
Measuring Poverty and Data Sources

Within the scope of the research activities performed in Israel on the issue of poverty and income distribution, a relative approach to measuring poverty was formulated in the early 1970s, which is accepted by the majority of researchers and social policy makers in the Western world. According to the relative approach, poverty is a phenomenon of relative hardship, which must be assessed in connection with the standard of living that is characteristic of the specific society: a family is considered poor not when it cannot afford to buy a certain basic basket of products required for its subsistence, but rather when its living conditions are significantly inferior to the typical living conditions of the society as a whole. The relative approach also recognizes that hardship is not manifested merely by low income, but also by the level of property, housing conditions, education and public services available. Nonetheless, since there is no agreed index that reflects all aspects of hardship, and since the National Insurance Institute has data available only on the current economic income of households in Israel (the source of which is the Central Bureau of Statistics' income surveys), the measurement of poverty is limited solely to the economic income aspect.

The relative approach offers a few practical methodologies for measuring poverty according to economic income level, with the common denominator being a comparison between the income level of families who are at the bottom of the income scale and the income level of all other families. At the basis of each methodology is the determination of a "poverty line" as a percentage of the income that is representative of the society's standard of living. A family whose income is below the poverty line is considered a poor family, without this necessarily implying that its members are living under conditions of hunger or malnutrition, in worn-out clothes or in ramshackle housing. A poor family is, therefore, simply a family whose income is substantially less than the "representative income."

In Israel, the methodology for measuring poverty is based on three principles:

- a. The first principle states that a family's disposable income should be deemed the relevant income for ascertaining poverty. "Disposable income" is defined as the family's economic income (derived from employment and from ownership of physical means of production and from financial assets), plus transfer payments (payments made other than in return for economic activity, such as national insurance benefits, support from institutions and individuals in Israel and abroad) from which direct taxes (income tax, national insurance contributions and health insurance contributions) are deducted.
- b. The second principle states that the population's median disposable income should be deemed the representative income of that society.¹ "Median income" is defined as the level of income that divides the income distribution into two equal groups; half the families have income above that amount, and half have income below or equal to that amount. The "poverty line" is defined as the level of income equivalent to 50% of the median disposable income. A family whose disposable income is less than half of the median disposable income is therefore considered a poor family. Economic growth, which leads to a rise in the level of the median

¹ The median income is preferable to the average income as representing the typical standard of living, since the average income is affected by the extreme values in income distribution (i.e., very high or very low income).

disposable income, also raises the poverty line. A family that is not poor, but whose disposable income is growing at a lower rate than the rate of the rise in the poverty line, is likely to become a poor family.

- c. The third principle states that the poverty line should be adjusted according to the size of the family. The assumption is that family size gives advantages in terms of consumption; the requirements of a family that grows by one member do not increase at a similar rate, but rather at a lower rate, so that the additional income that a family requires in order to maintain a constant standard of living is reduced with the increase in the number of family members. An "equivalence scale" was developed, in order to be able to compare living standards in families of different sizes, which makes it possible to measure the requirements of these families by comparing them with the requirements of a family of a given basic size. Specifically, the equivalence scale translates the number of family members into the "standard" number of persons (or "standard" adults) in a family. The basis of the scale is a family of two persons, which is assigned a value of two standard persons. According to this scale, a family with one member has a value of 1.25 standard persons. That is, the requirements of a one-member family are not assessed as being equal to half of the requirements of a two-member family, but rather as being more than half. Similarly, the requirements of a four-member family (which is assigned a value of 3.2 standard persons) are not double the requirements of a two-member family (which is assigned a value of two standard persons), but are less than double (only 1.6 times greater.)

According to these principles, the poverty line per standard person in Israel was defined as the level equal to 50% of the median disposable income for a standard person. A family in Israel is attributed to the poor population when its disposable income, divided by the number of standard persons in the family, is under the poverty line per standard person. The poverty line for a family may be calculated in a similar manner – by multiplying the poverty line per standard person by the number of standard persons in the family.

As in many Western countries, the analysis of the dimensions of poverty in Israel is based mainly on the two aggregate poverty indices that are the most accepted in empirical studies – the incidence of poverty, and the depth and severity of poverty (reflected in the income gap index of the poor and the FGT Index). The incidence of poverty index indicates the extent of poverty in terms of the percentage of poor families in the total population. The income gap index of the poor reflects the depth of poverty; the poverty gap of any poor family is defined as the difference between the poverty line (adjusted to family size) and the actual income of the family, while the poverty gap of the population as a whole is defined as the sum of the poverty gaps of all poor families. The poverty gap index may be standardized and defined as the ratio between the average income gap for a poor family and the poverty line (hereinafter referred to as the "income gap ratio of the poor"). The FGT Index (also called the "Foster Index") was developed by Foster, Greer and Thorbecke in 1989, and became the most accepted index for showing the depth and severity of poverty – see also Chapter 2 and Box 2. Contrary to the income gap index of the poor, the FGT Index assigns a higher severity weighting, the further a person's income falls below the poverty

line.² Another aggregate index is the SEN Index, which combines both these indices with a component of inequality in the distribution of income among the poor – see also Chapter 2 and Box 3.

The Data Sources

The data on income that is used as a basis for calculating the dimensions of poverty and income distribution in Israel is taken from the annual income surveys carried out by the Central Bureau of Statistics (hereinafter: the "CBS"). Up until 1997 (inclusively), the population that was surveyed only included those households headed by a salaried employee or an unemployed person, in urban communities with at least 2,000 residents and excluding East Jerusalem.³ In 1998, the CBS decided to produce an integrated income survey, based on the data from the current income survey and from the family expenditure survey. This integrated income survey has been produced since 1997, when the CBS began preparing surveys of families' current expenditure, in addition to the current income survey.

The integrated survey is based on a larger sampling (1.8 times larger than the previous sampling), and includes 95% of all households in Israel in most types of communities. In addition to salaried employees and unemployed people who live in urban communities, the integrated survey also includes the self-employed, residents of moshavim and rural communities and small urban communities, and in principle, includes also the residents of East Jerusalem. The populations still excluded from the survey are mainly kibbutz members and Bedouin not living in permanent communities. Residents of East Jerusalem were included in the integrated survey for 1997-1999⁴, but not in 2000 – due to the difficulties in conducting a survey in East Jerusalem stemming from the security situation. With the objective of presenting comparisons for the years 1997–2000, the data on poverty and inequality for the years 1997–1999 were produced again, excluding residents of East Jerusalem.⁵ A household (defined as a group of people living together most days of the week and having a common household budget) is used as the study unit in the surveys of income and expenses.⁶ For the sake of convenience, it is acceptable to use the term "family" in lieu of "household," despite the fact that these terms have different definitions.

When using the historical data presented in the Poverty and Inequality Tables Appendix, one must take into account the following major milestones in the CBS's income surveys and in the National

2 The FGT Index can obtain values between zero (if the income of the poor is close to the poverty line) and the incidence of poverty (if the income of the poor is zero). The index is calculated according to the following formula: $1/n \sum ((z_i - y_i)/z_i)^2$, where z_i is poverty-line income and y_i is the family's income.

3 Up until 1994 (inclusively) income in non-Jewish communities of at least 10,000 residents was included in the income surveys (apart from east Jerusalem). As of 1995, the income survey was expanded to non-Jewish communities of between 2,000 and 10,000 residents.

4 The sampling of the integrated income survey includes the residents of East Jerusalem in 1998-1999 fully, but only partially (about 65%) in 1997.

5 Data on the dimensions of poverty in 1997–1999 in the population including East Jerusalem, is presented in the Annual Survey for 1999.

6 Since 1995, the "head of household" has been defined as the member of a household with the greatest "degree" of participation in the household's labor power, regardless of age or gender.

Insurance Institute's calculations of the poverty line and dimensions of poverty and inequality over the years:

1. In the poverty calculations that the National Insurance Institute published up until 1985 on the basis of income surveys, the poverty line was defined as an income level equivalent to 40% of the gross median income (after making transfer payments but before deducting direct taxes). Since 1988, the definition has been revised to 50% of the median disposable income.
2. The income surveys performed since 1985 use different study and evaluation methodologies than those used in previous income surveys, in terms of the duration of the study period.
3. Up until 1997 (inclusively), the population surveyed in the CBS's income surveys only included those households headed by a salaried employee or an unemployed person (i.e., households headed by a self-employed person, about 10% of the families, were not included), in urban communities of at least 2,000 residents, and excluding East Jerusalem.
4. Up until 1994 (inclusively), non-Jewish communities of at least 10,000 residents (except for East Jerusalem) were included in the income surveys. Since 1995, the income survey has been expanded to include non-Jewish communities of 2,000-10,000 residents.
5. Since 1998, the CBS has produced income surveys based on data from the current income survey and on data from the family expenditure surveys. The integrated survey is based on a larger sampling (1.8 times larger than the previous sampling), and includes 95% of all households in Israel in most types of communities.
6. Regarding the new series since 1997: in 2000 and 2001, the residents of East Jerusalem were not surveyed. The sampling for the integrated income survey included East Jerusalem residents fully in 1998–1999, and from 2002 onwards, but only partially (about 65%) in 1997.

As a result of a National Insurance Institute initiative, the CBS performed a feasibility study, which showed that it is possible to produce findings on poverty and income distribution twice a year. Therefore, since 2004, in addition to calendar year data, findings are published that refer to the second half of the previous year and the first half of the current year. For example, in addition to the 2007 Survey, a survey is published for the period 2007/8, which includes the second half of the 2007 Survey and the first half of the 2008 Survey. A special survey with its own sampling framework was not performed for these interim periods, in order to study poverty and income distribution, but rather, a database was built that comprises half of each of two annual surveys. Accordingly, the poverty report for these periods is more condensed in nature, and is intended primarily to show the trends in poverty and social gaps that are expected in the next calendar year.