

## Chapter 8

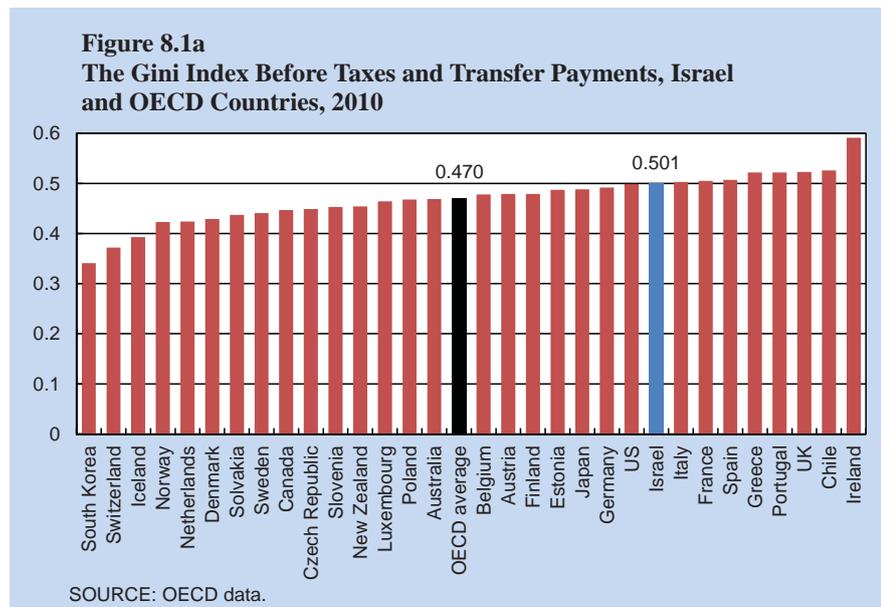
# Welfare Policy Issues

- Poverty, based on market income (income from labor and from capital before the payment of taxes), is not high in Israel. The government's contribution to its reduction is 25 percent, while the OECD average is about 60 percent. Therefore, the incidence of poverty on the basis of disposable income in Israel is higher than in the other OECD countries.
- The reductions made in allowances and in direct taxes over the past decade have contributed to new workers joining the labor market. The increase in employment has reduced poverty in a prolonged and slow process, following the sharp increase in poverty that occurred with the implementation of these measures. The Earned Income Tax Credit may accelerate the process of reducing poverty.
- The high incidence of poverty based on disposable income does not reflect inefficiency in its reduction, but rather a policy choice regarding the redistribution of income: the tax burden and transfer payments in Israel are relatively low.
- The share in GDP of civilian public expenditure excluding interest and the composition of taxes are correlated with the inequality in disposable income, but not with market inequality.
- The ratio between the indirect tax burden and the direct tax burden in Israel is the highest among OECD countries. This tax policy has advantages in terms of revenues, as well as having smaller side effects on incentives, but it has less of an effect on reducing inequality.
- There are no large gaps between the income quintiles from the standpoint of the share of income tax and VAT in gross income.
- The average equivalized income of a poor household constitutes about one-quarter of the average income of a household that is not poor, and consumption expenses constitute about one-half. There is a large gap between poor households and those that are not poor in the rate of owning a personal computer, vehicle, and Internet and cable connections. In contrast, there are small differences in the share of owning a home, air conditioner or refrigerator.
- Between 1998 and 2011, inequality between the center and periphery of the country has increased, while inequality of market income within the districts has declined.

## 1. INEQUALITY AND POVERTY

### a. Inequality and poverty, and the government's contribution toward reducing them

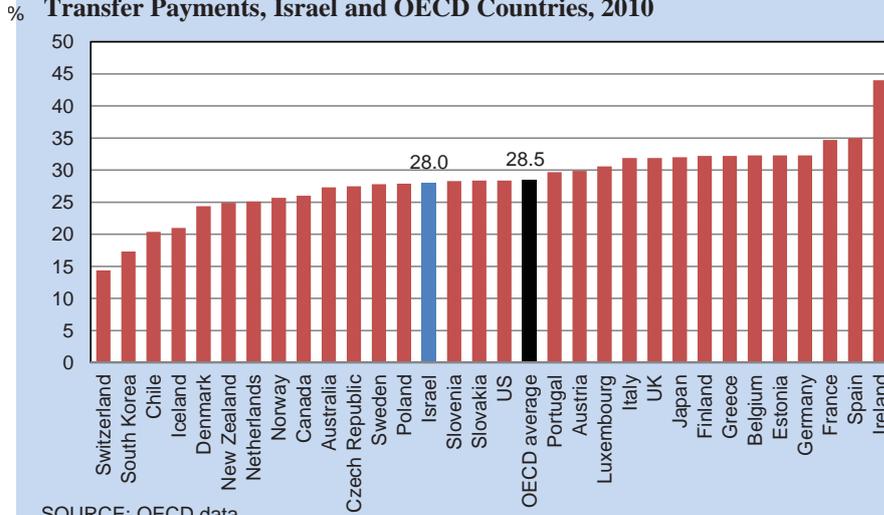
Inequality in market income<sup>1</sup> in Israel was higher than the average among OECD countries in 2010, and its value is at the lower end of the upper third of the distribution (Figure 8.1a)<sup>2</sup>. The poverty rate calculated according to market income is around the average (Figure 8.1b). At the same time, the extent to which the government is involved in the redistribution of income in Israel is smaller than in the other OECD member countries, which is reflected in the fact that the extent of inequality and the poverty rate as measured based on disposable income are higher than the parallel figures in the other OECD countries (Figures 8.2a and 8.2b). The contribution of policy to reducing the market poverty rate amounts to 25 percent, while the average in the OECD is about 60 percent, and the contribution to the reduction of market inequality in Israel is 25 percent, compared with an average of 35 percent in the OECD.



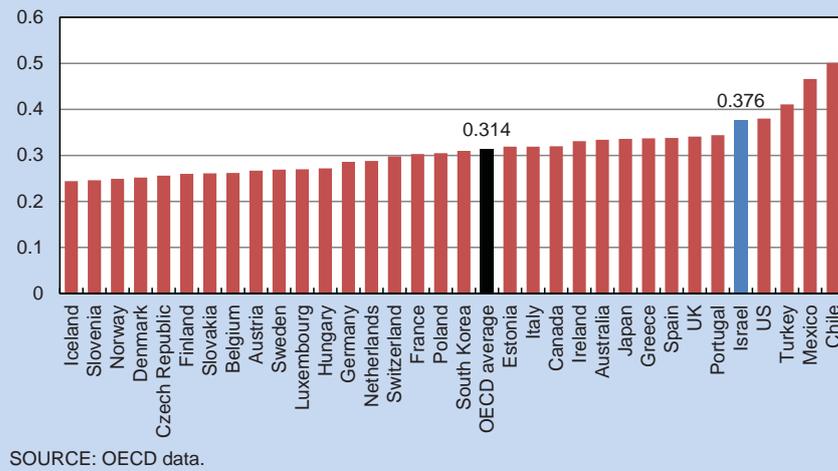
<sup>1</sup> Market income is the total income of a household before the payment of taxes and income from government transfer payments. Its size is equalized to the number of persons in the household by accepted weights determined by the Central Bureau of Statistics.

<sup>2</sup> The discussion relates to 2010, because that is the last year regarding which there is comparative data on Israel.

**Figure 8.1b**  
**The Incidence of Household Poverty Before Taxes and Transfer Payments, Israel and OECD Countries, 2010**

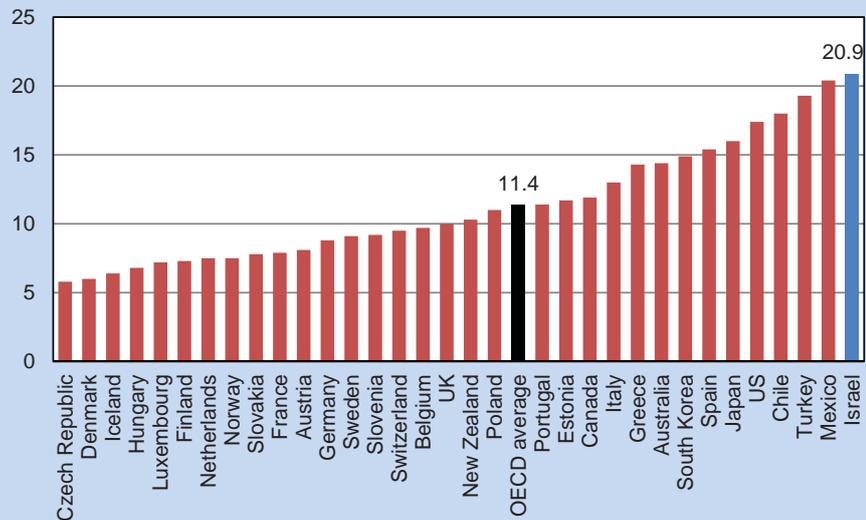


**Figure 8.2a**  
**The Gini Index by Disposable Income (After Taxes and Transfer)**



The incidence of poverty by disposable income is higher in Israel than in the other OECD countries.

**Figure 8.2b**  
**The Incidence of Household Poverty by Disposable Income (After Taxes and Transfer Payments), Israel and OECD Countries, 2010**



SOURCE: OECD data.

**b. The “welfare to work” policy as reflected in inequality and poverty**

Beginning in 2003, government policy has emphasized the principle that expanding employment is the main tool in reducing poverty.

Beginning in 2003, government policy has emphasized the principle that expanding employment is the main tool in reducing poverty. This policy has been reflected in a sharp decline in direct taxes and in the amount of allowances, particularly to the working age population, and it has contributed to an increase in employment rates and to a gradual and continued decline in market inequality and in the incidence of poverty of households by market income. The increase in the level of education of the labor force has also acted alongside this, as a result of the fact that the higher education system was expanded in previous decades.<sup>3</sup> This policy has also been reflected in a sharp decline in the government’s contribution to reducing market inequality and the incidence of poverty in the economy (Figures 8.3a and 8.3b).

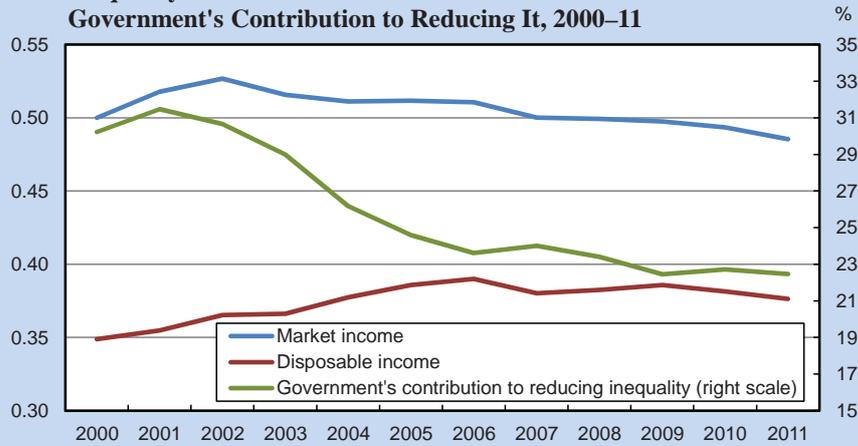
The process adopted by the government has led to a decline in market income inequality. After a decade, inequality in terms of disposable income has still not declined.

Inequality and the incidence of poverty based on disposable income increased until 2006 as a result of the combination of two developments—growth in employment (excluding the increase in the average real wage) and the reduction of transfer payments. Since then, a trend of moderate reduction has been apparent in them. The process adopted by the government has led to a decline in market inequality. After a decade, inequality in terms of disposable income has still not declined.

Between 2003 and 2011, the state of poor workers has improved, while the state of poor people who are not working has deteriorated. The real equivalized disposable

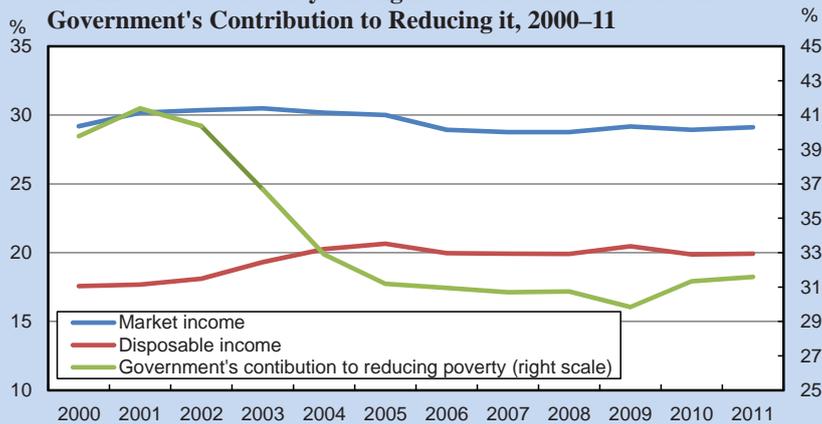
<sup>3</sup> See Box 5.1 of the Bank of Israel Annual Report for 2012.

**Figure 8.3a**  
**Inequality Between Households in Israel and the Government's Contribution to Reducing It, 2000–11**



SOURCE: Based on Income Surveys.

**Figure 8.3b**  
**The Incidence of Poverty among Households in Israel and the Government's Contribution to Reducing it, 2000–11**



SOURCE: Based on Income Surveys.

income of poor households with two wage earners has increased during this period by about 25 percent, and their standard of living has increased. As a result, the poverty line (which reflects relative poverty) rose by 21 percent in real terms, and by 0.7 percentage points in terms of per capita GDP. With that, the phenomenon of working poor has become more prevalent in relation to the new poverty line: Poor households with two wage earners increased as a share of total poor households, from about 5 percent in 2003 to about 10 percent in 2011, and households with one wage earner increased as a share of total poor households from 34 percent to 44 percent. The real

Between 2003 and 2011, the state of poor workers has improved, while the state of poor people who are not working has deteriorated.

disposable income of poor households with no wage earner increased by only 12 percent (the income of elderly households with no wage earner increased by about 15 percent, while the rest increased by 8 percent). The latter group constitutes almost half of poor households. Since the intensity of poverty is calculated based on the poverty line, which rose by 21 percent, the average intensity of poverty among all poor people increased over this period.

The government's reduction in the child allowance in 2013 is expected to serve as an incentive to increase the labor force participation rate, but is also expected to increase the poverty rate, the intensity of poverty, and inequality in disposable income.

Based on the above analysis, the government's reduction in the child allowance in 2013 is expected to serve as an incentive to increase the labor force participation rate, but is also expected to increase the poverty rate, the intensity of poverty, and inequality in disposable income. In particular, the levels of poverty among households with wage earners are expected to increase. The reason is that most poor households with wage earners have a high number of children, and are therefore sensitive to the reduction in the child allowance. In poor households without a wage earner but with children, the child allowance constitutes a larger segment of total income, and the reduction in allowances therefore makes the poverty gap more severe. It would therefore be appropriate to reduce the increase in inequality and in poverty that may result from this measure by expanding government support for the training of workers—which is very low compared to other advanced economies—and through the Earned Income Tax Credit<sup>4</sup> (a tool which did not exist yet in 2003). These measures will serve policy objectives while reducing poverty among workers, and will do so at a lower budgetary cost than welfare programs that are not conditioned on employment.

It is desirable to expand the active policy in the labor market.

These findings indicate that reducing poverty rates by reducing benefits and encouraging employment requires an extended process, and that years pass before these measures can effect a decline in the poverty and inequality rates, during which time those rates increase. It is therefore desirable that the government adopt complementary policy measures in order to increase the disposable income of working households with low market income. It is necessary to expand the active policy in the labor market—to establish vocational guidance centers, to enforce the minimum wage law and the restrictions on employing foreign workers, to subsidize day care, to expand the use of the Earned Income Tax Credit, and more.<sup>5</sup> These measures require increasing public expenditure. Since the government decided to adopt a fiscal rule reducing future growth in the expenditure ceiling, the need to change priorities in expenditure in favor of measures ensuring inclusive growth<sup>6</sup> becomes stronger.

<sup>4</sup> Formerly the "Income grant" or "Negative income tax".

<sup>5</sup> Public investment in active policy in the labor market in Israel is 0.15 percent of GDP compared to an average of 0.66 percent of GDP among OECD countries (OECD Review of Recent Developments and Progress in Labour Market and Social Policy in Israel, 2013).

<sup>6</sup> Inclusive growth is growth where inequality does not expand and the benefits of which are enjoyed by most of the population.

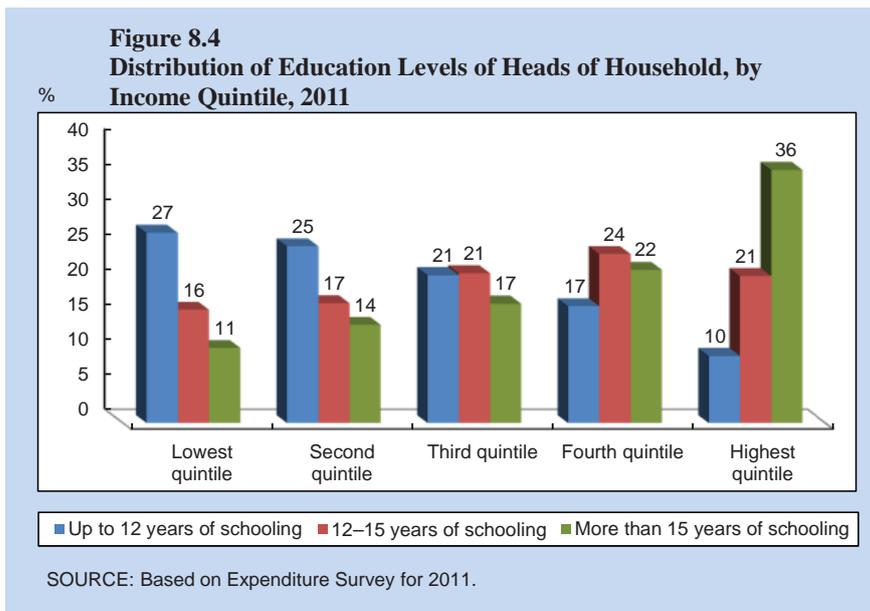
**c. Inequality and education**

There is a high level of market inequality in Israel, even though the employment rates here are higher than the average among OECD countries. This indicates that there is tremendous inequality in the labor market.<sup>7</sup> About 25 percent of those working full-time in Israel earn less than two-thirds of the median wage—a rate which is in the upper part of the distribution in the OECD, where the median is about 15 percent.<sup>8</sup> Inequality in Israel is also high among those with higher income—the ratio between the average wage and the median wage in Israel was 1.35 in 2012, compared to an average of 1.3 among OECD countries.

There is tremendous inequality in the labor market in Israel.

Since formal education makes a positive contribution to earning capacity, there is a positive connection between market inequality and inequality in education among households. Even though the level of education of heads of household in Israel increased over the past decade in each of the income quintiles, the education gaps between the quintiles—about 4 years between the lower and upper quintiles—have not declined. In view of the importance of education in expanding employment, productivity and wages<sup>9</sup> (Figure 8.4), it is possible to act to reduce market inequality by reducing the gaps in the human capital of the labor force.

The level of education of heads of household in Israel has increased in each of the income quintiles, but the education gaps between the quintiles—about 4 years between the lower and upper quintiles—have not declined.



<sup>7</sup> Dividing households by the number of wage earners shows that less than 10 percent of total inequality comes from inequality between the groups (meaning the gap in income between households that have different numbers of wage earners), while the rest comes from inequality within each group.

<sup>8</sup> OECD Reviews of Labor Market and Social Policies (2010).

<sup>9</sup> A discussion of the connection between education and employment appears in Box 5.1 of the Bank of Israel Annual Report for 2012, and a discussion of the connection between education and productivity appears in *Recent Economic Developments* 136, Bank of Israel.

In particular, it is important to require core studies among groups whose employment rates are currently low, with the aim of increasing labor productivity and wages among those groups, and strengthening affirmative action in public education toward children from low income households, since there are large gaps between the achievements of students from various socioeconomic backgrounds in state-wide and international tests.

The difficulty in obtaining a higher education reflects a lack of equal opportunity.

Current inequality has an effect on the intergenerational distribution of income. Studies have found that the liquidity constraints in Israel effectively limit the ability to acquire higher education, and that the children of parents who have low incomes have difficulties in obtaining academic degrees.<sup>10</sup> Since the education gaps between the quintiles currently focus mainly on higher education (in the lowest quintile, heads of household have close to 12 years of schooling on average), the difficulty in obtaining a higher education reflects a lack of equal opportunity. These gaps lead to low social mobility, since the accumulation of human capital is low after joining the labor force, as shown by an analysis indicating a lack of wage mobility.<sup>11</sup>

#### **d. Inequality and the government's civilian expenditure**

Economic policy that chooses a low share of civilian expenditure in GDP is correlated with the small extent of policy's contribution to reducing inequality.

Economic policy that chooses a low share of civilian expenditure in GDP is correlated with the small extent of policy's contribution to reducing inequality or poverty. Figure 8.5 illustrates this, showing that there is a connection between the share of civilian expenditure in GDP and the government's contribution to reducing inequality<sup>12</sup> or poverty. The government's civilian expenditure in Israel is lower than other OECD countries and, accordingly, the government has a smaller effect on the smoothing of income. In other words, in the advanced economies, there is a connection between the decision on the share of civilian expenditure in GDP and the extent of the government's involvement in the distribution of income. Observing Israel at the beginning of the previous decade illustrates this. The share in GDP of civilian expenditure excluding interest out was 3 percent of GDP higher, and the government had more of an effect on the distribution of income (Figure 8.5 and Figure 8.3a). The statistical connection observed in Figure 8.5 shows that there is no evidence that the government of Israel is inefficient in reducing inequality<sup>13</sup>, but rather that it dedicates fewer resources to it than other OECD countries.

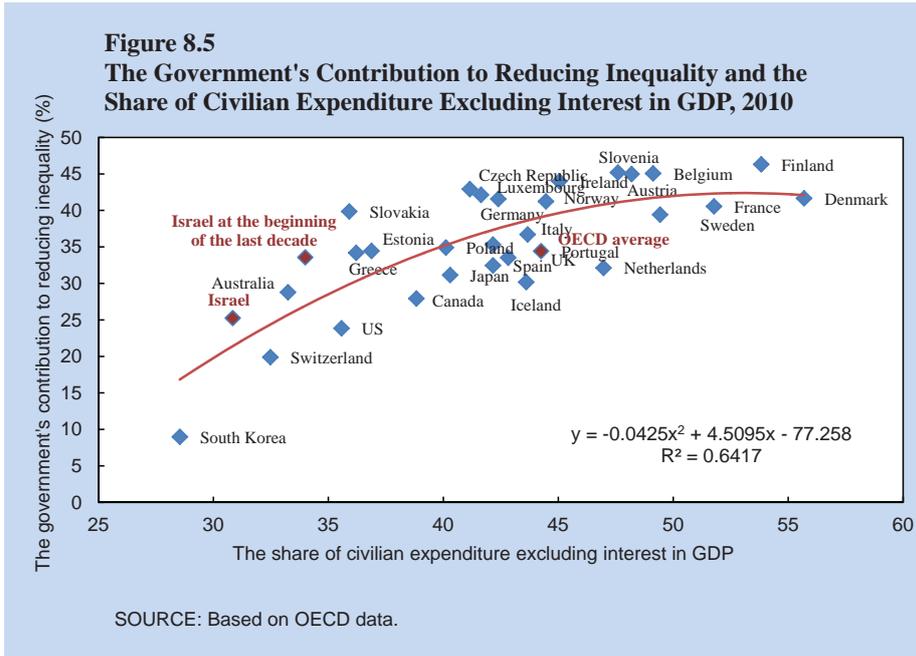
Public expenditure therefore has the potential to reduce inequality, but it is important to remember that the formulation of welfare policy and the distribution

<sup>10</sup> Friedmann, Y. and Frish, R. (2010), "The Effect of the Liquidity Constraint on the Accessibility of Higher Education in Israel", *Israel Economic Review* Vol. 8.

<sup>11</sup> Endblad, M. (2012), "Mobility and Inequality in Wages in Israel", National Insurance Institute, Discussion Studies, 109.

<sup>12</sup> The government's contribution to reducing inequality is calculated as one minus the quotient of inequality after the government's involvement and inequality before involvement.

<sup>13</sup> Israel is above the regression line connecting the weight of civilian expenditure in GDP and the government's contribution to reducing inequality, and it was also above it at the beginning of the previous decade.



of income present a complex challenge that concerns the balance between what may be competing objectives. Welfare policy may negatively impact growth, since it influences economic incentives both among those with high incomes and among those with low incomes. For people with high income, as taxes are more progressive and intended to finance a reduction in inequality, the concern increases that overly large gaps in the tax burden may negatively impact social cohesion and the readiness to support public expenditures. Moreover, since there is global competition over the human capital of employees, raising taxes above a certain level may lead to a “brain drain”. With regard to those with low incomes, increasing benefits that are not dependent on employment may negatively impact the incentive to work among those with low earning capacity and among individuals who prefer remaining outside the labor market. A new study by the International Monetary Fund assessed this issue and found a negative connection between net inequality and the growth rate, but did not find that the level of income redistribution directly affects the growth rate of the economy. The researchers conclude that since the redistribution of income contributes to obtaining an education, both its indirect effect on the growth rate, and its overall effect, are positive.<sup>14</sup>

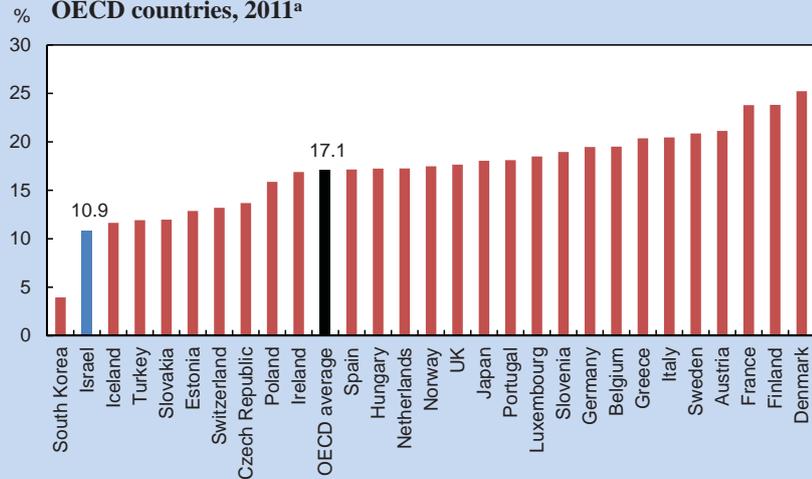
An analysis of the composition of Israel’s civilian expenditure compared to other OECD countries finds that most of the gap between Israel and the other countries derives from the share of transfer payments—the share in Israel is about 11 percent of GDP, while the OECD average is about 17 percent of GDP. Other than South Korea, which is characterized by the lowest market inequality and poverty rates in

The share of transfer payments in Israel is about 11 percent of GDP, while the OECD average is about 17 percent of GDP.

<sup>14</sup> IMF Staff Discussion Note (2014): “Redistribution, Inequality and Growth”.

the OECD (Figures 8.1a and 8.1b), Israel is ranked in last place in the OECD in this regard (Figure 8.6).<sup>15</sup> In contrast, public expenditure on healthcare and education (combined) in Israel has a similar weight to that in the OECD.<sup>16</sup> To the extent that the government of Israel prefers transfers in kind over transfer payments, this policy is reflected in high measured inequality and incidence of poverty. The government of Israel's preference to reduce measured inequality by transfers in kind, which act to reduce market inequality, requires more investment than other OECD countries in a policy that supports participation in the labor market and in education.<sup>17</sup>

**Figure 8.6**  
The Share of Transfer Payments in GDP, Israel and Other OECD countries, 2011<sup>a</sup>



<sup>a</sup> Australia, the US, New Zealand, and Canada do not appear in the figure because the international comparison does not include data on those countries. With that, an analysis we carried out shows that the weight of transfer payments in the GDP of those countries is higher than in Israel by 1.5, 2.4, 4 and 2.4 percentage points, respectively.

SOURCE: OECD data.

<sup>15</sup> The gap is not mainly the result of gaps in old-age allowances. In 2009, the share of old-age allowances in Israel was 4.2 percent of GDP, compared with an average of 6.7 percent of GDP in the OECD.

<sup>16</sup> See Table 6.2 in this report.

<sup>17</sup> Services in kind are transfers that are not in cash, such as education and healthcare services. It is difficult to measure and quantify the monetary value these have for the household. Therefore, and despite their importance, they are not included in the standard measure of poverty and inequality. However, it seems that from this standpoint, there is a much less prominent gap between Israel and the other OECD members, based on a comparison of their weight in GDP.

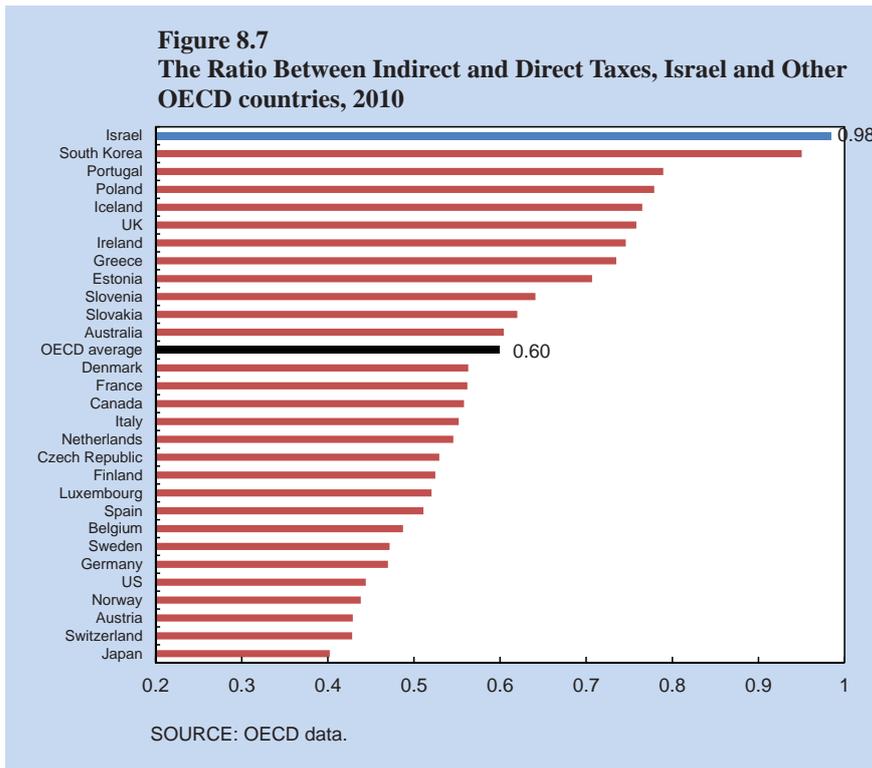
2. THE TAX AND TRANSFER PAYMENTS SYSTEM IN ISRAEL

a. The composition of taxes: an international comparison

In the previous section, it was shown that there is a connection between the share of civilian expenditure in GDP and inequality. In this section, we assess the connection between the composition of taxes that finance expenditure and inequality. In Israel, total taxes have a low share in GDP compared to the average share in OECD countries (Figure 6.1). In terms of the mix of taxes, the share of indirect taxes in GDP in Israel is similar to the share of direct taxes, and the ratio between them is higher than the same figure in any other OECD country (Figure 8.7). The direct tax component with a particularly low share in GDP in Israel is the personal income tax (and not corporate tax or capital gains tax). With that, the personal income tax rate in Israel is very progressive compared to other OECD countries. Based on the Gini Index, the net contribution of direct taxation to reducing inequality in Israel was about 10 percent in 2012—similar to the OECD average<sup>18</sup>—despite the fact that direct taxes in Israel have a low share in GDP (16 percent compared to an average of 22 percent in the OECD).

The share of indirect taxes in GDP in Israel is similar to the share of direct taxes, and the ratio between them is higher than the same figure in any other OECD country.

Income tax in Israel is very progressive compared to other OECD countries.



<sup>18</sup> Some of the effect in the OECD countries is not measured, because the measurement in those countries does not relate to employer deductions.

Table 8.1 presents the correlations between the share of civilian expenditure in GDP (excluding interest expenditure) and the composition of taxes, and (1) market inequality, (2) inequality after government involvement, and (3) the contribution of government involvement to reducing inequality.

**Table 8.1**  
**The correlations between inequality indices and the share of civilian expenditure in GDP excluding interest and the composition of taxes, based on 29 OECD members, 2010**

	Gini Index before government involvement	Gini Index after government involvement	Government contribution to reducing inequality
(1) Share of civilian expenditure in GDP	0.16	-0.59	0.76
(2) The ratio between indirect and direct tax receipts	0.03	0.37	-0.39
(3) The correlation between (1) and (2)	-0.39		

SOURCE: Based on OECD data for 2010.

No significant direct connection is found between the share of civilian expenditure—or between the composition of taxes—and market income inequality.

The table indicates that no significant direct connection is found between the share of civilian expenditure—or between the composition of taxes—and market inequality. But similar to the analysis in the previous section, there is a negative link between the share of civilian expenditure and inequality after government involvement. In other words, based on an examination of the correlation between the variables, there is no connection between the composition of taxes and the level of expenditures and the economic allocation in the labor market, other than to inequality in disposable income.

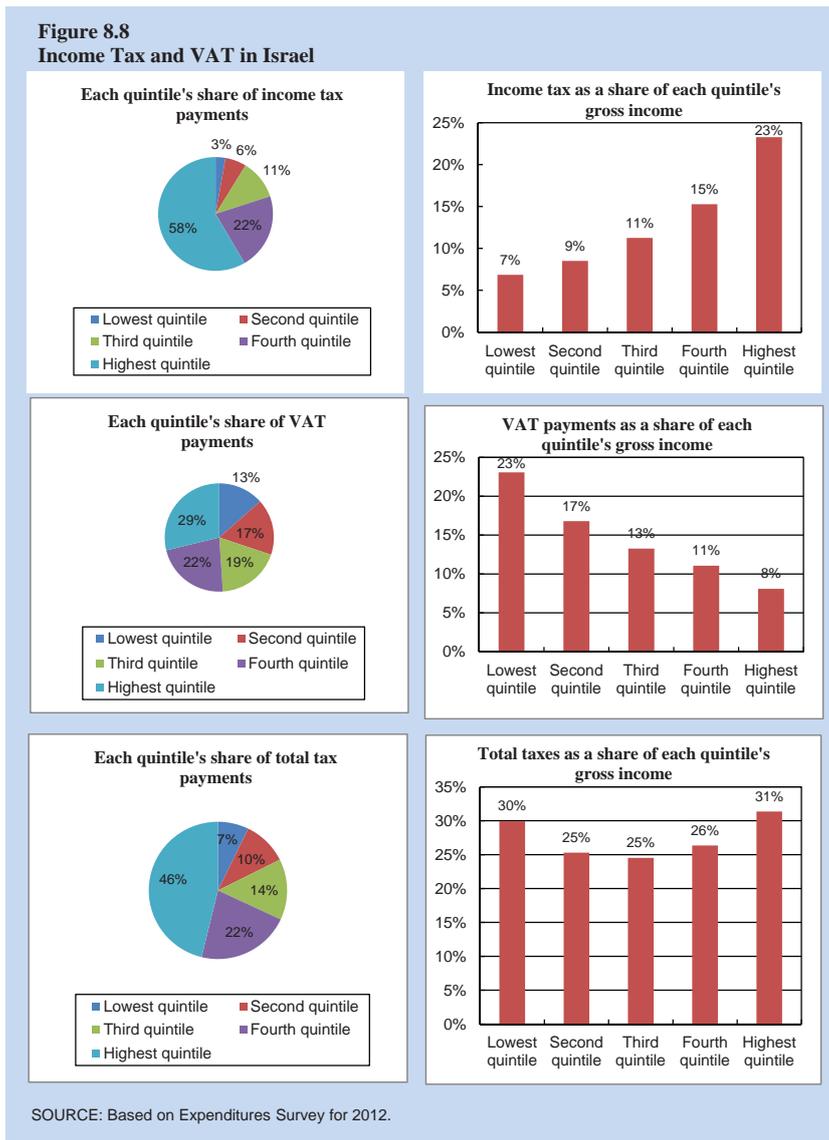
It is important to remember that the effect of the composition of taxes and the size of government expenditure on the economic allocation was examined within a certain range around the OECD average, and conclusions should not be drawn from it for the extreme values of these variables. Furthermore, even if direct taxation does not significantly impact the economic allocation, the imposition of indirect taxes does have a considerable advantage from the standpoint of simplicity of collection.

The data indicate that there is a negative correlation between the share of civilian expenditure in GDP and the ratio between indirect tax receipts and direct tax receipts (Table 8.1, third row). That is, the more civilian expenditure increases, the greater the decline in the share of indirect tax revenue relative to direct tax revenue. The study by the International Monetary Fund (mentioned in footnote 14) also found that the more market inequality grows in a given country, the level of government involvement in the redistribution of income increases. A multiyear regression found that given the share of expenditure in a country, the composition of taxes does not affect the extent of the government's contribution to reducing inequality. In other words, the size of

expenditure affects the reduction of inequality more than the composition of taxes, but is not independent of it. Adding market inequality as an explanatory variable reduces the coefficients of the other variables.

**b. The composition of taxes and transfer payments in Israel and their effect on inequality**

About 60 percent of direct taxes in Israel (income tax, payments to National Insurance and health tax) are received from the upper quintile of households<sup>19</sup>, and almost half of total direct tax and VAT receipts (combined) imposed on households are received from that quintile (Figure 8.8). With that, the first and fifth quintiles are similar from



<sup>19</sup> From here onward, the distribution into quintiles is based on equivalized income.

The upper quintile's contribution to revenue from VAT and income tax combined is the result of both the progressiveness of the tax system and market income inequality.

the standpoint of the overall tax burden out of gross income. This burden is slightly higher than the tax burden in the other quintiles, which are also similar to each other. In other words, the upper quintile's large share of revenue from VAT and direct taxes is partially the result of the progressiveness of the tax system, and partly the result of market inequality.<sup>20</sup> The decline in direct tax rates since 2003 was reflected in the fact that the share of direct taxes out of gross income declined by 0.9 percentage points among the lower quintile, and the share of direct taxes out of gross income among the upper quintile declined by 4.7 percentage points.

As a result of the large market income inequality and the progressiveness of direct taxes, on the margins, increasing the tax burden used to increase benefits reduces the inequality in net income.

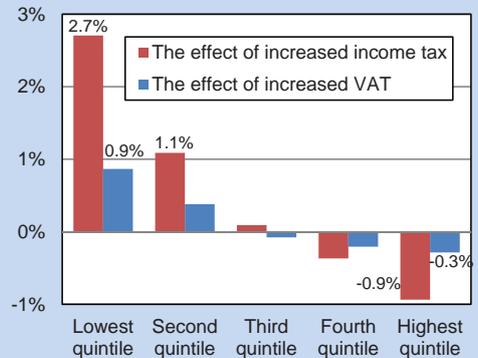
As a result of the large market inequality and the progressiveness of direct taxes, on the margins, increasing the tax burden used to increase allowances reduces the inequality in net income.

In order to illustrate how policy alternatives affect inequality, and to obtain orders of size, the effect of a change of one percentage point of GDP in the tax rates (scenarios 1 and 2) or in the mix of taxes (scenario 3) on the distribution of disposable income was examined, assuming that the changes in total tax receipts are reflected, in scenarios 1 and 2, in uniform changes to the level of allowances, and the change in allowances is divided equally among the quintiles.<sup>21</sup> The analysis is static—there is no change in behavior as a result of a change in the composition of taxes, and no loss or gain of sources or income. The three scenarios examined are (Figure 8.9):

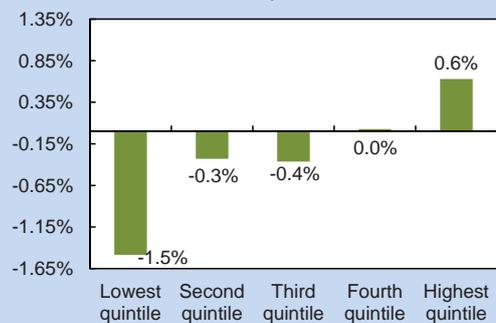
<sup>20</sup> The calculation did not include taxes on capital gains, vehicles, fuel, cigarettes and alcohol, or housing. Some are progressive and some are not progressive.

<sup>21</sup> A report by the National Insurance Institute shows that National Insurance receipts are divided among the quintiles in a more or less uniform manner (see Figure 10 in the report entitled "The Budget Proposal for 2014").

**Figure 8.9**  
Percent Change in Quintile's Disposable Income, After VAT Payments, as a Result of (1) Income Tax Increase, (2) VAT Increase, and (3) Income Tax Reduction Financed by Increased VAT



**The Effect of a Reduction in Income Tax that is Financed by Increased VAT**



SOURCE: Based on Expenditures Survey for 2012.

1. An increase of about 1 percent of GDP in the income tax rates and a similar increase in benefits.
2. An increase of about 1 percent of GDP in the VAT rate and a similar increase in benefits.
3. A reduction of one percentage point in the income tax rates, and financing that reduction by increasing VAT, without changing government expenditures.

Increasing income tax and increasing benefits (scenario 1) affects disposable income in two different directions: transfer payments increase, but households pay more taxes on their market income. Since the income tax system is progressive, in the three lowest quintiles, and particularly in the lowest quintile, the first effect is dominant, and net income is expected to increase with an increase in income tax. As to scenario 2, even though it involves an increase in the rate of a regressive tax, there is a marked increase in disposable income of the lower quintiles as a result of increased transfer payments, due to the tremendous market inequality. Disposable income after VAT payments will increase in the lowest quintile by 0.9 percent, and in the second lowest quintile by 0.4 percent, and will decline by an increasing rate as household income increases. In other words, increasing VAT that finances benefits is also a progressive action, although less so than increasing income tax.

As to scenario 3, a reduction of income tax (progressive) and financing it by increasing VAT (regressive), will increase inequality in disposable income after VAT payments, as expected, and is expected to have a negative impact mainly on the lowest quintile, and to particularly benefit the upper quintile. This scenario illustrates the effect of the policy measures adopted in recent years, measures that reduced the ratio between income tax receipts and VAT receipts and thereby contributed to an increase in inequality.

### **Box 8.1**

#### **The Standard of Living of the Poor in Israel**

This box examines the standard of living of poor households in Israel through an assessment of several expenditure items, and ownership of several durable goods. Data are taken from the 2011 Household Expenditures Survey, which also contains detailed data on household incomes, allowing a cross-tabulation between the definition of a “poor household”—a term defined exclusively in income terms—and basic data on the standard of living for poor households.

Equivalized disposable income in poor households is one-quarter of that in households that are not poor, while consumption expenditure accounts for one-half. Approximately 70 percent of poor households have equivalized per capita expenditures of less than NIS 2,250 per month, while less than 20% of all non-poor households have a similar expenditure level. In poor households, average equivalized consumption expenditure is 40% greater than the average

equivalized disposable income, and in two-thirds of the poor households, consumption exceeds income. Nonetheless, in 60% of these households, consumption levels are below the poverty line, and in these households poverty is considered a persistent and more intense condition.<sup>1</sup>

The results reflecting the gap between consumption and income is resilient, persisting over the years, and reflects the fact that consumption inequality is lower than income inequality.<sup>2</sup> Obviously, this phenomenon cannot be sustained over time in an individual household. There are several generally accepted explanations for the fact that consumption in poor households exceeds income in certain periods of time: the smoothing of consumption over business cycles—for example, when the head of a household is unemployed, consumption will temporarily exceed income; the lifecycle model of consumption (the permanent income theory)—young people and the elderly tend to consume more than their income by greater amounts; and measurement errors in the Survey originating in underreporting of income (perhaps including black market income). Quantification of the weights of these explanations requires panel data that allow us to track an individual household over time.<sup>3</sup>

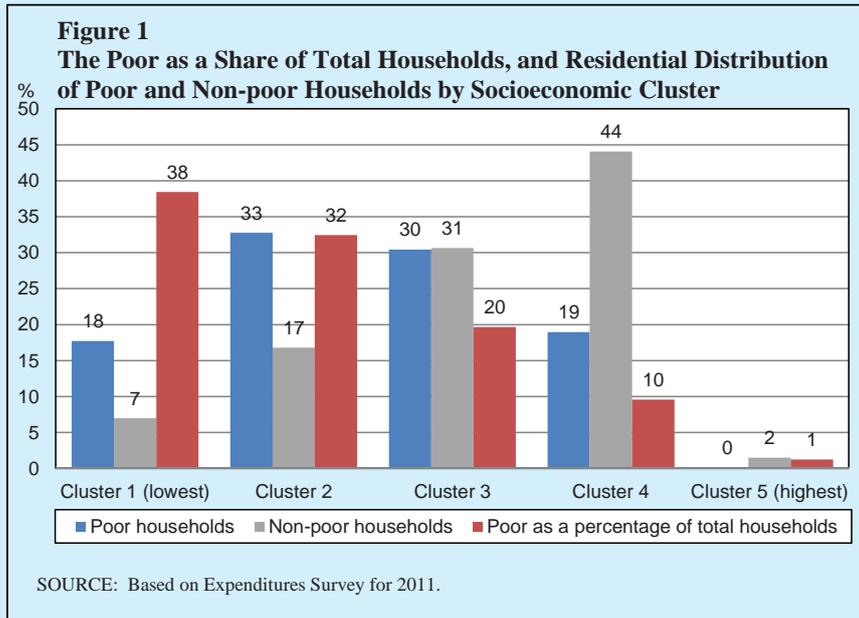
As food is an essential good, poor households' share of total expenditure spent on food is 7 percentage points greater than the parallel figure for non-poor households. Nonetheless, the total expenditures on food, per capita, among the poor is 40% lower than the food expenditures of the non-poor, and in terms of food expenditure excluding restaurants and pubs, the difference is 35 percent.

Table 1 presents household ownership of durable goods. Home ownership among poor households is 63 percent, compared to 70 percent in non-poor households, indicating that in this respect the difference between the two groups is not large. The difference is similarly not especially large in terms of the number of rooms per home, for households that own a home—the data indicate that non-poor households' homes are larger by one-half of a room. However, taking into account that the number of individuals in poor households is greater by 1, on average, poor households live in more crowded living arrangements. Home ownership among poor Arab families is greater by about 30 percentage points than the rate for poor Jewish households (83 percent and 53 percent, respectively), although the value of the home they own is about 10 percent lower than the value of the apartments owned by poor Jewish households. In

<sup>1</sup> For additional information on this issue, see, for example section 5 of the Poverty Report for 2013 or Box 8.3 of the Bank of Israel Annual Report for 2006.

<sup>2</sup> The Gini Index of inequality in consumption is lower than the inequality measure based on disposable income by 0.025, and the incidence of poverty based on consumption is 25% lower than the incidence of poverty based on disposable income.

<sup>3</sup> This is a survey commenced this year by the Central Bureau of Statistics.



terms of home ownership, the gaps between poor and non-poor families have diminished slightly, compared with 1997.

Poor households are concentrated in towns that are classified in the lower socioeconomic clusters (Figure 1). The dire situation of the poor Arab households is especially notable: Nearly 50 percent reside in towns in the lowest socioeconomic cluster. With that, 20 percent of poor households reside in towns in the fourth socioeconomic cluster. This finding is consistent with the fact that expenditures on housing (including imputed expenditures) among poor households are, on average, equal to two-thirds of the housing expenditures of non-poor households, while per capita expenditures are equal to one-half of the per capita housing expenditures of non-poor households. These statistics indicate that the differences in consumption, specifically in housing services, are smaller than the differences in disposable income.

Regarding other durable goods, 70 percent of all poor households do not have a car, compared with 28 percent among non-poor households. Other goods for which there is a significant difference in ownership rates include personal computer, air-conditioner, internet connection, dishwasher, and a second or additional TV set. Differences in personal computer ownership are especially disconcerting due to the potential implications for children's education and their access to information.<sup>4</sup> In this respect, no significance difference was found between poor Arab and ultra-Orthodox Jewish households.

<sup>4</sup> In terms of personal computer ownership, no difference was found between poor households with and without children.

The majority of households, whether poor or non-poor, own basic goods such as a TV, refrigerator, and washing machine. Differences in rates of ownership of these goods have remained stable since 1997, with the exception of air-conditioners: In this case, there has been a sharp increase in ownership among poor families in this period. Both poor and non-poor households have, thus, improved their situation corresponding to an improvement in the economic standard of living (the increase in per capita GDP).

**Table 1**  
**Ownership of durable goods**

Product	2011		1997	
	Poor households	Non-poor households	Poor households	Non-poor households
Home	63	70	58	73
Number of rooms in the home	3.3	3.9	3.0	3.6
Number of rooms per capita	0.8	1.2	0.8	1.1
Vehicle (share that do not own a vehicle)	70	28	84	39
Two or more vehicles	3	24	0	12
Refrigerator	100	100	99	100
One or more telephones	65	85	17	48
Air conditioner	58	87	17	87
Dishwasher	12	42	12	48
Clothes dryer	23	42	11	27
Two or more televisions	26	62		
Two or more mobile phones	53	75		
Cable or satellite television	30	70	41	68
<i>of which: excluding ultra-Orthodox</i>	33			
Personal computer	55	84	11	39
Internet connection	39	78	1	5
<i>of which: excluding ultra-Orthodox</i>	41			

SOURCE: Based on Expenditures Surveys for 1997 and 2011.

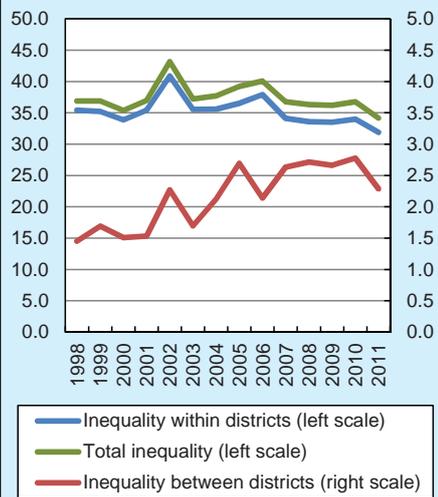
**Box 8.2**  
**Changes in Inequality Between and Within Districts in Israel**

Over the last decade, as a result of agglomeration, the concentration of population in the central district of the country has increased steadily, while in all other districts, the balance of migration has been negative.<sup>1</sup> This process was accompanied by a concentration of higher-quality jobs in the center of the country (See Chapter 5), and led to an increase in housing prices in that district. This box examines whether these processes have expanded the economic gaps between the center of the country and the periphery, and whether they have created socio-economic stratification.

The box approached these questions by examining the development of income inequality, using the Theil index—an accepted tool for such analyses that allows dividing the population into groups and decomposing total inequality into “between group” and “within group” components.<sup>2</sup> Using the Theil index in relation to districts allows the presentation of two indices: The first relates to gaps between districts and is calculated on the basis of the average income in each district, and the second relates to gaps within the districts and is calculated on the basis of the weighted average of the level of inequality in each district. The sum of these two indices reflects the total inequality in the population.

Figure 1 relates to market income (income from salaried or independent work, a business, pensions and capital, before taxes and government transfer payments), and outlines how the Theil index of income inequality developed

**Figure 1**  
**Development of the Theil Index: Decomposition of Inequality in Market Income, by Geographic Districts<sup>a</sup>, 1998–2011 (percent)**



<sup>a</sup> Inequality indices calculated based on equivalized income. It is difficult to compare inequality within districts to inequality between districts, since the first relates to gaps between hundreds or thousands of observations (the residents living in the districts), while the second relates to gaps between 6 observations (the six districts).  
 SOURCE: Based on Central Bureau of Statistics Income Surveys.

<sup>1</sup> In other words, the number of people who left the districts exceeded the number of people who moved into the districts. More information appears in Table 2.15 of the Statistical Abstract of Israel, 2013.

<sup>2</sup> Milanovic, 2005; Theil, 1989; Akita, 2000; Braun, 1988.

between 1998 and 2011. The Figure shows that total inequality in the population (the green line) declined in recent years. A decomposition of total inequality by geographic districts indicates that during the period, inequality between districts increased, while inequality within districts declined<sup>3</sup>, and both of these results may indicate the widening of the gaps between the center and the periphery of the country. In addition to the agglomeration processes, in 2003, as part of the economic recovery plan, the government reduced the scope of tax benefits enjoyed by many communities in the periphery. For communities in the North, the benefits were reduced, and for hundreds of communities in the Negev, they were cancelled<sup>4</sup>, which has possibly eroded the ability of the periphery to retain strong population groups and attract them from the center of the country. Economic-income inequality between the districts increased until 2010 and, after a prolonged period of increase, it declined in 2011. It is still premature to evaluate whether this is a change in trend or a temporary deviation. Inequality within the districts was stable at first and began declining gradually in 2006.<sup>5</sup>

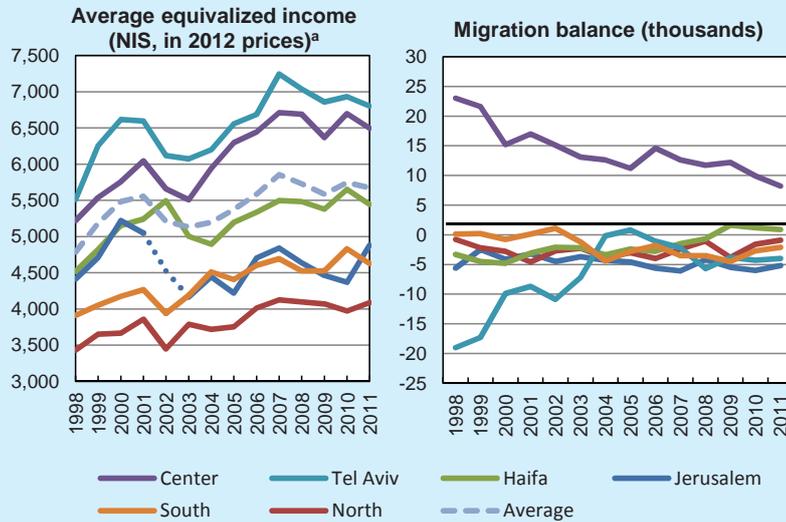
Figure 2 presents the internal migration between districts and the widening of the gaps between them in average equivalized market income (in constant prices). In the Center and Tel Aviv districts, growth in income exceeded the average by about 5–6 percentage points between 1998 and 2011; in Haifa it exceeded the average by 2 percentage points, and in the North district it was just 0.6 percentage points above the average. In the South, income grew at a rate similar to the average, and in Jerusalem, it grew by 8 percentage points less than the average. In terms of average income, the Tel Aviv and Center districts

<sup>3</sup> The Central Bureau of Statistics Income Surveys distinguish between seven districts: Jerusalem, North, Haifa, Center, Tel Aviv, South, and Judea and Samaria. There is a lack or a shortage of observations in the data for Judea and Samaria for some years. As such, the district was removed from the calculations. The Income Surveys include the variable for division into districts since 2004. Until then, the observations were classified by districts by matching the community label with the district to which it belonged. There was no community symbol for about 15 percent of the sample during those years. Due to the changes that took place in 2012 in the Income and Expenditure Surveys, developments that took place following 2011 cannot be analyzed comparatively.

<sup>4</sup> In 2005, a number of communities in the South and the North were added to the list of communities entitled to tax benefits. In 2012, an easement was added for residents of the city of Eilat, within the framework of the Free Trade Zone Law. In 2009, the government decided on a path of gradual reduction in the tax credits awarded to communities, which relates to the years 2012–16. More information appears in Section 11 of the Income Tax Ordinance.

<sup>5</sup> To illustrate the dimensions of the Theil index: Akita (2000) found that between 1990 and 1994, inequality between districts in China increased sharply, by about 3 percentage points (0.029 in absolute numbers). Milanovic (2005) assesses the development of the Theil index of inequality between districts in a number of major countries, and indicates that between 1990 and 2000 there was an increase in India and China—and a decline in Brazil— of between 3 and 5 percentage points. Inequality between districts in Israel increased between 1998 and 2010 by 1.3 percentage points.

**Figure 2**  
**Average Equivalized Market Income and Migration Data, by District, 1998-2011**

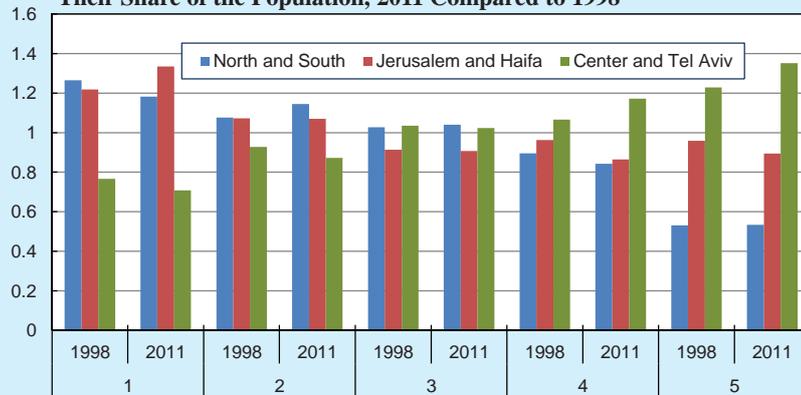


<sup>a</sup> Income Survey data do not include Arabs from Jerusalem, 2000–01.  
 SOURCE: Based on Central Bureau of Statistics Income Surveys and internal migration data.

led throughout the period, with average income in those districts significantly greater than income in all other districts, while the North district remained at the bottom of the scale.

Figure 3 portrays the ratio between the districts' share of the income quintiles and their share of the population in 2011, and compares it to the parallel data from 1998. For the purpose of the comparison, the districts were divided into pairs according to the extent they are considered as the periphery: The Tel Aviv and Center districts were combined, as were the Haifa and Jerusalem districts, and the North and South districts. The figure shows that the gaps between the center and the periphery widened during the period: In the Tel Aviv and Center districts, the ratio declined in the three lower quintiles and increased in the two upper quintiles; in the Jerusalem and Haifa districts it increased in the highest quintile and declined in the two lowest quintiles; and in the North and South districts, it declined in the highest quintile and increased in the second-highest quintile. The background for these changes was both the negative migration that characterized all of the districts during the period other than the Center

**Figure 3**  
**Ratio Between the Districts' Share of the Income Quintiles and Their Share of the Population, 2011 Compared to 1998<sup>a</sup>**

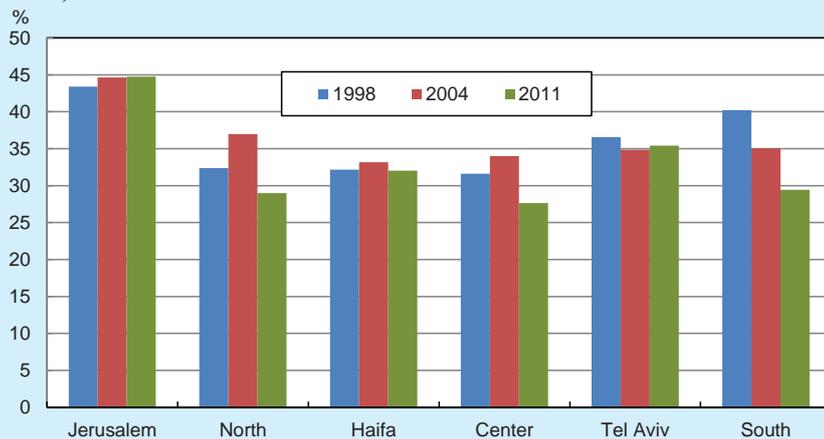


<sup>a</sup> The division into income quintiles was done according to equivalized economic income.  
 SOURCE: Based on Central Bureau of Statistics Income Surveys.

district, and the growth in income, which as noted was higher in the Tel Aviv and Center districts (Figure 2).

Figure 4 indicates that between 1998 and 2011, inequality in market income declined within each of the districts, other than the Jerusalem district. This district was characterized throughout the period by the highest level of inequality, because there are low levels of education and low employment rates among the Arabs and ultra-Orthodox Jews. In the Center district, which in recent years has been characterized by lower levels of inequality than the other

**Figure 4**  
**Theil Index of Inequality Within Districts, by Market Income, 1998, 2004 and 2011**



SOURCE: Based on Central Bureau of Statistics Income Surveys.

districts, inequality declined in parallel with positive migration to the district. Since the district increased its share of the two upper quintiles of income distribution, it is possible that the changes in inequality reflect the migration of strong populations to it.

**Sources:**

Akita, T. (2000), “Decomposing Regional Income Inequality Using the Two-Stage Nested Theil Decomposition Method”, International University of Japan.

Braun, D. (1988), “Multiple Measurements of US Income Inequality”, *The Review of Economics and Statistics*, 398-405.

Haughton, J., & Khandker, S. R. (2009), *Handbook on Poverty and Inequality*, World Bank.

Kimhi, A., and Shafir-Tidhar, M. (September 2012), “Income Inequality Between and Within Population Groups in Israel: 1997–2010”, Taub Center. (in Hebrew)

Milanovic, B. (2005), “Half a World: Regional Inequality in Five Great Federations”, *Journal of the Asia Pacific Economy*, 10(4), 408-445.

Theil, H., & Sorooshian, C. (1979), “Components of the Change in Regional Inequality”, *Economics Letters*, 4(2), 191-193.

Theil, H. (1989), “The Development of International Inequality 1960–1985”, *Journal of Econometrics*, 42(1), 145-155.