Israel and on associated problems, in a context of international comparison.

1. Achievements of the System

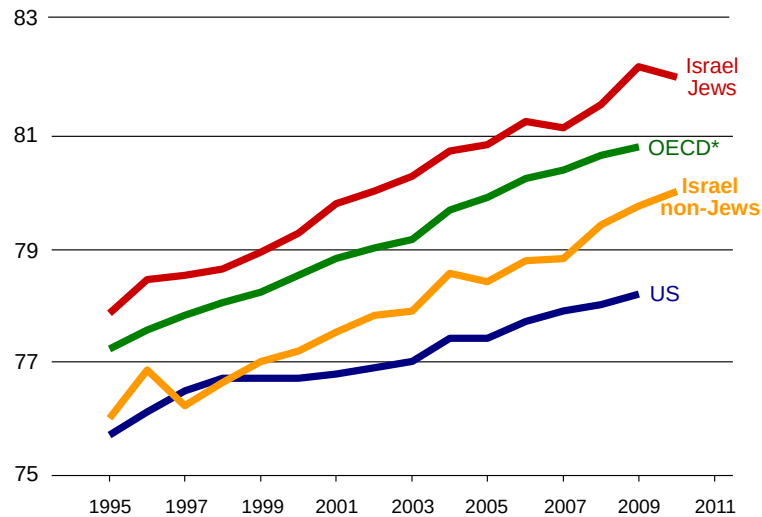
The achievements of Israel's healthcare system are measured in terms of two main perspectives: the population's health, and its satisfaction with health services. Several secondary parameters that impact the main parameters are measured as well: equity, cost containment, economic efficiency, and freedom of choice.

The Population's Health Status – Life Expectancy and Infant Mortality

In general, Israel continues to witness a consistent rise in the life expectancy of its population. The life expectancy of Israel's non-Jewish population improved, rising from 79.8 in 2009 to 80 in 2010. By contrast, the Jewish population's life expectancy has been trending downward: from 82.2 in 2009 to 82.1 in 2010. This decline has been attributed to changing figures for Jewish women, while the life expectancy values for Jewish males have remained stable.

Despite the slight decline in life expectancy recorded for Israel's Jewish population, the life expectancy continues to exceed that of the populations of most developed countries; Israel's non-Jewish population is also closing the gap relative to the OECD states (whose average life expectancy is 80.8), and Israel's Jewish population (Figure 1).

Figure 1
Life expectancy at birth, 1995-2010



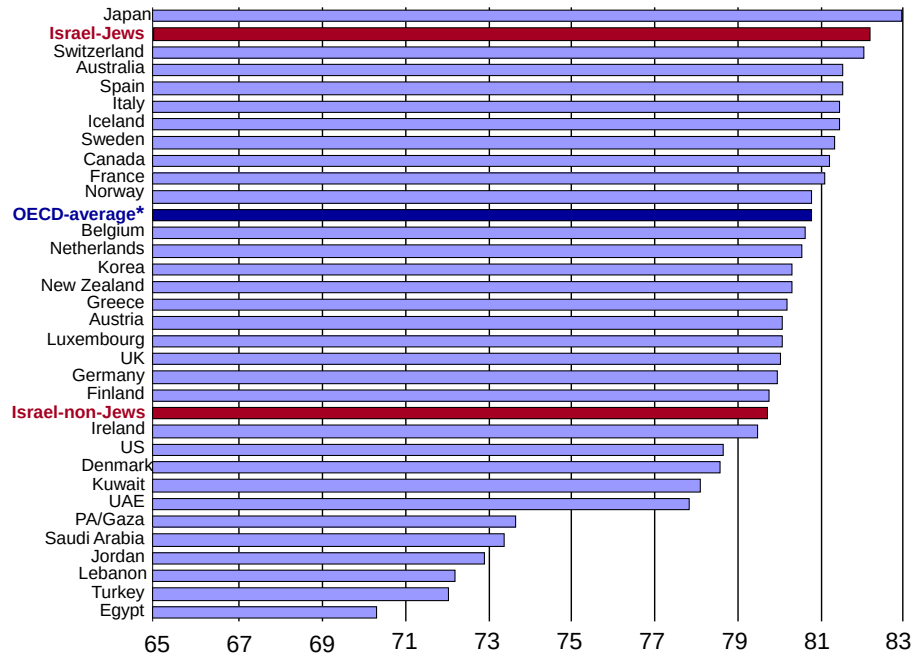
* Average of the 22 most developed OECD countries (excluding the US).

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, OECD.

The life expectancy of non-Jewish Israelis is high compared with that of Arab and Muslim countries, at least those in Israel's proximity (Figure 2). However, it is still lower than that of Jewish Israelis and compared with most Western countries.

Figure 2
Life expectancy at birth, 2009



* Average of the 22 most developed OECD countries (excluding the US).

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, OECD.

Regarding infant mortality, the trend toward improvement among the Jewish population continued, while no significant improvement was found for the non-Jewish population. Closing the gaps in this area between Jewish and non-Jewish Israelis (Figures 3 and 4) is one of the main challenges facing the healthcare system.

Figure 3

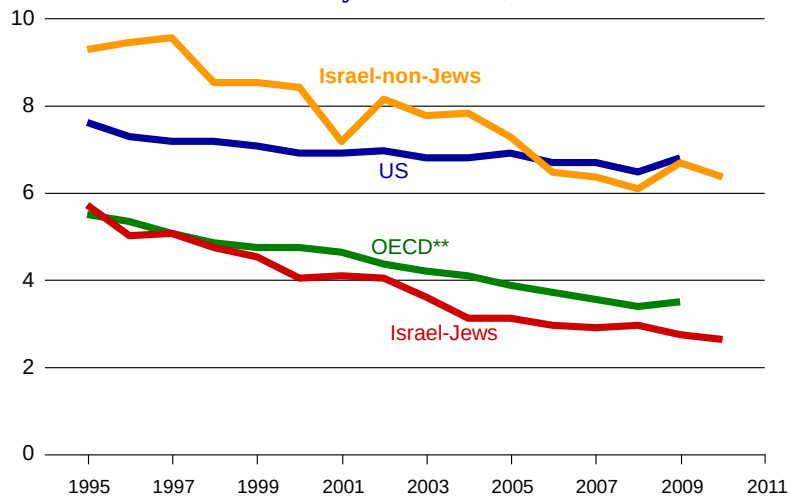
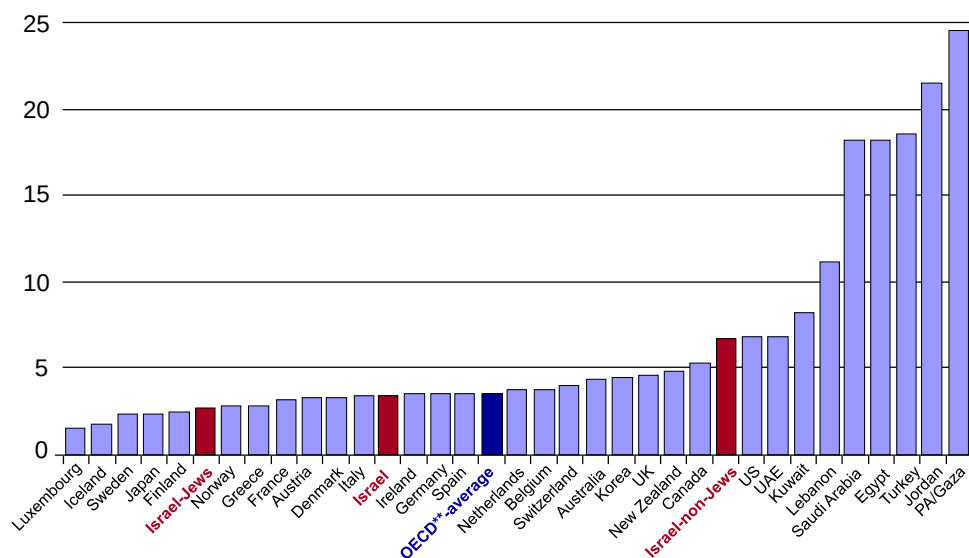
Infant mortality over time*, 1995-2010

Figure 4

Infant mortality across countries*, 2009

* Infant mortality up until age 1 per 1,000 live births.

** Average of the 22 most developed OECD countries (excluding the US).

Source for both figures: Taub Center for Social Policy Studies in Israel.

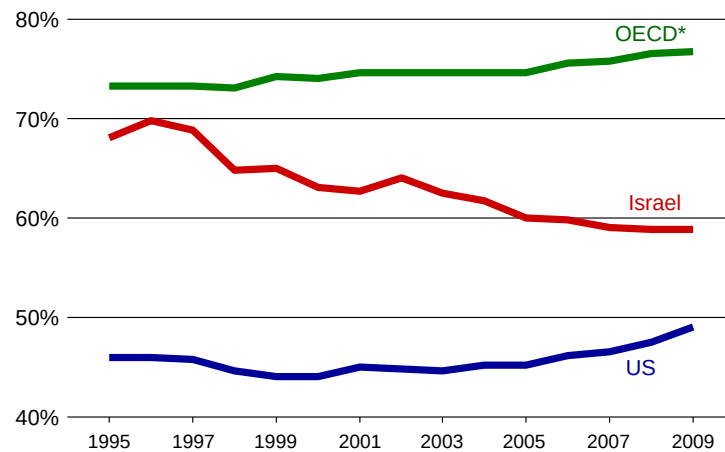
Data for both figures: Central Bureau of Statistics, OECD, World Bank.

The Healthcare System's Medium-Term Socioeconomic Objectives

The system's medium-term objectives relate to greater equity, cost containment, service-provision efficiency, and freedom of choice. On the one hand, these socioeconomic factors are beneficial to healthcare consumers and to society as a whole, while on the other hand they also serve the system and contribute to its performance. In addition to their practical aspects, these objectives also have intrinsic value, particularly with regard to equity and freedom of choice.

Equity. Equity relates to two issues: the progressivity of healthcare financing and the relationship between income levels and access to healthcare. The share of public funding in Israel's total national health expenditure continues to trend downward: in 2009 public funding accounted for 58.9 percent of all health spending, versus 68.2 percent when the healthcare system reform was instituted in 1995, 76.7 percent in the OECD countries and 49 percent in the US. In comparison with the US and other OECD countries, the trend in recent years in all of these countries, including the US, has been opposite to that of Israel; they have shown a rise in the share of public funding as a percentage of the national health expenditure (Figure 5).

Figure 5
Public expenditure on healthcare services
 as percent of national expenditure on healthcare services, 1995-2009

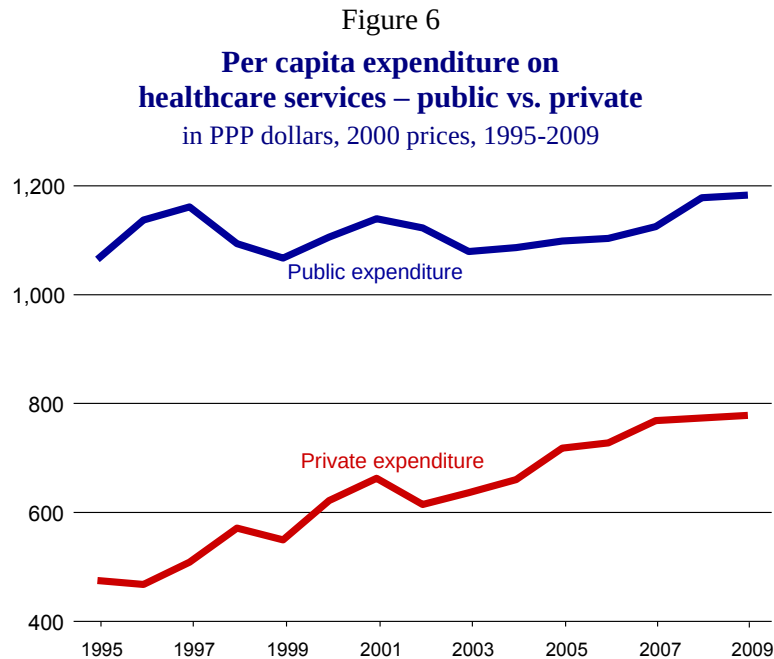


* Average of the 22 most developed OECD countries (excluding the US).

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, OECD.

In terms of health expenditure per capita, during the period 1995-2009 Israel's public health expenditure grew by just 11 percent, from \$1,066 to \$1,182 at purchasing power parity per capita (2000 prices), and was characterized by a high degree of fluctuation – point-specific budgetary increases followed by long periods of gradual erosion. Major budgetary increases were authorized only once every few years, usually in response to crises arising from these periods of budgetary erosion. At the same time, private per capita expenditure grew steadily during the same period, for a total of 64 percent: from \$474 to \$778 at PPP per capita (Figure 6).



Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

As will be seen in greater detail in Section 2, the regressive nature of Israeli healthcare financing is reflected in household budgets: the increase in private funding of healthcare translates into a worsening income-distribution situation and deeper poverty among sectors that were already poor. It also results in less accessibility to services among these groups, due both to a decline in their ability to pay the rising prices, and to a lack of availability of healthcare services.

Cost containment. Israel's national healthcare expenditure in 2010 was NIS 61.2 billion, accounting for 7.5 percent of GDP. This is a relatively low percentage compared with other Western countries, and places Israel, for the first time, below the average of the OECD's 22 most developed

countries (7.7 percent) – excepting the US, which continues to deviate from this picture with its high rate of health expenditure as a percentage of GDP: 14.6 percent (Figure 7A).

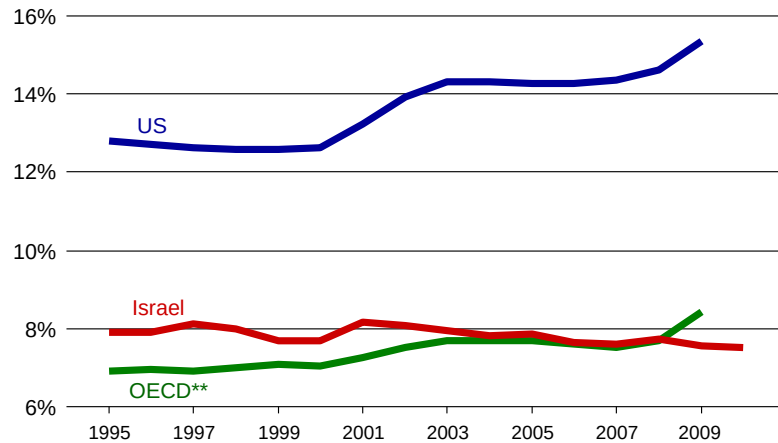
The decline in Israel's national healthcare expenditure is continuing despite a rise in the rate of private expenditure. Hence, there has been a significant erosion of public financing, which did not expand relative to the rise in GDP (Figure 7B). This means that Israel's publicly financed system and those dependent on it are not enjoying the fruits of Israel's economic growth. This is true of the population as a whole, in light of the fact that, in GDP terms, the rise in private funding did not fully compensate for the erosion of public funding, and also in view of the inflation that affected private healthcare prices.¹

¹ It should be noted that healthcare expenditure as a percentage of GDP is also related to GDP growth rate relative to healthcare expenditure. Given the long-term downward trend in Israel's expenditure rate, the low rate of expenditure compared with other countries should not be attributed to inter-country GDP growth-rate differences.

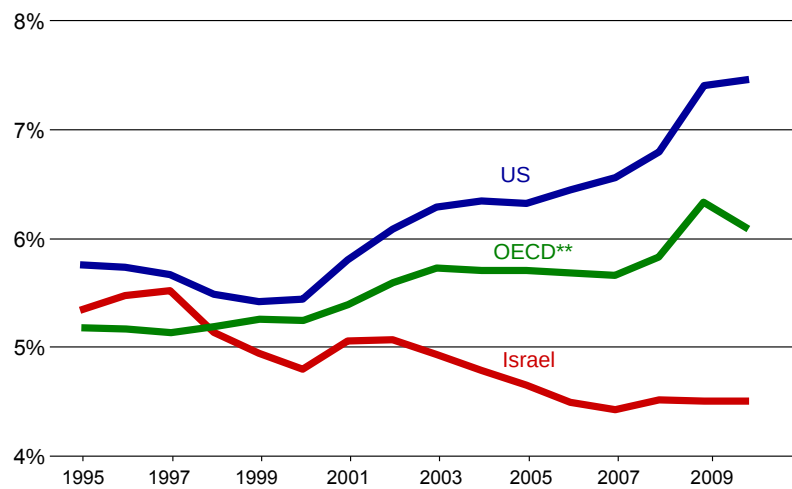
Figure 7

Expenditure on healthcare services as percent of GDP*, 1995-2010

A. National expenditure



B. Public expenditure



* Adjusted for standardized person in Israeli risk adjustment terms (old capitation method) as percent of regular GDP.

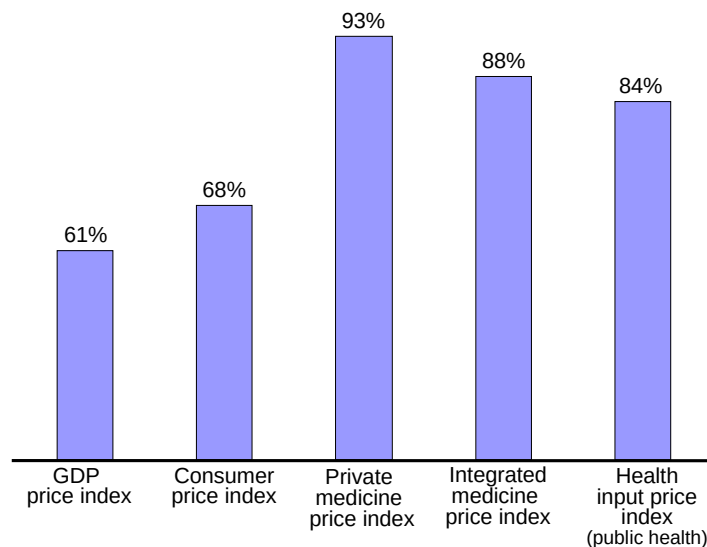
** Average of 22 most developed OECD countries (excluding the US).

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, OECD.

In Israel's healthcare system, cost containment is not reflected in a curbing of service-price inflation. There has been, in effect, a loss of expenditure control within the system. In terms of their expenditures, the private and public systems are not keeping pace with price increases in the healthcare system. As may be seen in Figure 8, the composite healthcare price index rose by 88 percent and the private healthcare price index by 93 percent between 1995 and 2010, while the GDP deflator rose by just 61 percent. What this means, particularly in the context of the previous discussion, is that in terms of real services, the share of healthcare services in the GDP declined more than would be expected based on the percentages in the graph.

Figure 8
Changes in price indices, 1995-2010

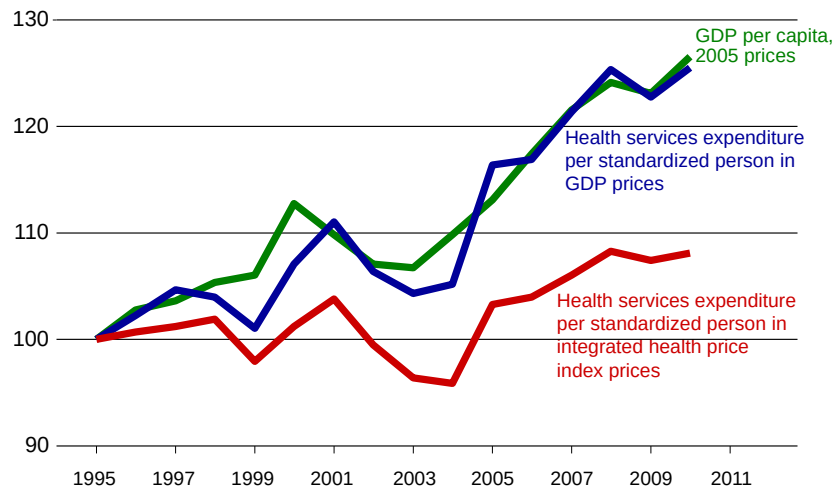


Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, Ministry of Health.

The meaning of the rise in prices may be seen in Figure 9: since 1995 there has been a real (actual) increase of only 8 percent in per capita healthcare purchasing power per standardized person in Israel – despite the fact that the real per capita GDP rose by 26.6 percent during the same period. The situation is even worse taking into account that the share of private expenditure out of total national healthcare expenditure has increased over the years, and that private services have become more expensive.

Figure 9
Healthcare expenditures per standardized person, 1995-2010
Index: 1995=100



* Adjusted for standardized person in Israeli risk adjustment terms (capitation formula) through 2010.

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics.

Freedom of choice. Data are not available regarding the degree to which the healthcare system is characterized by choice. However, in the context of the discussion of structural changes undergone by the system, and of major issues on the Israeli public agenda – particularly that of privately paid medical services (*SHARAP*) – it is important to emphasize that, in contrast to normal practice in the various healthcare services available in the community, Israelis have no freedom of choice with regard to physicians in publicly-funded hospital settings (hereinafter: “public hospitals”), despite the fact that hospitalization is frequently essential to ensure survival and well-being (exceptions to this lack of choice are the publicly-funded Hadassah and Sha’arei Zedek Medical Centers in Jerusalem, where choice is possible via *SHARAP*).

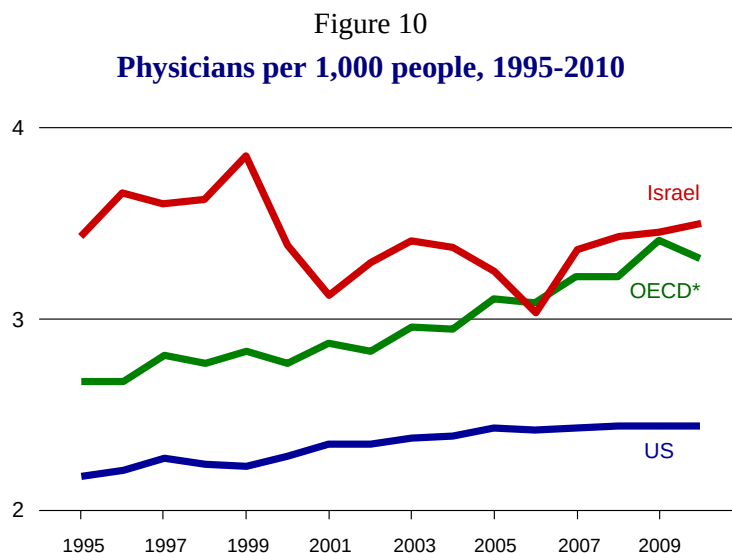
2. The Physicians’ Strike

The physicians’ strike lasted from March to August 2011, at which time an agreement was signed between the Israeli Medical Association and the government (the Ministry of Finance). Labor relations returned to normal only in late 2011, after an agreement was reached with the medical residents.

Despite its status as one of Israel’s most prolonged labor disputes, it is highly doubtful whether the strike helped resolve any structural issues within the system, or whether it indeed saved Israeli public medicine, as the strike’s organizers originally intended. This section will look at the basic factors behind the crisis, and at the strike’s outcomes as perceived by some of its participants.

Signs of the Crisis – A Reduction in the Supply of Physicians and a Decline in the Number of Hospital Beds

Over the years, Israel has enjoyed a high physician-to-population ratio compared with other developed countries and compared with the US (Figure 10). A significant increase in this ratio was registered during the early 1990s due to the large number of physicians who came to Israel in the great wave of immigration from the former Soviet Union. However, by the late 1990s a downward trend could already be discerned in Israel's physician-to-population ratio, and the disparities narrowed between Israel and the OECD countries (per thousand people).



* Average of the 22 most developed OECD countries (excluding the US).

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, OECD.

Over the last few years Israel has witnessed a moderate rise in this index; as of 2010, the Israeli physician to population ratio was still high compared with all other developed healthcare systems, and especially compared with the US. The number of physicians per thousand people in Israel is 3.5, versus 3.1 in the OECD countries, and 2.4 in the US. In this context it is important to note a lack of age-adjusted population data; when Israel's high proportion of young people compared with the OECD states (Section 4) is taken into account, Israel's situation is even better than that indicated by the figures.

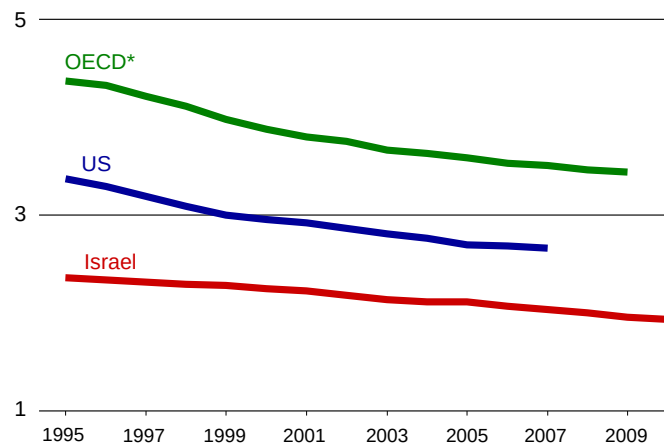
The data do not, of course, reflect relative shortages in specific medical specialties or in the numerical distribution of Israeli doctors between public and private healthcare or between Israel's geographic center and the periphery. The serious problem for which no reliable data exist is that of the siphoning of physician manpower, particularly specialists, out of the public system and into the private market, and a consequent worsening of the relative shortage of physicians (especially specialists) in the public system. As noted, at the core of the process lies the replacement of public funding with supplemental insurance, which creates ever-greater demand outside of the public system.

Hospital beds. When Israel joined the OECD, the resulting uniformity of definitions enabled better international comparisons of hospital bed numbers. Figure 11 presents up-to-date figures recently published by the OECD regarding general inpatient beds. It shows that the ratio of hospital beds per thousand people in Israel has continued to decline, and is significantly lower than the ratios of the other developed countries included in the comparison, as well as the US: just 1.93 beds per thousand people, versus 2.66 in the US and 3.44 in the OECD states.

It is important to note that this disparity is obscured when one looks at Israel's total inpatient-bed data, which include emergency room, long-term care and psychiatric beds. Nevertheless, the data for 2010 confirm the medical community's contention that Israel is suffering from an overall inpatient bed shortage.

The downward trend of recent decades in general inpatient bed numbers, observed in the US and the OECD as well, appears mainly to reflect technological developments that have led to a relative decline in the need for general inpatient care. However, because Israel's starting point was lower than that of the other developed countries, the decline in inpatient bed numbers per capita may be problematic.²

Figure 11
General hospital beds
 per 1,000 population, 1995-2010



* Average of the 22 most developed OECD countries (excluding the US).

Source: Taub Center for Social Policy Studies in Israel.

Data: Central Bureau of Statistics, OECD.

² It is important to remember, in this context, the relative youth of Israel's population.

In the Wake of the Physicians' Strike

The Israeli Medical Association (*IMA*) went to battle to “save Israeli public medicine.” However, the agreement reached did not enjoy the support of the entire physician community – a situation that deepened rifts within the *IMA*. The Hospital-Employed Physicians Organization (known by its Hebrew acronym, *Arbel*) undertook to advance the cause of those doctors who choose to devote all of their work hours to serving the public in Israel's public hospitals, while *Mirsham* (Medical Residents Working to Improve Israeli Medicine) sought to represent Israel's younger, resident physicians who, it was claimed, were paying the price of the public system's inadequacies.

Each of these organizations stood its ground regarding the physicians' strike and its outcomes. The following *Spotlights* summarize the organizations' positions on the strike's achievements (or lack thereof), on the healthcare system's deficiencies, and on the issues needing in-depth systemic attention.

Spotlight A: The IMA's Position**Zeev Feldman***

Prior to the collective bargaining process aimed at reaching a new collective agreement, the IMA undertook a comprehensive preparatory initiative in which it appealed to all Israeli physicians and to the heads of all 180 professional associations included within the IMA. The initiative featured an effort to understand and define existing needs and issues relating to standards, hospital work conditions and understaffed specialties, and to address them in its demands at the negotiation table. Never before had so transparent a preparatory process been set in motion, or followed by, so transparent a collective bargaining process; updates on the progress of the negotiations and on the difficulties encountered were posted continuously on the IMA website.

Agreement provisions addressing disparities in the quality of healthcare provided to Israel's periphery and the impossible medical staff workloads resulting from decades of neglect, as well as ensuring IMA participation in overseeing the agreement's implementation over the coming years – all of these things constitute a major achievement of the State of Israel's longest-running physicians' strike. The agreement reached contains numerous sections and clauses and addresses the majority of the objectives that were defined at the outset of the process. One thing is clear: doctors who invest more of their time in public medicine will earn more.

The IMA team that spearheaded the struggle set major objectives regarding physicians' wage and work conditions, and formulated demands regarding the operation and future of Israel's healthcare system, including: a 50 percent wage increase; future safeguarding of real physician wages; improved physician pension arrangements; a solution to the physician shortage and an increase in the number of job positions; solutions for understaffed specialties; improved work conditions for the medical residents who account for 22 percent of all Israeli physicians; and the advancement of medicine in the periphery.

* Dr. Zeev Feldman, Director, Pediatric Neurosurgery Unit, Safra Children's Hospital, Tel Hashomer, and member of the IMA secretariat.

Achievements of the Struggle

Physician wages. Based on the agreement, Israeli doctors will be receiving over three billion shekels a year more in wages.

Reduced workload. The agreement calls for a reduction in the workload of young physicians. A thousand job positions were added to the system, half of them aimed at easing the shift burden on the residents to no more than six per month; options were also provided for the possibility of specialist shifts, to ensure professional backup during the afternoon, evening and nighttime hours.

Weekly day of rest. The agreement ensures a weekly day of rest for those working weekend shifts, and allows for mechanisms to ensure that residents are able to go home after their shifts.

Strengthening of understaffed specialties. The agreement provides for wage raises and individual bonuses for those working in the understaffed specialties that employ 50 percent of physicians in central Israel. Those working in these specialties will be entitled to significant increases in the daily salary rate, and to a higher rate of compensation for their heavier work load; physicians who choose to join understaffed specialties will receive grants in the amount of NIS 300,000.

Strengthening the periphery. The agreement proposes wage increases and individual bonuses for physicians in the periphery. For example, a doctor in the periphery will earn 20 percent more than a colleague in the center of the country while a physician who moves to the periphery for work will receive a bonus of NIS 300,000.

Encouraging in-service training and professional advancement. The agreement encourages in-service training days and even stipulates a compensatory mechanism for such days and for the shared funding of conferences for residents, as well as overtime pay for residents and the creation of paths to physician advancement.

Specialist compensation. The agreement provides for the appropriate compensation of subspecialists consulted outside of scheduled on-call hours (up until the present agreement there was no compensation in these instances).

Much of the frustration of Israeli physicians in the wake of the agreement stems from unrealistic expectations that the agreement would include high enough wage increases so as to bring public healthcare system wages in line with those of private frameworks and thereby enable doctors to forego their non-hospital jobs. Those opposed to the agreement must, however, understand that any blow to the IMA's status or power will be disastrous for Israeli physicians, and that unity is crucial to the continued advancement of Israeli medicine and its physicians.

Future Objectives

The idea that the voice of the physician community was silenced when the present agreement was signed is entirely mistaken. Over the coming years there will be a need to advance the cause of numerous issues crucial to the improvement of Israel's healthcare system, among them:

1. The declining share of public expenditure in the healthcare system. At the time that the National Health Insurance Law came into effect in 1995, the state bore some 70 percent of Israel's healthcare expenditure, but over the years it has been shirking its obligations and reducing its share in healthcare financing. The public healthcare expenditure has declined in recent years to just 55 percent, compared with an average of 73 percent in the OECD countries to whose level of service Israel aspires.

2. A lack of long-term planning that is based on the healthcare system's needs. The current situation stems from a combination of faulty planning and a failure to allocate necessary resources. The national priorities, as reflected in the share of healthcare expenditure as a percentage of GDP, has kept the public healthcare system's share frozen at a level of 7.8 percent for many years, despite population growth, population aging, a complex morbidity situation, new technologies, and the high-level therapeutic capabilities offered by modern medicine. Recently, in 2010, another decline in the state's share of the national healthcare expenditure was registered, to just 7.5 percent. In light of Israeli population-aging forecasts calling for a rise in the percentage of the elderly from 9.4 percent to over 13 percent within less than 20 years, there will have to be a change in resource allocation to the healthcare

system. The system must stay current and reflect these changes if Israeli citizens are to receive optimal healthcare.

3. The public hospitals are not benefiting from the growth in general healthcare services. The public hospital system currently has no way of improving its status by providing services to holders of supplemental insurance in the public health funds. According to the law, the health funds are currently selling their members coverage packages that expand the basic basket of services that they are required to provide. This system generates four billion shekels per year, but the public hospitals have no access to these funds.

Spotlight B: Arbel's Position**Amnon Mosek***

The medical profession is unique in several ways. Physician training is lengthy and entails an uncompromising investment in study and in the training period, followed by a commitment to work around the clock and to be available at all times and in any situation. The compensation for this commitment is not always financial; the doctor's ability to sacrifice for the good of the patient, and to help others, brings with it a high degree of satisfaction. That being said, doctors should be compensated at a reasonable level; physician salaries should enable those who choose medicine as their vocation to devote all of their time to it without being concerned for their livelihood.

Hospitals lie at the heart of the medical world. They serve the most seriously ill patients, they are the training ground in which students become doctors, and they are the venue for most medical research. But while the population has grown and aged, the state has not made any corresponding increase to the number of inpatient beds or to the number of hospital physician positions. The workload borne by the doctors and the hospital departments is overwhelming. The state has transferred the responsibility for building and upgrading hospitals to private donors. Not only that, but over the years the state has opposed wage and pension increases for physicians in Israeli hospitals, meaning that their income has remained very low.

Reality indicates that the problem with Israel's healthcare system is not one of insufficient financial resources, given that the state enables private medical frameworks to thrive using the same public funds, and is creating a situation in which physicians earn much less in public hospitals than in non-hospital frameworks. The current state of affairs is such that doctors cannot work solely in hospitals; they are forced to find non-hospital frameworks in which they can supplement their income. The Israeli public is also aware of the discrepancy between the hospital workload and the hospital physician's earning potential. Moreover, many fine physicians are seeking their futures abroad. The overall

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picture is grim and poses a threat to equity within the system and to the system's ability to provide healthcare services to all citizens.

Outcomes of the Strike

When the strike began, there was unequivocal unity among the participating doctors. However, major rifts erupted along the way between the younger physicians and the Israeli Medical Association (IMA) leadership. After a prolonged legal battle the IMA signed the agreement, despite opposition on the part of some medical residents. In Arbel's view, the agreement reached by the IMA fails to address the roots of the problem:

Physician wages. The overall physician wage has changed by only a few percentage points per hour and does not amount to a significant increase, meaning that hospital doctors will still have to seek additional sources of income in order to make a living.

Shortage of job positions. The thousand job positions that are going to be added to the system will barely cover the shortage that has developed up to now; it will not suffice for the workload anticipated over the coming nine years.

Overtime budget. The future of overtime budgeting beyond the coming year is obscure; it does not appear that doctors will be compensated for extra work on the hospitals' behalf.

In addition to these unresolved issues, the agreement introduced new problems into the public health system, particularly regarding morale. Firstly, a nine-year agreement precludes any possibility of change in the foreseeable future. Secondly, the outcomes of the strike and the split with which it culminated have deepened disparities within the healthcare system and polarized the physician population. The bottom line is that the public healthcare system gained nothing from the strike, and may have even been harmed by it.

Spotlight C: Mirsham's Position

Yona Vaisbuch*

Achievements of the Strike

The residents' agreement will improve the situation regarding two main issues:

Additional supervisory and enforcement mechanisms. The mechanisms stipulated by the agreement ensure, for the first time, the exercise of important medical-resident rights: no more than six shifts per month, and a weekly day of rest.

Third shifts and on-call bonuses. Shifts and bonuses are the only areas in which the agreement stipulates an increase beyond what already exists. These are attractive new work modes intended to compensate doctors for their work in the public system during the afternoon and evening hours. The shifts and overtime bonuses have created, for the first time, a mechanism that resembles a true full-time job in a public hospital, and that enables shift doctors to add a few thousand shekels to their NIS 4,800 salary.

Weaknesses of the Agreement

Failure to address the problem of service and quality of care. The agreement between the IMA and the state, most of whose budget is earmarked for wages, does not significantly change existing work methods or the quality of service that the public healthcare system provides to citizens. Indeed, it freezes the current situation for nine years, thereby discouraging physicians working in the system.

Lack of relevance to the physician population as a whole. The agreement deals with two main issues: improving service to the periphery and addressing the needs of understaffed specialties. The doctors belonging to these two sectors account for fewer than half of all of the physicians in the system, and the agreement is useless to the other

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half. Moreover, Mirsham estimates that the medical-resident profile in the periphery will not change significantly.

Failure to address the flight to the private market. The agreement does not address one of the main problems of medicine in Israel today: the flight of physicians from hospital-based public medicine to private medicine, and the even more dangerous migration to biotech and work abroad. Compensation for salaried health fund employees (without overtime like on-call or shift work) is double or even triple that of hospital employees. This situation makes it hard for hospital-based physicians to survive, and forces them to choose between the following alternatives: working in two or three different places, including hospitals, for 16-18 hours a day, or working solely in the community, on a reasonable schedule. This situation damages the morale, the functional ability and the dedication of those doctors who choose to work in the hospitals. If full-time jobs were defined, standardized and appropriately remunerated in the public hospitals, hospital-based physicians would not have to seek additional work in order to supplement their income.

No change in the nature of the work. A large share of the physician's time is spent on paramedical tasks (taking blood samples, inserting catheters, signing admission and discharge forms, and arranging tests) that could be performed by medical secretaries or physician's assistants. A change of this kind would likely increase physician satisfaction, professionalism and the amount of time devoted to direct patient care.

Inadequate resolution of the job position problem. The agreement's main achievement was the addition of a thousand job positions over the course of nine years. However, the IMA estimates that this addition will account for only a third of the positions currently needed by the system.

The problem of medical-residents. Apart from the added job positions, there was no real change in the work conditions for resident doctors, nor were limits imposed on the number of hours they could work – limits that would prevent exploitation, ensure learning and improve training.

One of the main lessons that was learned from the recent physicians' strike was that the system has a great many flaws, and that any future struggle will have to focus on achieving a single goal, and on ensuring peace in the industry for that specific goal for a short period of time (not more than three years). Experience from the past and present, and the fact that Israel currently has no Minister of Health, compel one clear and distinct conclusion: strengthening Israel's public medical system has not been a priority of the Israeli government during the past three decades.

In summation, despite the agreement's long-term character, it appears mainly to have resolved certain point-specific issues within the system, rather than the fundamental problems: the declining share of public investment in the healthcare system, the lack of a long-term plan, and the private system's growing share at the public system's expense – a situation liable to worsen existing inequities and to impair the public system's effectiveness. To these may be added one particular consequence of the healthcare system – the loss of status suffered by the physician in the public system. Based on the foregoing, it appears that the basic situation of a doctor who wants to devote all of his/her time to public-hospital work has not improved. This being the case, it may be assumed that the public system's physician-shortage problem, and particularly its specialist-shortage problem, is not about to be solved – despite the fact that Israel has no relative shortage of healthcare manpower.

Even given the global decline in general hospital bed numbers, the long-term solutions required for Israel's healthcare system, as noted by a number of relevant parties, are: increasing public medicine's share of the mix relative to the private services, and encouraging technological advances that will save on manpower and inpatient beds. These changes should supplement short-term efforts to increase the supply of manpower.

3. Private Expenditure on Healthcare Services in Israel as an Expression of the Public System's Functional Status and Its Role in Disparities and Poverty

As noted earlier, in Israel the share of public expenditure in the total national health expenditure has declined to the lowest level exhibited by those developed countries that provide their residents with universal health insurance – less than 60 percent in 2010 (see Figure 5). This decline is exposing Israel to situations that other countries are trying to escape: a closer linkage between health status and poverty, and system-wide inefficiency.³

The impact exerted by private healthcare expenditure on income distribution and poverty in Israel was assessed through an innovative approach employed in a study by Navon and Chernichovsky (2012). The study, which is based on data from 2009, looked at how private funding is worsening Israel's income-distribution situation and driving a catastrophic rise in poverty. This chapter features updated findings from that study, according to a survey of family expenditure for 2010.

The components of private healthcare expenditure in Israel. Since 1997 there has been an increase in private healthcare expenditure's share of total average household consumption: from 4.1 percent to 5.1 percent. Nearly all Israeli households (93 percent) reported some form of private healthcare expenditure during the survey period (not including private expenditure on nursing care); the average figure arrived at was NIS 646 per month, per household.

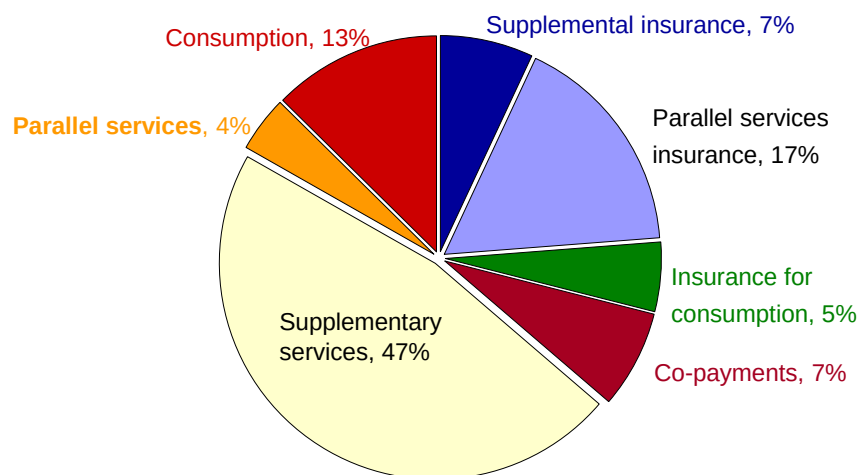
³ Defining the poverty line and determining how it is arrived at are central to this work in two areas: classifying private expenditure on healthcare by economic status, and measuring the impact of this expenditure on poverty. In both cases the research relied on the relative poverty definition used by the National Insurance Institute (for an in-depth discussion see Navon and Chernichovsky 2011 – Appendix 1).

- **Copayments** account for 7 percent of the total private expenditure. Forty-four percent of households reported expenditure of this kind, for a monthly average of NIS 117. Among the respondents, copayments for prescription drugs was the main expenditure, both in terms of percentage of households that made such payments (35 percent) and the average level of expenditure (NIS 289 per month).
- **Supplemental health insurance** (hereinafter: “supplemental insurance”) – as defined in the original study (insurance for services not covered by the public basket), also accounts for 7 percent of the total expenditure. Eighty percent of households reported that they spend money on such insurance, and the average monthly expenditure made by these households was NIS 56. Surgical procedures and choice of surgeon are major items within this category – in contrast to dental care, a sphere on which expenditure is low despite its exclusion from the health basket.⁴
- **Out-of-pocket expenditure on supplemental services** is the largest expenditure item among the various out-of-pocket expenditures, both in terms of the average amount of expenditure – NIS 551 per month – and in terms of the number of households that report it (44 percent). This expenditure accounts for 47 percent of private expenditure on healthcare. This item includes dental care, a field whose insurance options are relatively limited (Chernichovsky and Navon 2010). The financial expenditure on surgical procedures, which is included in the expenditure on parallel services, is especially high, but refers to just 1 percent of the population.

⁴ Since 2010 dental care for children has been included in the basket.

According to the study, expenditure on these three items serves as a kind of alternative to taxes, in the sense that it has a basis in necessity, is a matter of public interest, and affects 44 to 80 percent of Israeli households. Expenditures on these items together amount to 61 percent of total private healthcare expenditure (Figure 12).

Figure 12
Distribution of private expenditure for healthcare services
by categories, Israel 2010



Source: Navon and Chernichovsky, 2012 (Taub Center update.)

Data: Central Bureau of Statistics.

In addition to these three items, there are two additional spheres for private healthcare expenditure:

- Parallel services and products (hereinafter: parallel services): services or products that are provided through full or partial public funding.

- Consumption services and products: expenditures that are not specifically healthcare, and which it is not in the public's interest to subsidize in any way.

Private Expenditure on Medicine as an Expression of Efficiency and Equity in the Public System

The study findings yield several important insights regarding the public healthcare system's efficiency and equity:

- Low income is a barrier to access for services that entail copayments and that are in the public interest, and for parallel services, including dental care, that are not in the basket of services.
- Out-of-pocket expenditure on parallel services correlates positively with income, educational level and insurance coverage, as well as with the presence of elderly people and children in the household. That is, groups characterized by more numerous needs than average and which are able to afford it, spend more on these services.
- The positive correlation between high socioeconomic status, including education level, and expenditure on voluntary insurance and out-of-pocket expenditure – over and above the fact that insurance coverage is positively correlated with healthcare service consumption and out-of-pocket expenditure – support the hypothesis that voluntary insurance in Israel may worsen the inequity situation, at least in the short-term. The insurance policies purchased by those with relatively high incomes give them better access to service as well as better protection for the household budget in cases of high expenditure on services not included in the health basket.

- The fact that high-income people in general, and the highly-educated in particular, spend relatively large amounts on parallel services both through insurance and out-of-pocket, supports the hypothesis that the public system is not functioning well – at least in the consumer's view – and that even with regard to the basic basket of services, two parallel systems are developing – a system for the poor and a system for the rich.⁵
- Households that include children or elderly people, two populations that have a need for more health services, spend more (relative to income) on parallel services – another indication of non-optimal system functioning. The positive influence of number of wage earners on insurance, when all other variables are equal, hints that employer expenditure on insurance may play an important role – a role that likely expands as general expenditure on insurance grows.
- Having insurance for parallel services has a large and particularly significant influence on total private healthcare expenditure. This finding is consistent with the hypothesis that insurance for parallel services constitutes an impetus for public-system service providers to encourage demand in the private system.

Private expenditure on healthcare services and income distribution.

Private expenditure on the various forms of healthcare, by income quintile, is detailed in Figure 13 and in Table 1. The highest quintile spends three times as much as the lowest quintile – a fact that is

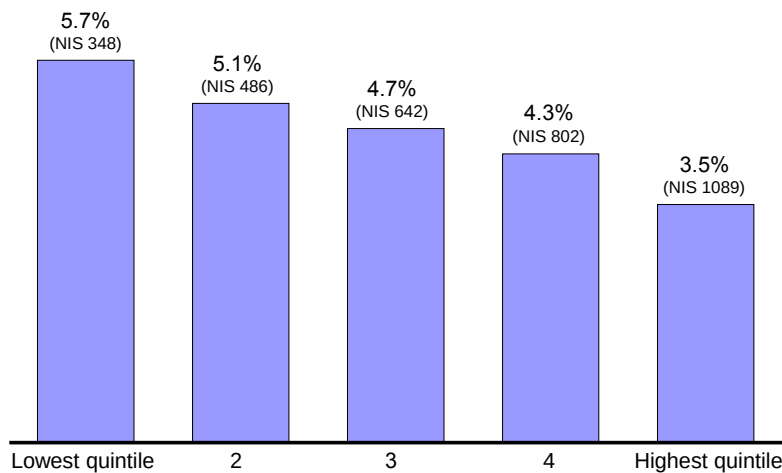
⁵ The concept of the public system's functioning is complex and relative, inasmuch as it is subject to the effects of reciprocal relations between the holding of supplemental insurance, purchased within the public system, and the use of that insurance in the private system. Patients whose financial status enables them to use supplemental insurance in the consumption of a relatively large number of healthcare services are referred from the public system to the private one, and therefore suffer less from the public system's erosion in terms of the level of service provided to them – but they spend more out-of-pocket (see Chernichovsky 2011).

consistent with the previous findings. In spite of this, the total healthcare expenditure is regressive: poor households spend a higher percentage of their disposable income on healthcare services – 5.7 percent for the lowest quintile versus 3.6 percent for the highest quintile. Copayments and out-of-pocket payments for supplemental services – primarily dental care – make a special contribution to this situation, and their impact on the average expenditure cancels out the effects of the progressive expenditure on parallel services and on the consumption of, and coverage for, supplemental services – whether out-of-pocket or through insurance. What the findings mean is that, although higher-income Israelis spend a higher percentage of their income on certain areas than do those with lower-income; the lowest quintile, in general, spends a higher percentage of its income on healthcare due to expenditures on copayments and necessary services.

Figure 13

Private expenditure on healthcare services by income quintiles

as percent of disposable income in each quintile, 2010



Source: Navon and Chernichovsky, 2012 (Taub Center update).

Data: Central Bureau of Statistics.

An analysis of the way in which private expenditure affects equity yields the following conclusions:

- In general, the middle-income groups bear a relatively large share of the expenditure on the three expenditure categories in which the public has a direct interest. The higher income quintiles spend a low percentage of their disposable income on these categories, including copayments, as do the lower income quintiles – but the reason in the latter case is non-consumption and lack of access to care, whether directly or due to foregoing insurance for supplemental services. Regarding the impact on health, the findings are even more significant if it is assumed that poor people have a greater need for healthcare than do affluent people.
- The findings support the contention that, in Israel, private insurance worsens the state of the distribution of access to healthcare services, because it affords better access to healthcare services and better protection (in the case of large healthcare expenditures not included in the health basket) to the higher income brackets. That is to say, in Israel the advantages of insurance, including supplemental insurance, are enjoyed mainly by the higher income groups.

Table 1. **Distribution of private expenditure on healthcare services**
by categories of expenditure and income quintiles, 2010

	Insurance			Out-of-pocket expenditures				Total health care
	Supplemental	Parallel	Consumption	Copayment	Supplemental	Parallel	Consumption	
Avg. reported household expenditure (NIS per month)	62	166	53	230	737	347	223	715
Percent of reporting households	80%	81%	82%	27%	53%	10%	47%	94%

Average expenditure per household
as percent of average disposable income

Income quintile	Insurance			Out-of-pocket expenditures				Total health care
	Supplemental	Parallel	Consumption	Copayment	Supplemental	Parallel	Consumption	
1	0.34%	0.76%	0.19%	0.82%	4.35%	0.18%	0.78%	5.72%
2	0.38%	0.93%	0.27%	0.58%	3.26%	0.19%	0.63%	5.06%
3	0.38%	0.95%	0.29%	0.40%	2.96%	0.21%	0.64%	4.68%
4	0.35%	0.94%	0.30%	0.34%	2.56%	0.21%	0.65%	4.30%
5	0.24%	0.76%	0.27%	0.27%	1.63%	0.25%	0.69%	3.55%
Average	0.32%	0.86%	0.28%	0.39%	2.49%	0.22%	0.67%	4.28%
Ratio of expenditure: highest to lowest	3.59	5.05	7.08	1.63	1.88	7.12	4.40	3.11

Source: Navon and Chernichovsky 2012 (Taub Center update).

Data: Central Bureau of Statistics.

The Relationship Between Private Healthcare Expenditure and Poverty

The estimates for 2010 indicate that total private expenditure on healthcare raises the incidence of poverty by 17,840 households⁶ (Table 2).

Expenditures in which the public has an interest, as defined in the original study – copayments, insurance premiums and out-of-pocket expenditure on supplemental services – raise the number of Israel's poor households by 2,976, 738 and 8,508, respectively. The greatest contribution to the figures on poverty due to expenditure on supplemental services is actually in households with two wage earners and amongst the Arab Israeli population.

⁶ The meaning here is that when one deducts private healthcare expenditure from disposable income, the disposable income of 17,840 additional households falls below half the median disposable income (all data are calculated in terms of standardized persons per household).

Table 2. **The impact of private healthcare expenditure on the incidence of poverty***
by expenditure category and household attributes, 2010

	Arab Israelis	Haredim	Families with elderly members (65+)
Average without influence of expenditures on medical services			
Number of households in group	284,884	85,782	312,106
Number of households at baseline	132,335	32,070	49,156
Percent of the poor at baseline	15.7%	37.4%	46.5%
Impact of total expenditure on medical services			
Percent increase in the poor	1.7%	-0.4%	2.3%
Net number of households added to poor	4,780	-370	7,024
Average change in depth of poverty	14.3%	-1.2%	3.6%
Impact of expenditure on copayment			
Percent increase in the poor	1.4%	-0.6%	0.3%
Net number of households added to the poor	3,878	-475	802
Average change in depth of poverty	2.9%	-1.5%	1.6%

* In contrast to the way the National Insurance Institute calculates the poverty line which is according to net monetary income, the poverty line is calculated here according to net overall income. That is: net monetary income + in-kind income. The population in the sample is the one that was sampled for the 2010 Household Survey (see Navon and Chernichovsky, 2012).

Table 2. (continued)

Families with children (0-18)	No wage earners	One wage earner	Two or more wage earners	Total
986,183	233,132	682,162	922,346	2,181,736
242,443	120,355	171,404	40,613	384,029
24.6%	51.6%	25.1%	4.4%	17.6%
0.1%	2.0%	-0.2%	0.6%	0.8%
1,262	4,770	-1,045	5,780	17,840
0.5%	4.0%	-0.7%	14.2%	4.6%
-0.1%	0.5%	-0.1%	0.0%	0.1%
-1,073	1,180	-360	25	2,976
-0.4%	1.0%	-0.2%	0.1%	0.8%

Table 2. (continued) **The impact of private healthcare expenditure on the incidence of poverty**

by expenditure category and household attributes, 2010

	Arab Israelis	Haredim	Families with elderly members (65+)
Impact of expenditure on supplemental insurance			
Percent increase in the poor	0.0%	0.0%	0.1%
Net number of households added to the poor	—	—	383
Average change in depth of poverty	0.0%	0.0%	0.8%
Impact of out-of-pocket expenditure on supplemental insurance			
Percent increase in the poor	1.6%	-2.1%	0.9%
Net number of households added to the poor	4,542	-1,836	2,805
Average change in depth of poverty	3.4%	-5.7%	5.7%
Impact of expenditure on recipients' insurance			
Percent increase in the poor	0.0%	0.3%	0.1%
Net number of households added to the poor	-90	217	383
Average change in depth of poverty	-0.1%	0.7%	0.8%

Table 2. (continued)

Families with children (0-18)	No wage earners	One wage earner	Two or more wage earners	Total
0.0%	0.1%	0.0%	0.1%	0.0%
355	118	-327	564	738
0.1%	0.1%	-0.2%	1.4%	0.2%
-0.2%	2.0%	-0.5%	0.4%	0.4%
-1,633	4,759	-3,714	3,631	8,508
-0.7%	4.0%	-2.2%	8.9%	2.2%
0.1%	0.4%	0.0%	0.1%	0.1%
1,045	989	-234	1,284	2,423
0.4%	0.8%	-0.1%	3.2%	0.6%

Table 2. **The impact of private healthcare expenditure on the incidence of poverty (continued)**

by expenditure category and household attributes, 2010

	Arab Israelis	Haredim	Families with elderly members (65+)
Impact of expenditure on consumer insurances			
Percent increase in the poor	0.1%	0.3%	0.1%
Net number of households added to the poor	406	217	383
Average change in depth of poverty	0.3%	0.7%	0.8%
Impact of out-of-pocket expenditure on parallel services			
Percent increase in the poor	0.0%	0.0%	-0.1%
Net number of households added to the poor	107	–	-265
Average change in depth of poverty	0.1%	0.0%	-0.5%
Impact of out-of-pocket expenditures on consumption			
Percent increase in the poor	-0.03%	-0.1%	0.0%
Net number of households added to the poor	-743	-44	79
Average change in depth of poverty	-0.6%	-0.1%	0.2%

Table 2. (continued)

Families with children (0- 18)	No wage earners	One wage earner	Two or more wage earners	Total
0.0%	0.0%	-0.1%	0.0%	0.0%
-3	—	-475	—	-740
0.0%	0.0%	-0.3%	0.0%	-0.2%
-0.1%	0.1%	-0.3%	0.0%	0.0%
-1,325	313	-1,874	147	1,052
-0.5%	0.3%	-1.1%	0.4%	-0.3%
0.1%	0.3%	0.0%	0.0%	0.1%
974	757	—	217	1,356
0.4%	0.6%	0.0%	0.5%	0.4%

Source: Navon and Chernichovsky, 2012 (Taub Center update).

Data: Central Bureau of Statistics.

In this context, the Navon and Chernichovsky research findings also indicate that:

- Expenditure on parallel services for which public entitlement exists contributes to poverty among families with children and families with two or more wage earners. These findings point to a certain dissatisfaction on the part of working couples with children with the public system, which drives them to spend privately on parallel services, even at the price of falling into poverty. The influence of this expenditure on the deepening of poverty is particularly conspicuous among the Arab Israeli population. By contrast, copayments and out-of-pocket payments for supplemental services contribute to a deepening of poverty among all households. This effect is especially notable regarding out-of-pocket expenditure on supplemental services among households that include elderly people.
- Those with low incomes have a higher chance of falling below the poverty line in all expenditure categories, and particularly in copayments. In this context it should be noted that a positive correlation was found between household size in terms of standardized persons and the probability of falling into poverty. That is, lower income per capita is what raises the likelihood of descent below the poverty line.
- The special impact of income per capita on the likelihood of falling into poverty due to expenditure on services parallel to those included in the health basket is that large, low-income families fall into poverty when they spend money on services that they are supposed to receive through the basic basket of services.
- A larger number of wage earners lowers the chance of falling into poverty, even when accounting for the effects of income per capita. This may be taken to indicate that working people have fewer

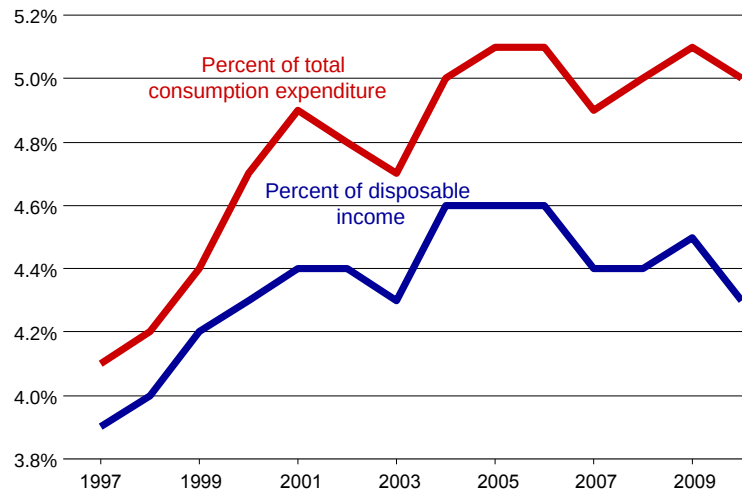
healthcare needs, and that they have better access to insurance, especially for services included in the basket.

- Within the parallel services category, the variables that most strongly affect poverty are the number of persons and the dummy variables for the geographic districts (these data are not included in the table). The findings indicate that families with greater needs are relatively more likely to fall into poverty even due to expenditure on services that are included in the health basket. Moreover, people are falling into poverty due to expenditure on parallel services even in districts characterized by abundant service supply. This finding hints that service providers are encouraging demand. Alternatively, the finding may testify to a problem in these districts regarding access to healthcare services included in the health basket.

Long-Term Trends

Figure 14 shows a steady rise in private healthcare expenditure as a percentage of household budgets since 1997. One can see that the increase in expenditure as a percentage of total consumption is higher than the increase as a percentage of total disposable income, which means that households are, to a greater and greater degree, foregoing other forms of consumption in favor of healthcare services consumption. The situation is actually worse than these figures would indicate, given that the rise in healthcare service prices exceeds the price rise for the remainder of the household-consumption product basket (Chernichovsky, Gamzu, and Navon 2010).

Figure 14
Private expenditure on healthcare services, 1997-2010
 as percent of disposable income and of total consumption expenditure

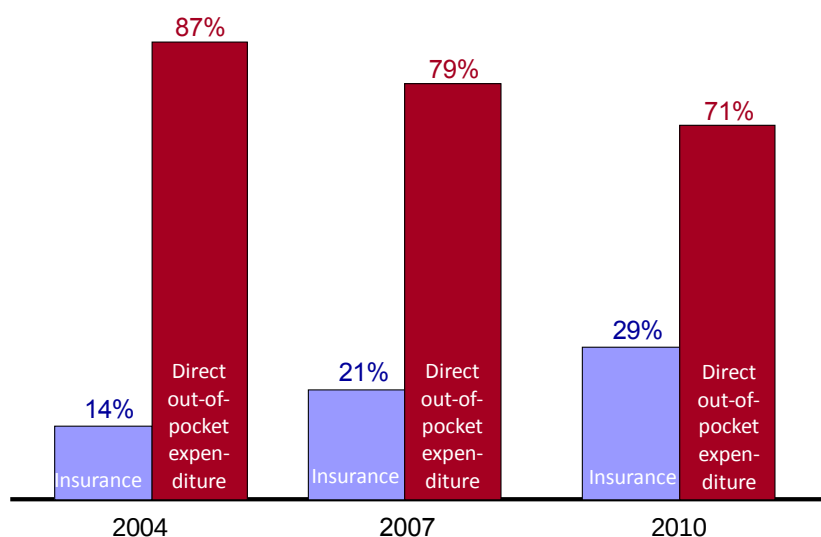


Source: Chernichovsky, Gamzu, and Navon, 2012 (Taub Center update).

Data: Central Bureau of Statistics.

The changes in healthcare expenditure distribution since 2004 are shown in Table 3 and in Figure 15. The share of insurance expenditure is rising, while the share of out-of-pocket expenditure is trending downward. In percentage-point terms, there has been a notable rise in the share of insurance expenditure on parallel services and consumption. Despite a decline in the share of out-of-pocket expenditure, from 87 percent in 2004 to 71 percent in 2010, there has been a rise in direct expenditure on parallel services and consumption – at the expense of the share accounted for by copayment and expenditure on supplemental services.

Figure 15
Distribution of private healthcare expenditures



Source: Navon and Chernichovsky, 2012 (Taub Center update).

Data: Central Bureau of Statistics.

Table 3. **Changes in the distribution of healthcare expenditures in 2004, 2007 and 2010**

Expenditure		2010	2007	2004
Insurance	Supplemental	7%	5%	5%
	Parallel	17%	12%	8%
	Consumption	5%	4%	1%
	Copayment	7%	8%	9%
Out-of-pocket	Supplemental	47%	55%	63%
	Parallel	4%	5%	3%
	Consumption	13%	11%	12%

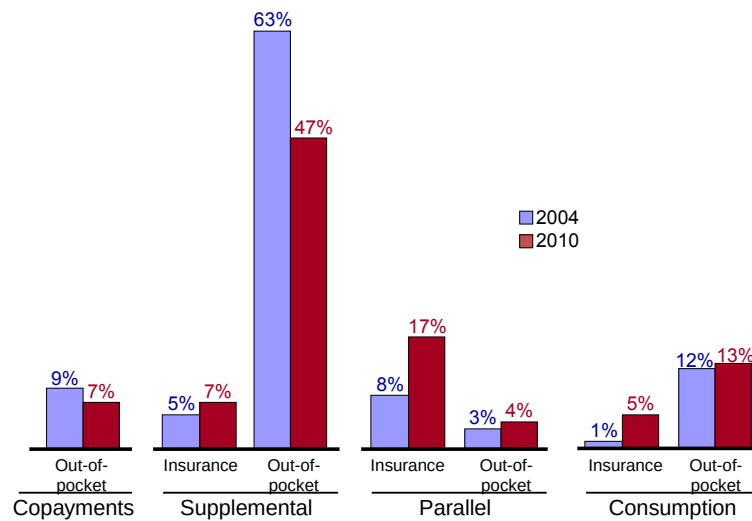
Source: Navon and Chernichovsky, 2012 (Taub Center Update).

Data: Central Bureau of Statistics.

Figure 16 summarizes the changes in expenditure, as well as their extent. The data indicate an overall upward trend in the percentage of insured households and in expenditure on insurance, versus a decline in the percentage of households that make direct out-of-pocket expenditures in these areas. The only item for which there has been a slight rise in direct expenditure throughout the period is that of parallel services (from 3-4 percent).

Figure 16

Components of private healthcare expenditure



Source: Navon and Chernichovsky, 2012 (Taub Center update).

Data: Central Bureau of Statistics.

In summary, although the rise in the share of expenditure on insurance – particularly in the form of a rise in copayments – compared with direct out-of-pocket expenditure is on the face of it a welcome development, emerging trends in expenditure distribution may point to a relative worsening of the overall situation. The problem lies in the expenditure that is being made on parallel services. The Israeli public is spending larger portions of its income – whether through private insurance or through direct out-of-pocket payments – for services that are included in the public basket, or that are supposed to be. What this means is that the public system is fulfilling its function vis-à-vis the public to an ever-diminishing degree.

4. Long-Term Nursing Care Funding in Israel

The issue of long-term nursing care (LTNC) and its funding comes up regularly in Israel due to the social and economic challenges that it has long posed to the country as a whole (Chernichovsky et al. 2011; Ministry of Health 2011; Chernichovsky et al. 2010). The topic has become particularly relevant over the last two or three years in light of two apparently contradictory governmental initiatives. One of these initiatives, spearheaded by the Ministry of Finance, seeks – through the health funds – to base long-term care insurance on personal premiums to a greater degree than is currently the case; the other initiative, advocated by the Ministry of Health, wants to make this form of insurance more governmental in nature. The goal of the former initiative is to limit the potential for parallel subsidies, particularly between age and income groups, while the goal of the latter is the opposite.

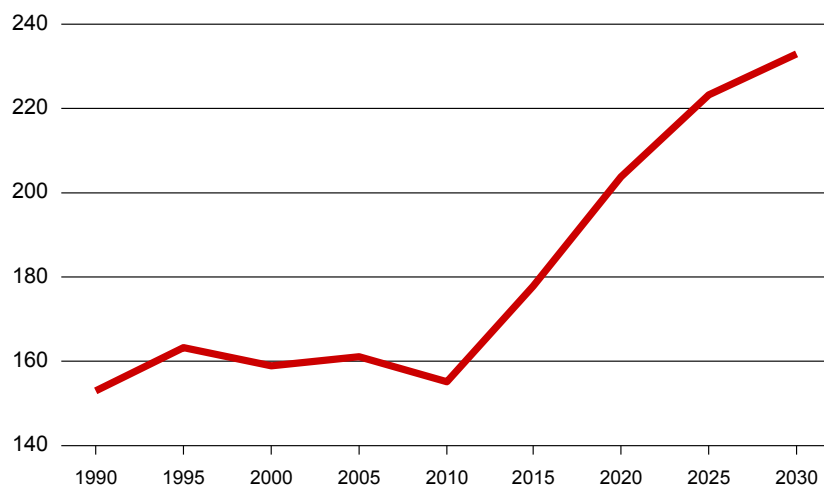
These issues are addressed in a forthcoming Taub Center policy paper (Chernichovsky, Kaplan, and Stessman 2012) and are also reviewed in this section. The paper complements the publications previously cited by placing the current Israeli situation and the proposals on the agenda in an international and conceptual perspective.

Rising Needs

Forecasts of the Central Bureau of Statistics point to a sharp rise in the total number of people aged 65 and over in the population. By 2030 the number of those aged 65 and over – of whom half will be aged 75 and over – is expected to reach 1,370,000 versus 760,000 aged 65 and over today. The share of the elderly in the population is expected to reach 12 percent in 2020, and nearly 14 percent in 2030, versus 10 percent today. This means that in 2030 there will be 230 elderly people in Israel for every thousand people of working age, compared with 160 elderly per thousand working-age people at present (Figure 17). That is, over the coming two decades (2010-2030) this population group will grow by 80 percent, compared with a general population growth figure of 32 percent (Central Bureau of Statistics, *Forecasts*, 2010).

Figure 17

Elderly dependency ratio*
percent of persons aged 65 and over
per 1,000 working-age adults (ages 25-64)



* Data for 2012-2030 are projections based on current age distribution.

Source: Ben-Moshe, 2011 (Taub Center update).

Data: Ministry of Industry, Trade and Labor.

Compared with the more developed OECD countries, Israel's population is characterized by a relatively low percentage of people aged 65 and over; however the proportion of older seniors within this group (those aged 75 and over) is relatively high, due to Israel's relatively high life expectancy. Moreover, Israel's rate of aging in the population is high compared with that of all other developed countries.

This demographic picture dictates potential for increased long-term care needs. Within the context of this discussion, the issue of old age – particularly with regard to the healthcare of those aged 75 and over – is complicated by multiple diseases per individual, by the changing character and symptoms of disease, by a rise in the prevalence of disease, and by a more lengthy course of illness. Diseases appear at this age that do not characterize younger age groups, and that involve cognitive decline and sensory impairment. The outcomes of morbidity – some of it chronic – among the elderly are manifested in functional decline and in a loss of independence in daily living. These latter phenomena lead to a growing need for hospitalization, facility-based care or constant caregiving in the home (*Report of the Committee on Planning National Geriatric Services* 2011).

Funding Long-Term Care in Israel – Sources and Uses

Table 4 presents the composition and sources of funding for the various forms of long-term care in Israel. The table data themselves, and in international comparison, indicate the existence of questions regarding eligibility and regarding the system's relative efficiency.

Table 4. **Estimates of financing of long-term care in Israel**
by type of care and public funding agent

Public					
Care type	Primary funder	Estimate of those in care	Cost estimate (NIS billion)	Percent of expenditure for nursing care	Notes
Individual care – community-based	National Insurance Institute	139,419	3.6	32%	Estimate includes those entitled to care only, some nursing patients are entitled to more services
Non-complex institutional care	State (via Min. of Health and Welfare)	16,512	1.68	15%	Calculated on basis of Min. of Health budget for long-term care (services for illness and actual expenditure) + Min. of Welfare expenditure for long-term care
Complex hospitalization	State (via health funds)	1,659	0.42	4%	Calculated on the basis of 1,659 complex nursing care patients X 365 days X 700 NIS per hospital day
Total public			5.7	50%	

Table 4. (continued)

Private					
Care type	Primary funder	Estimate of those in care	Cost estimate (NIS billion)	Percent of expenditure for nursing care	Notes
Individual care – community-based	Household	57,329	2.4	21%	Calculated on the basis of 57,329 work permits in nursing care X \$1,000 per month (3.5NIS to the dollar)
Non-complex institutional care	Household	29,281	2.5	22%	Calculated on the basis of 29,281 hospital beds X NIS 7,000 per month (average cost)
Net private insurance premiums, after payments for hospitalization		No data on number of those insured	0.8	7%	Calculated on the basis of premiums paid for private nursing care insurance (NIS 1,608,431,000) less claims (NIS 790,084,000)
Total private			5.7	50%	
Total long-term care expenditure			11.37	100%	

Source: Taub Center for Social Policy Studies in Israel.

Data: National Insurance Institute, Ministry of Finance, Myers-JDC-Brookdale, Knesset Research and Information Center.

Public Funding

Public funding is relevant to three main types of care: personal care in the community, non-complex facility-based care and complex facility-based care.

The National Insurance Institute is the main public funder of personal care in the community. It subsidizes the care of 140,000 elderly people at a cost of NIS 3.6 billion – 63 percent of the total public funding for continuing care. The Ministry of Health and the Ministry of Social Affairs are the public funders of non-complex facility-based care. The cost of this funding is NIS 1.68 billion, constituting 29 percent of the total public funding for long-term care.

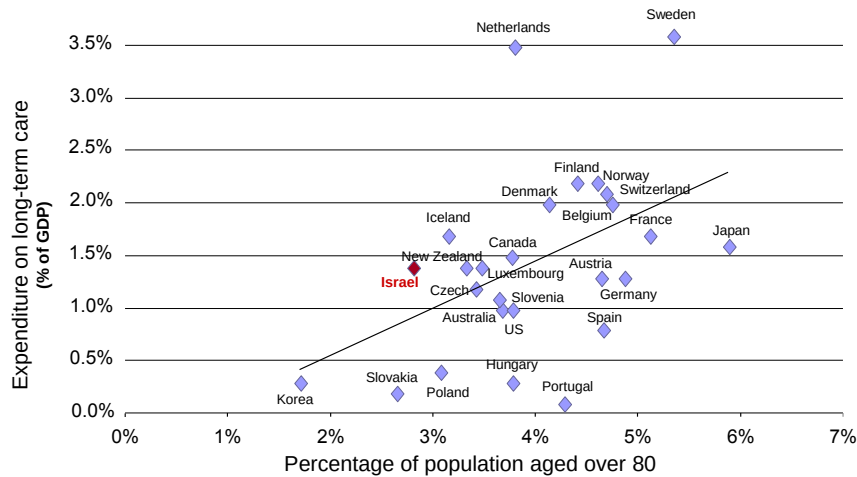
The state (the Ministry of Finance and the National Insurance Institute), through the health funds, finances complex long-term care for 1,700 elderly people, at a cost of NIS 420 million – 8 percent of the public funding total. Total public funding for long-term care is NIS 5.7 billion, half of the national expenditure on continuing care.

Private Funding

Private funding is used for personal care by means of foreign workers, non-complex facility-based care, and net private insurance premiums (after deducting for insurer payments for insurance-provided facility-based care). Israeli households spend NIS 2.4 billion per year on the employment of foreign workers as personal caregivers to 57,500 elderly people. This expenditure accounts for an estimated 42 percent of all private expenditure on long-term care. Households also spend NIS 2.5 billion per year on non-complex facility-based care for 29,500 elderly people – 44 percent of the total private expenditure on continuing care. The overall cost of net private insurance premiums (after payment for hospitalization) is estimated at NIS 800 million, 14 percent of the total private expenditure on long-term care. Total private funding for long-term care is NIS 5.7 billion – half of the national expenditure on long-term care.

Figure 18

Percentage of aged 80+ and expenditure rate on nursing care*
as percent of total population in OECD countries** including Israel, 2008



* Data include private and public expenditure on long-term nursing care.

** Expenditure data for Austria, Belgium, Canada, Denmark, Hungary, Iceland, Norway, Portugal, Switzerland, and US include actual expenditure on nursing care only and do not include any other national expenditure on long-term care.

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD, Bank of Israel, Ministry of Health.

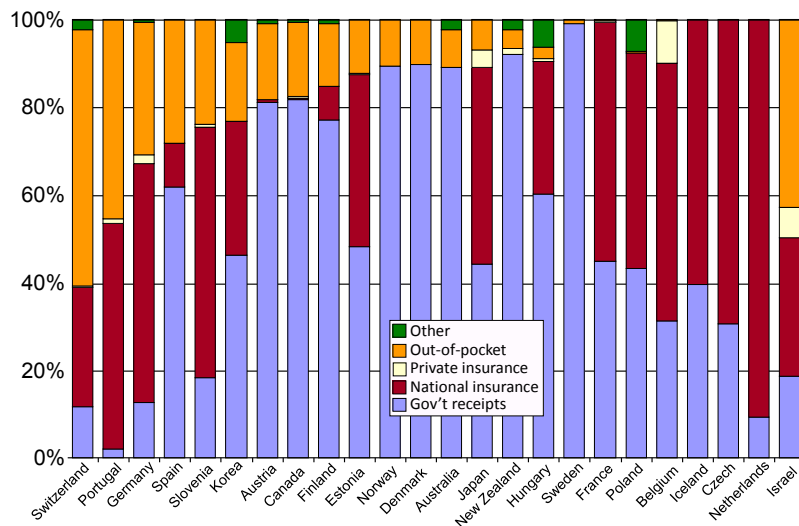
Israel spends 1.4 percent of its GDP on long-term care.⁷ This percentage is similar to the average OECD expenditure (Figure 18). However, when taking into account the relatively low share of those aged 80 and over in the population, Israel spends a high proportion of its GDP on this form of care.

⁷ The funding estimates are consistent with those of the Bank of Israel, which places the scope of the expenditure at 1.2 percent of the GDP. The public expenditure estimates given here are identical to those of the Bank of Israel (*Bank of Israel Report 2011*, Chapter 8); by contrast, the Taub Center's private expenditure estimates are higher than those of the Bank.

The most outstanding characteristic of Israeli funding for continuing care is its relatively large share of private funding (Figure 19). Of the countries examined, only Switzerland has a higher share of private funding. The OECD average for private funding share is only 16 percent, meaning that Israel's private funding share for long-term care is three times higher than the OECD average. Israel also stands out for its rate of expenditure on private insurance – exceeded only by that of Belgium. Israel's private LTNC expenditure in terms of per capita GDP is relatively high: 24.10 percent of per capita GDP, versus 17.14 percent for the OECD.

Figure 19

Long-term nursing care expenditures by funding sources*
OECD countries and Israel, 2008



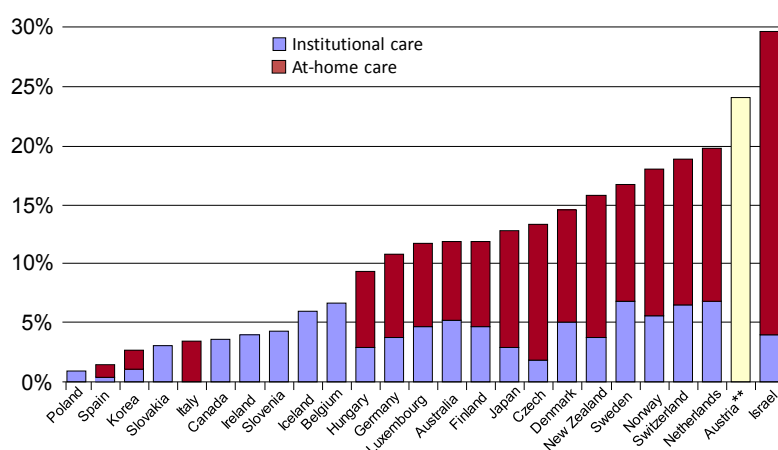
* For some of the countries, the private out-of-pocket expenditure of consumers represent a low estimate. For example, in the Netherlands, participation in long-term nursing care is estimated to be some 8 percent of this expenditure.

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD, Bank of Israel, Ministry of Health.

Israel is the leader in the sphere of long-term care for the elderly (Figure 20). Israel's percentage of those cared for in the community and in the household is especially high: 86.5 percent of all Israeli LTNC patients, compared with an OECD average of 50.7 percent.

Figure 20
Consumers of long-term nursing care*
 as percent of the population aged 65 and over, OECD countries
 and Israel, 2008



* Consumers of long-term nursing care aged 65+ – those in institutions and those at home.

** Data for Austria are the percent of those receiving benefits for the purchase of long-term care.

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD, Central Bureau of Statistics, Bank of Israel, Ministry of Health.

An International Perspective on Long-Term Nursing Care Expenditure

On the face of it, Israel's long-term nursing care picture would appear to be a positive one, featuring a high level of coverage at a low cost – a picture testifying to efficiency, high access and relatively low prices. However, this is a partial and misleading picture; a closer look at the data raises questions regarding the system's efficiency, equity and sustainability in the long term.

Israel's relatively low average cost per LTNC patient is derived from the country's high percentage of elderly care-recipients aged 60 to 80 – some of whom are cared for by foreign workers, the cost of whose employment is low relative to the OECD. Thus, when an adjustment for age that also ensures institutional-level comparability is made (Figure 18), the Israeli expenditure turns out to be high compared with the OECD.⁸

Moreover, elderly long-term nursing care recipients are generally obliged to spend larger out-of-pocket sums than those required of elderly people in the OECD. This situation leads to inequity and raises questions regarding the system's efficiency, given the existing insurance frameworks' inability to prevent such a state of affairs.⁹

One particularly serious aspect of the present situation is its unsustainability in the face of anticipated developments: current trends, in Israel as elsewhere, point in the direction of population aging, and specifically an aging of the elderly population (see Figure 17), as well as a relative rise in the wages of foreign workers (a phenomenon stemming from, among other things, a rise in the standard of living of these workers' countries of origin). These trends will likely lead to a decline in private funding capabilities, particularly for the younger generations who

⁸ The figure may reflect a social preference on the part of the very old, as well as Israel's high life expectancy. However, it is unlikely that these factors explain the relatively high cost of care in Israel.

⁹ See discussion in forthcoming paper: Chernichovsky, Kaplan, and Stessman, 2012.

will not be eligible, for example, for German reparations and who will perhaps have fewer assets than the current generation has. These developments, along with societal changes, will entail more extensive facility-based care – as in the more developed OECD states – at higher costs and without sufficient arrangements.

Indeed, the reality of the LTNC insurance market and of society's long-term care needs drove the developed countries to choose solutions of a public nature; the way in which selected countries (those closer to Israel on social services funding parameters) implemented these solutions is presented in Table 5.¹⁰

The comparison provided by Table 5 draws attention to several main points regarding public funding of long-term care in the selected countries:

- Coverage is universal
- Insurance is mandatory for all
- Funding comes from taxes or from social insurance based on the ability to pay (expenditure)
- Compensation is provided to families through in-kind services, cash, or a combination of the two
- Compensation is sometimes conditional on means testing
- Private insurance, mainly in the US but also in Japan and Germany, confers tax credits

Universal mandatory insurance is based on the need for young people's participation in the program, as well as the need to keep them from burdening the public with their parents' care (or with their own care, in the future). The systems are, ultimately, based on the Pay As You Go (PAYG) method, but with accumulating funds.

¹⁰ Countries where LTNC insurance is primarily governmental, such as the Scandinavian states, are not included.

Table 5. **Models for publicly-funded long-term nursing care, selected counties**

	Funding	Compensation	Entitlement	Private insurance
France	General tax	Cash only	Universal, means-test-based private insurance requirement	25% of aged 60 and over
Germany	Salary tax	Service or cash	Universal	Less than 10% optional for those with high salaries
Japan	Salary tax, general taxes, income-based premiums	Service only	Universal for ages 65 and over	None
Netherlands	Income tax participation according to ability	Service or cash	Universal	Mandatory, privately managed
UK	General tax	Service or cash	Means tested	Very limited
Israel	General tax participation according to ability to pay	Service or cash principally for those using foreign workers	Means test, needs test (evaluation of daily living skills)	

Source: Taub Center for Social Policy Studies in Israel.

Data: OECD.

Principles for Reform in Israel

From a financial perspective, international experience clearly indicates that the private insurance market cannot contribute substantially to resolving the issue of long-term care funding; the developed countries have, for all intents and purposes, given up on any private-market based solution to the problem. In Israel, the main way of addressing the issue is that of purchasing long-term care insurance within a framework of private group policies purchased by health funds from private insurance agencies. This solution currently fails to meet the needs of broad portions of the Israeli population, particularly its low-income sectors, nor does it address anticipated developments.

Thus, any approach resembling that which the Ministry of Finance has championed in recent years – one that would turn the health-fund-based “semi-public” insurance into private-premium insurance, albeit in a group framework – would run counter to current international trends. By contrast, the Ministry of Health’s approach, one that aspires to ensure universality (if only partial) of long-term care beyond the existing coverage provided by the health funds, is consistent with international trends and with principles of equity and efficiency.

That being said, consideration needs to be given to other options besides that of raising the healthcare tax by half a percent (if at all) as the Ministry has proposed. The basis for this latter option is unclear, both conceptually (the connection between funding long-term care – most of which is not medical but rather social in nature – and the healthcare tax) and in terms of its funding implications. The issue needs to be thoroughly investigated before any far-reaching measures are taken. Instituting mandatory LTNC insurance is an important matter, one with long-term ramifications for Israelis’ well-being and social security, and it is important that an initiative of this magnitude be implemented in the best possible way.

The solution in Israel might include the following features and measures:

- A pre-defined basket of continuing care services to be provided in the form of a “nursing care allowance” – cash, in-kind services, or a combination of the two.
- The basket would be funded by pooling all public resources that currently exist within the Ministry of Social Affairs, the National Insurance Institute and the Ministry of Health, through a dedicated account in the National Insurance Institute.
- Mandatory insurance would be administered by a special authority created for the purpose, or within the National Insurance Institute framework.
- Some of the private, health fund based insurance could be converted to mandatory insurance, with the state making up the difference for less-affluent sectors, on a means test basis.
- Health fund based group nursing care insurance policies (some of which, again, would be turned into mandatory insurance) could be arranged in such a way as not to impair mobility between the health funds.
- The definition of a long-term nursing care patient would be that currently used by the private insurance agencies.
- A governmental authority would be established to determine the eligibility of long-term care patients for a “nursing care allowance,” and to administer the public budgets, including the mandatory insurance funds, intended for long-term care services.
- The “nursing care allowance” would not be conditional on the patient/family means testing.

- The allowance would be linked to the consumer price index or to another relevant index employed by the Central Bureau of Statistics.
- Future increases in the nursing care allowance would be considered periodically based on LTNC patient needs, and on the state's ability to fund these allowances.

The background for these proposed features is presented in detail in a forthcoming Taub Center policy paper (Chernichovsky, Kaplan, and Stessman).

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