THE SINGLE PARENT LAW, LABOR SUPPLY
AND POVERTY[*]

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Abstract

The Single Parent Law introduced in 1992 grants single parents special treatment, primarily under the Income Support Law. In 1994 and 1995 additional legislative changes eased the terms of eligibility of this segment of the population. These changes increased the size of welfare benefits and expanded the eligible population, enabling it to earn a relatively large wage income without losing the right to receive benefits. An examination of the effect of the various legislative changes introduced between 1992 and 1995 indicates that they served to reduce the labor supply of single mothers at all levels: their rates of participation and employment declined, as did the number of hours worked, while their share of part-time employment rose. This was in contrast with the continued upward trend in the labor supply of married mothers. This result remains valid when the population of single mothers is compared with a sample of married mothers with similar characteristics (using propensity score matching). The effect is particularly strong for mothers who had not worked before the change in the law, and especially young mothers, as well as for those with a low level of education. We also find that the changes in the size of the benefits and the eligibility criteria reduced the poverty of single-parent families. Thus, we conclude that the legislative changes reduced poverty at the expense of increased dependence on the welfare system.

1. INTRODUCTION

The population of single-parent families, especially of those with very young children, presents a particular challenge for policy. The fact that a single adult heads a household imposes upon him or her a double burden of earning enough to support the household as well as caring for children. This double role obliges society to offer policy instruments which create a balance between assuring an income that enables a reasonable standard of living to be maintained while providing an incentive to accept personal economic

responsibility. This is particularly acute in view of the increasing proportion of single-parent families in the general population. The search for a combination of policy measures that maintains an equilibrium between these factors, both in Israel and in other countries, is expressed in the relatively frequent changes in the array of policy instruments deployed towards this population. This paper examines the changes in the policy instruments used for dealing with this population since the first half of the 1990s, and their effect on labor-force participation, employment and poverty.

The population of single-parent families in Israel has grown considerably in the last two decades, far beyond the growth rate of households in general, reaching 97,000 such families in 2003. The poverty rate in this segment is relatively high, and the rate of dependence on the welfare system, that reached almost 50 percent in mid-2003, is far greater than that of other segments. These trends went hand in hand with changes in the welfare policy concerning single-parent families. In particular, the Single Parent Law which was introduced in 1992, accorded special treatment to this segment of the population under the Income Support Law. In 1994 and 1995, under the Reduction of Poverty and Income Inequality Law and amendments to the Single Parent Law, additional changes affected the terms of eligibility of this segment.

The data indicate that after the introduction of the Single Parent Law, which broadened the definition of persons eligible for income support and increased it for most of those eligible, there was a significant drop in the poverty rate of this segment and a decline in the employment rate. The latter contrasts with the continued increase in the employment rate of married mothers. These trend changes indicate that the decline in the poverty rate was attained by increasing the dependence of single-parent families on the welfare system. This finding has implications for the chances of the single parents and their children of escaping poverty in the long run.

The special needs of single-parent families have prompted many countries to introduce welfare programs catering for this population. In the last decade many western countries have deployed programs of various kinds intended to provide an active incentive for entry into the labor market, often placing particular emphasis on dealing with single-parent families. Among the measures introduced were incentives for single mothers with a low level of education to enter the labor market (see, e.g., Gonzalez, 2004, for a review of these policies in 15 developed countries, including Israel; OECD, 2003, for a review of programs in various countries; Doiron, 2004, for Australia; Gregg and Harkness, 2003, for the UK; Michalopoulos et al., 2000, for Canada; Meyer and Rosenbaum, 2000 and 2001, and Blank, 2002, for the US). In comparison with the measures adopted by various countries focusing on an attempt to bring single mothers into the labor market, the changes introduced in the treatment of single-parent families in Israel in the 1990s worked mainly in the opposite direction, focusing on reducing poverty among these families, even at the cost of lowering their participation in the labor market.

In 2002 and 2003, within the framework of changes in the benefit system, motivated in part by budgetary pressures, the terms of eligibility of single-parent families for benefits were changed: the benefit and attendant assistance were reduced, and the income disregard was cut. As a result, the threshold income for complete departure from the income support system declined. In addition, the age of the child for which the mother was exempt from the employment test was reduced. As of August 2003, programs to provide incentives for single mothers to return to work and remain in employment by subsidizing employment were introduced. All these were intended to reverse the trend and encourage single mothers to return to the labor market.

Against the backdrop of the policy adopted in the last few years of the transition 'from welfare to work,' it is important to examine the extent to which changes in the welfare system affect the labor supply and economic well being of the various segments of the population. The effect of welfare policy on the employment and participation of various segments of the civilian labor force has been discussed extensively in economic research undertaken in Israel and elsewhere. In Israel the effects of national insurance benefits on the entry into the labor force of persons eligible for them and on the level of poverty of these segments of the population have been studied. This was done in the wake of the rise in the number of recipients of these benefits during the 1990s. Various studies undertaken in Israel have shown that beyond each individual's personal characteristics, which affect his or her ability and desire to enter the labor market, the various benefits – those which are dependent on not being employed or that are means tested, as well as those which are not – reduce the incentive to work (Brender, Peled-Levy, and Kasir (Kaliner), 2002; Gottlieb, 2002; Sussman and Romanov, 2002; Flug and Kasir (Kaliner), 2001, 2003).

Policy changes introduced in 1992–1995 in dealing with single-parent families, and especially the introduction of the Single Parent Law in 1992, make it possible to examine these topics among single-parent families. To date this has not been done. The present study examines the extent to which the changes in trends of employment and poverty rates among single-parent families can be explained by these policy measures.[1] The empirical part of this study focuses on the population of single mothers in the established population with children under 18 between 1985 and 2003.

Our empirical analysis regards the tendency to establish a single-parent family as exogenous, and ignores the possible effect of more liberal terms of eligibility for single-parent benefits on the tendency to establish families of this kind – demographic effects of this kind are beyond the scope of this study.[2] Note, however, that the trend rise in the proportion of single mothers in the population of mothers which was evident from the mid-1980s to the late 1990s slowed somewhat after the introduction of the Single Parent Law: the rate of increase in the share of this group fell from 0.2 percentage points in the years before the law to 0.1 percentage points afterwards (Figure 1).[3] Thus, it is reasonable to assume that even if the Single Parent Law did serve to encourage the creation of single-parent families, this was negligible.

The main findings of our study is that there was a sharp contraction in the presence of single mothers in the labor market in the wake of the legislative changes of 1992–1995, which increased the benefits paid to single mothers and eased eligibility criteria. This contraction was reflected in a decline in labor-force participation, employment and the

[1] The study is not concerned with the repercussions of the stricter terms of eligibility, reduction of benefits, and programs providing incentives to work introduced since 2002, and especially in 2003, because of the brief period that has elapsed since then.

[2] Changes in patterns of establishing single-parent families are generally ongoing and long-term, and are affected by economic processes and social norms. The influx of immigrants which brought with it a large population of single-parent families probably had an effect on norms in this sphere. This influx came at a time when the Single Parent Law was introduced, making it more difficult to identify the effect of the law on patterns of establishing families.

[3] The findings from studies undertaken elsewhere in the world on the effect of government assistance programs (including those in welfare states) on the creation of single-parent families are negligible and unequivocal, see, for example, Moffitt, 1998; Harknett and Gennetian, 2001; Edin, 2000.

extent of the employee posts in which they were employed. This is in contrast with the trend

Figure 1
Proportion of All Mothers who are Single Mothers[a] (percent)

$y=5.6+0.1x$

$y=5.1+0.2x$
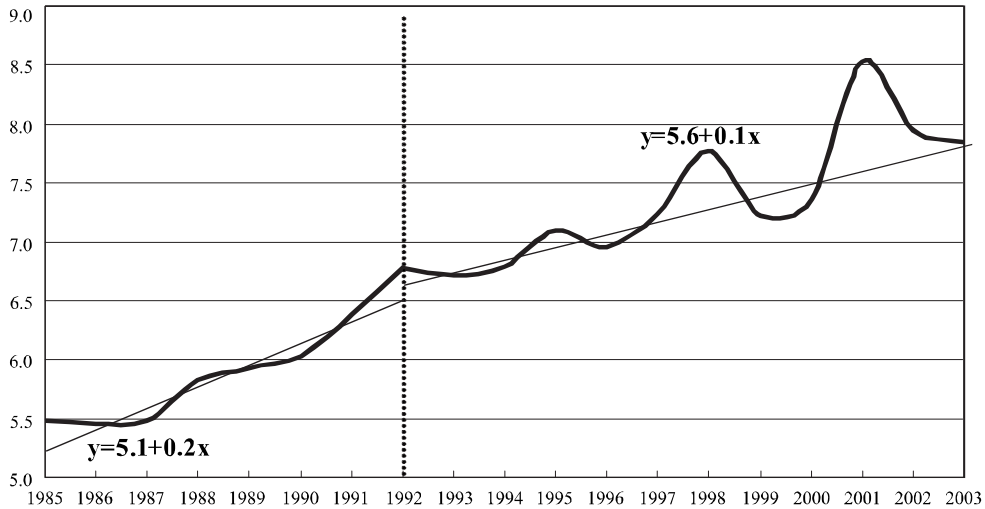
[a] Mothers (born in Israel or immigrated to Israel before 1990), aged 25-54, with children under 18.
SOURCE: Based on Labor Force Surveys of CBS, 1985-2003.

among married mothers in general. The changes in the treatment of single mothers contributed to an 8 percentage-point decline in their participation rate five years after the introduction of the changes, and to a 10 percentage-point fall in their employment rate in the same period. Our research also shows that the legislative changes particularly affected single mothers with a low level of education, for whom the labor market is less attractive. The changes also affected single mothers who had not worked before the changes in the law, particularly young ones. Alongside the decline in the extent of work of single mothers, there was also a 4 percentage-point decrease in their poverty rate as a result of the increase in benefits. Hence, while the changes served to reduce poverty among single mothers, they served to increase their dependence on benefits.

The paper is organized as follows: section 2 describes the characteristics of single-parent families; Section 3 gives an account of the changes over time in welfare policy vis-à-vis the various kinds of single-parent family; Section 4 presents comparative statistics on employment and poverty, and Section 5 presents the estimation method and its results. We conclude with a summary and conclusions.

2. THE POPULATION OF SINGLE–PARENT FAMILIES: INDIVIDUAL CHARACTERISTICS[4]

Since the early 1980s the number of single-parent families in Israel has grown by a factor of 3.8, and in 2003 there were 97,000 such families, 91 percent of them headed by a woman (Table 1). This led to a marked rise in the proportion of single-parent families in total households in Israel, a trend which is evident in many western countries (Duncan and Edwards, 1997). The increase stemmed from a change in social norms (in common with

Table 1
Characteristics of Single Mothers, 1982–2003

	1982	1995	2003	1982	1995	2003
	Proportion (%)			Actual numbers		
Single mothers, total	100	100	100	25.6	64.2	87.9
Religion						
Jewish[a]	91	92	92	23.2	59.1	80.9
Non-Jewish	9	8	8	2.4	5.1	7.1
Established population		74	67		47.6	58.5
Immigrants		26	33		16.6	29.4
Family situation						
Divorced	53	60	61	13.5	38.5	53.9
Widow	43	20	12	10.9	13.0	11.0
Unmarried	5	8	14	1.2	5.4	12.0
Separated	0	11	13	0	7.3	11.0
No. of children under 18						
1	51	57	54	13.2	36.8	47.1
2	30	28	29	7.8	18.3	25.8
3+	18	14	17	4.7	9.1	15.0
Youngest child under 5	17	21	25	4.4	13.5	22.4
Youngest child under 10	51	52	55	13.1	33.6	48.2
Years of schooling						
0–8	40	18	11	10.2	11.8	9.2
9–10	14	11	11	3.6	7.2	9.8
11–12	25	29	35	6.5	18.4	30.9
13–15	12	25	26	3.1	15.8	22.6
16+	9	17	17	2.3	11.0	15.4

[a] Including non-Jewish immigrants.
SOURCE: Based on Labor Force Surveys of CBS, 1982, 1995 and 2003.

[4] The population of single mothers was defined for the purposes of this study in accordance with the Labor Force Survey as mothers of children under 18 who are not married (unmarried, divorcees, widows, or women who are separated from their husbands) and who do not have a partner living in the household. In the Income Survey, because of the lack of data on children in the household, single mothers are defined as unmarried women who are heads of households and with whom persons under the age of 18 are living (the existence of another adult was accepted provided he or she was not older than 24). For further descriptions of the characteristics of single-parent families, see Swirsky, Connor-Attias, and Herbert, 2002.

many western countries) as well as from the influx of immigrants which included many single-parent families, especially from the former USSR (Sikron, 1998), but also from Ethiopia (Weil, 1991; Benita, Noam and Levy, 1994). In 2003 immigrants accounted for 36 percent of all Jewish single mothers (some 29,000 families), compared with 19 percent of Jewish married mothers.

The increase in the number of single mothers in the last twenty years was accompanied by a radical change in the characteristics of their family situation. With the arrival of the influx of immigrants in the 1990s, mothers who were separated from their husbands became a far more widespread phenomenon, and they accounted for 13 percent of all single mothers in 2003. At the same time, the proportion of divorced and unmarried mothers rose. As a result, the share of widows among the single mothers plummeted from about 43 percent in 1982 to some 12 percent in 2003 (although their number remained unchanged). These developments – a drop in the proportion of widows alongside a rise in that of separated, unmarried, and divorced mothers – is characteristic of western countries in general (Duncan and Edwards, 1997).

Jewish mothers[5] constitute 92 percent of single mothers (a proportion that has remained stable for many years), while the population of married mothers, in which the proportion of non-Jewish women is higher (about 22 percent), has risen over time. This is the result of the low frequency of single-parent families in the non-Jewish population, and is connected with the traditional structure of Arab society, which accounts for most of this population.

Single-parent families are characterized by few children – most single mothers have two children at the most. In 2003 only 17 percent of single mothers had three or more children (some 19 percent of established single mothers), while among married mothers the rate was 37 percent. The proportion of single mothers with only one child has risen over the years as a result of the influx of immigrants, while within the established population the proportion of single mothers has declined. In comparison with other countries, the proportion of single mothers with more than one child and the average number of children in single-parent families is relatively high (Gonzalez, 2004). In Israel about half of the single mothers have small children, the youngest being less than ten years old.

The level of education of single mothers is slightly lower than that of married mothers, and there are large gaps among the Moslem mothers (Swirsky, Kraus, Connor-Attias and Herbst, 2002). Over the years the level of education of single mothers has risen, reflecting the general rise in the level of education of women in Israel, as is the case in other western countries. The rise in women's level of education has reduced their economic dependence on their partner's income, thereby also contributing to the increase in the proportion of single-parent families. The proportion of single mothers with post-high-school education (over 13 years of schooling) rose from 21 percent in 1982 to 43 percent in 2003, alongside the decline in the share of those with a low level of education (up to 10 years of schooling), which fell from 54 to 22 percent in the same period.[6] Among married mothers the trend was similar – the proportion of women with post-high-school education rose from 25 to 46 percent in the same period, and that of women with a low level of education fell from 48 to 17 percent. The effect of immigrant mothers on the distribution of education among single mothers is evident primarily in the smaller proportion of women with up to eight years of schooling and the increased proportion of women with 13–15 years of schooling.

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[5] Or new immigrants who are not Jewish.

[6] Their number rose by about 30 percent.

3. THE CHANGE IN WELFARE POLICY VIS–À–VIS SINGLE–PARENT FAMILIES

Single mothers who get special treatment

Initial discussions about the need to give single-parent families special rights began back in 1978, in the Committee on the Status of Women headed by then Knesset Member Ora Namir. The committee recommended that single-parent families be officially defined in such a way as to include divorced and separated women, and that the measures for helping such families in the areas of housing, augmented child allowance, tax concessions, minimum wage rate, etc. be defined by law. Despite the acknowledgment of the need to deal with this segment of the population immediately, no official definition of a single-parent family was formulated until 1992, and the treatment of single mothers who were not employed or whose income was low was confined to their eligibility for income support, under the law introduced in 1982, and in accordance with its criteria.[7] Special treatment was accorded solely to widows with children.

In 1989 Knesset Member Namir submitted a private member's bill concerning single-parent families, and that law was passed by the Knesset in April 1992. The law acknowledged the need to accord special treatment to the parent of a child under 18 (in some cases, i.e., widows, of a child under 22), and their eligibility for special assistance, including benefits under the Income Support Law. Within the framework of the law, a single-parent family was defined as one where the parent, whether mother or father, was unmarried or divorced. In 1994 the definition in the law was amended to include also women who were separated or abandoned;[8] in 1997 women with a common-law husband were excluded from the definition, and in 2001 women in a shelter for battered women were added to the definition.

The rate and extent of the income support benefit

Until the Single Parent Law was introduced, the benefit paid to single mothers (except for widows) and fathers who had been receiving income support payments for two years was standard (30 percent of the average wage), and was subsequently increased (to 37.5 percent of the average wage). A special benefit – an extra 2.5 percent of the average wage was added for each of the first two children – was paid only to widows who were eligible for this, and this was paid to them as soon as they began receiving the benefit. After the introduction of the Single Parent Law the special benefit was also paid to unmarried and divorced parents, whether mothers or fathers, and from March 1994 it was extended to separated and abandoned mothers, to be paid as soon as they began to receive income support payments (Table 2).

[7] For a more extensive discussion of the changes in the characterization of recipients of income support, see Morgenstein and Smeltzer, 2000.

[8] The purpose of the amendment was to tackle the problem of new immigrants who were separated from their husbands, and that of women involved in protracted divorce proceedings.

Table 2
Monthly Income Support Payments[a] to Single Mothers, as Percent of Average Wage
(by family characteristics and length of period of receipt of income support)

Length of period of receipt of income support	Before Single Parent Law (March 1992)		After Single Parent Law and before Reduction of Poverty and Income-Inequality Law (April 1992–July 1994)		After Reduction of Poverty and Income-Inequality Law (August 1994–2002)	
	Less than two years	Two years or more	Less than two years	Two years or more	Less than two years and under 46 years old	Two years or more and over 46 years old
WIDOWS						
CHILD UNDER 22	40	40	40	40	42.5	42.5
TWO OR MORE CHILDREN UNDER 22	47.5	47.5	47.5	47.5	52.5	52.5
OTHER SINGLE MOTHERS[b]						
CHILD UNDER 18	30	37.5	40	40	42.5	42.5
TWO OR MORE CHILDREN UNDER 22	35	42.5	47.5	47.5	52.5	52.5

[a] The gross payment, before deduction of points.

[b] From April 1992, in each period in accordance with 'single parent' as defined by law.

SOURCE: National Insurance Institute, annual reports.

In addition to the Single Parent Law, in 1994 and 1995 two laws intended to reduce poverty and income inequality were introduced. In accordance with the law introduced in August 1994, the payments to single parents and to widows with children were raised by 2.5 percent of the average wage for each of the first two children. The law that was introduced in June 1995 amended the Income Support Law so that a single parent of a child under 18 who was separated from his or her partner and was not supported by her or him, or whose spouse was in jail, was entitled to an augmented benefit payment (i.e., the payments to them were brought into line with those made to single parents as defined in the Single Parents Law).

When the Single Parents Law was introduced in 1992 many of the single parents receiving income support switched from a standard or augmented benefit to a "special rate" benefit. As a result, only about 20 percent of the single-parent families which were entitled to receive income support payments did not receive the "special rate" payment. Following additional amendments which were introduced in the mid–1990s and extended the definition of a single-parent family, there was a further increase in the proportion of single-parent families receiving the special rate payment. As a result, almost all the single-parent families eligible for the income support benefit received the special rate payment, and the average monthly income support payment to a single-parent family (at constant prices) doubled in the first half of the 1990s. rising from about 18 percent of the average wage in 1990 to some 37 percent of it in 1995 (Table 3).

Table 3
Average Monthly Income Support Payment,[a] by Family Composition

| | At 2003 prices (NIS) | | | | As percentage of average wage per employee post | | | |
| | Single parent | | Couple | | Single parent | | Couple | |
	1 child	2 or more children	1 child	2 or more children	1 child	2 or more children	1 child	2 or more children
1989	1,474	1,767	1,703	1,906	24.2	29.0	27.9	31.2
1990	988	1,122	1,237	1,427	16.2	18.4	20.3	23.5
1994	1,745	2,079	1,707	1,933	28.2	33.6	27.6	31.3
1995	1,831	2,309	1,829	2,055	29.0	36.6	29.0	32.6
1999	1,950	2,418	2,120	2,381	28.4	35.2	30.8	34.6
2000	2,040	2,540	2,262	2,609	27.9	34.8	31.0	35.7
2001	2,239	2,783	2,485	2,873	29.7	36.9	33.0	38.1
2002	2,084	2,566	2,324	2,696	29.4	36.2	32.8	38.1
2003	1,776	2,130	2,060	2,285	25.9	31.0	30.0	33.3

[a] The average payment was calculated on the basis of the share of the population segments eligible for different levels of payment.
SOURCE: National Insurance Institute, statistical quarterlies, Tables 4.4.2 and 4.4.3.

The increase in the level of the payment to single parents made the income support payments attractive relative to the potential earnings, and augmented the disincentive to work. In comparison, the change in the income support payments made to non-single-parent families was more moderate.

The structure of the income support payment

Like in other systems of income support payments, the eligibility of single-parent families for income support was dependent on a means test, where a certain level of income disregard was not offset against the payment, and from that level upwards every extra NIS earned from work was offset against the payment to differing extents.[9]

Until 1992 the level of work income that cancelled eligibility for a payment was set for all eligible segments of the population according to the 'determining wage' set in the Income Support Law, except for widows, regarding whom there was no wage ceiling above which the right to receive the benefit was denied. Since 1992, with the introduction of the Single Parent Law, the "determining wage" for a single-parent family was annulled, and since then they have been entitled to the payment until it is completely offset. The fact that the determining wage was cancelled greatly benefited this segment of the population, enabling it to work and earn a significantly higher wage than that of other eligible segments of the population without forgoing its right to a partial benefit, and particularly the additional benefits granted to those eligible for them. Thus, for example, until the changes

[9] Income from other sources (e.g. capital gains) was usually offset at 100 percent of the payment.

that were introduced in 2003, income from work that was exempt from being offset (the "disregard") stood at 17 percent of the average wage (NIS 1,184), and from that amount upwards the offset rate for each extra NIS earned was 60 percent. The level of income from work that a single mother was required to earn in order to lose eligibility for income support was NIS 5,832 and NIS 6,992, in accordance with the number of her children (Figure 2).[10] This contrasts with the determining wage, which cancels the right of couples with children to income support if they earn between NIS 3,700 and NIS 4,300 in 2002, in accordance with the number of their children.

Figure 2
The Structure of the Income Support Payment to Single Mothers,
Until 2003 (NIS)
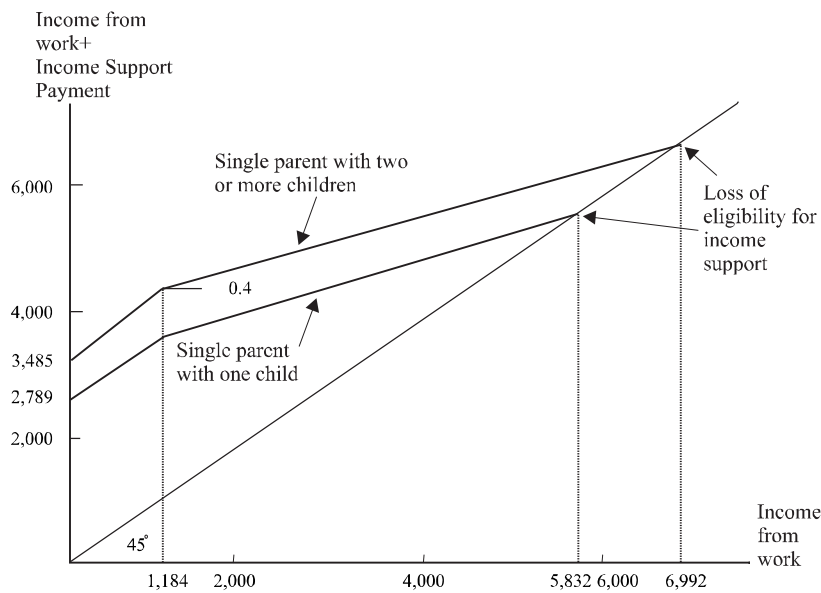
SOURCE: Based on National Insurance Institute data.

Exemption from employment test requirement

Parallel to the introduction of the Single Parent Law, the Income Support Law was amended to exempt mothers (whether married or single) with a child under the age of 7 from the employment test requirement. Hence the exemption was extended to single mothers with one child between the ages of 5 and 7, but was restricted to single mothers who had several children, with the youngest aged between 7 and 10. In addition, the exemption was also extended to include single fathers with a child under 7.

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[10] The example is appropriate for the case in which there is no additional income other than income from work.

Additional benefits

Within the framework of the Single Parent Law, amendments to the Income Support Law, and the National Insurance Law, additional benefits were granted to single-parent families: such as child care facilities, rental assistance, subsidized municipal tax rates and income tax credits.

In 2002–2003, in the framework of the change in the system of benefits, several measures were introduced which related to the general population of recipients of income support, including single-parent families. The level of the payment and the labor income disregard were cut,[11] and as a result, the wage leading to complete loss of eligibility for income support declined. In addition, the age of a dependent child for whom the mother was exempt from an employment test was reduced, and the income-assurance supplementary benefits–such as the reduction in municipal rates, exemption from the TV license fee, help in purchasing an apartment, reductions in public transport and health payments, etc.—were slashed.

At a later stage, in August 2003, complementary programs intended to encourage single mothers to return to the labor market were introduced. These included inter alia the subsidization of their salaries and costs of going to work, and grants to those who managed to remain in employment and increase their wages.

4. COMPARATIVE STATISTICS: EMPLOYMENT AND POVERTY

4.1 Participation in the labor market and employment

The change in the treatment of single mothers in 1992–1995, as described above, included various components. Some of the measures introduced, such as increasing benefit payments, raising the age of dependent children which accorded the single mother exemption from the employment test (except for mothers with two or more children aged between 7 and 10), constituted a disincentive to work, while others – such as the annulment of the wage ceiling above which benefits were not paid and assistance with child-care for infants—constituted a positive incentive to work.

In this section we present a basic examination of the effect of the various policy measures introduced between 1992 and 1995 on the entry into the labor market of single mothers. This is done by examining the changes over time in e.g., labor-force participation, employment, and the extent of the employee post—comparing single mothers with married ones. Particular emphasis is placed on a comparison of developments before 1992 and after 1995 (using the difference in difference approach). We also examine developments by comparing single mothers with married ones with similar characteristics.

A prominent feature of Israel's labor market, as well as of those of many other countries, is the gradual and constant rise in the participation rate of women, which has been evident for several decades. Thus, the labor-force participation rate of women has risen from 35.7 percent in 1980 to 49.1 percent in 2003. The upward trend in participation rates is characteristic primarily of women with children (Lipschitz, 2004).

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[11] According to the National Insurance Institute, the payment was reduced by 20-23 percent for most of the population of single mothers.

An examination of the trends of women's labor-force participation and employment, by family status, yields an interesting finding which is particularly notable among mothers in the established population: labor-force participation rates rose steadily throughout the period reviewed for married mothers, while this trend was checked for single mothers from the early 1990s, and even declined after 1994 (Figure 3). As regards employment, while the employment rate of married mothers rose continuously throughout the period, from about 44 percent in the early 1980s to some 56 percent in 2003, from the mid–1990s there is a clearly-identifiable trend switch towards a decline in the employment rate of single mothers.

Figure 3
Labor-Force Participation Rates of Established Mothers, by Family Status, 1982-2004[a]
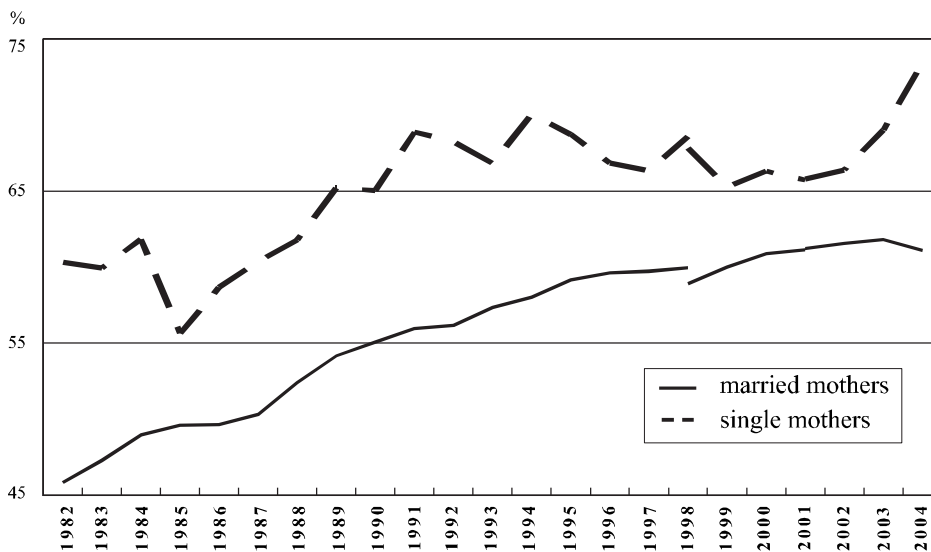
[a] Established mothers with children under 18. In 1998 and 2001 changes were made in the extrapolation method used in the Labor Force Survey. The gaps in the graphs in those years represent the transition to a different method of extrapolation.
SOURCE: Based on data from the Labor Force Surveys of the CBS, 1982-2004.

The employment rate of single mothers, which was significantly higher than that of married ones at the beginning of the period, and stood at 55 percent in the early 1980s, continued to rise until the mid–1990s, but has since declined moderately. Thus, the gap between the employment rates of married and unmarried mothers, which was more than 10 percentage points at the beginning of the period, has disappeared (Figure 4). As stated, this has taken place alongside the rapid rise in the proportion of families receiving income support benefits.

Figure 4
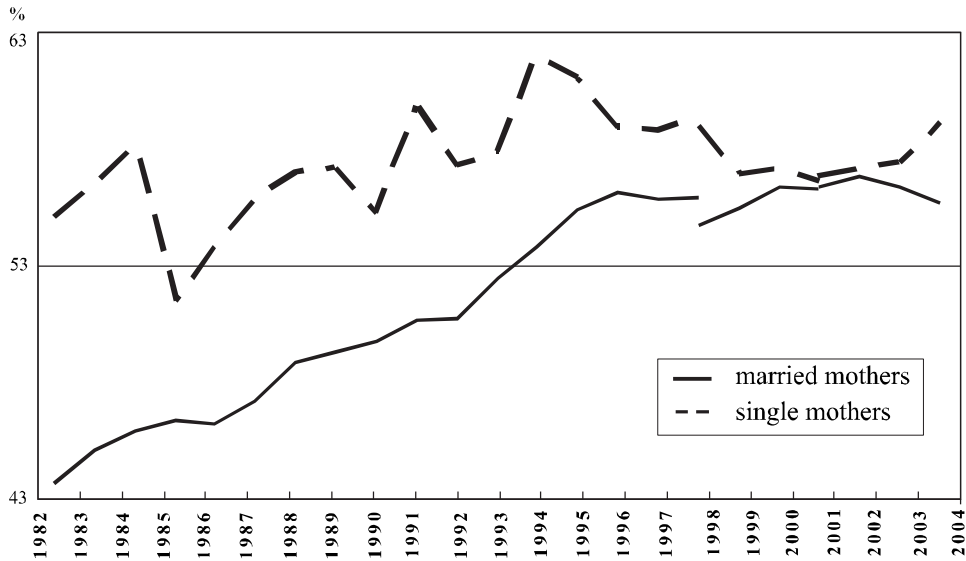**Employment Rates of Established Mothers, by Family Status,**
1982-2004[a]

[a] Established mothers with children under 18. In 1998 and 2001 changes were made in the extrapolation
method used in the Labor Force Survey. The gaps in the graphs in those years represent the transition to
a different method of extrapolation.
SOURCE: Based on data from the Labor Force Surveys of the CBS, 1982-2004.

In 2003, and more intensively in 2004, the participation and employment rates of single
mothers rose, apparently as a result of the policy measures introduced – the reduction of
benefits and encouragement (in the form of wage subsidy etc.) of single mothers to go to
work. These increases are particularly apparent in the context of the slight dip in the
participation and employment rates of married mothers.

The connection between the proportion of single-parent families receiving income
support benefit and the gap between the employment rates of established single and
married mothers is clearly shown in Figure 5.

An examination of the data suggests that the different developments in employment
rates of married and single mothers derive more from the policy measures introduced for
single mothers than from differences in the individual characteristics of the two groups.
This is because the decline in the employment rate of single mothers since the mid–1990s
is prominent in comparison with the way this rate has evolved among married mothers, also
with respect to groups with similar characteristics – number of children, years of schooling,
nationality, etc. (see, e.g., Figure 6).[12] Particularly apparent is the gap in the development of

[12] The comparison relates to 2002, in order to exclude the effect of the active measures taken as of 2003
to get single mothers into employment. Nevertheless, similar qualitative results, albeit with less intensity,
are also obtained when the comparison relates to 2003.

the employment rates of married and single mothers in the following categories: 1. those with a low level of education (up to ten years of schooling): this group, which has difficulty

Figure 5
Gaps Between the Employment Rates of Single and Married Mothers, and the Proportion of Single-Parent Families Receiving Income Support Payments, 1982-2003[a,b]
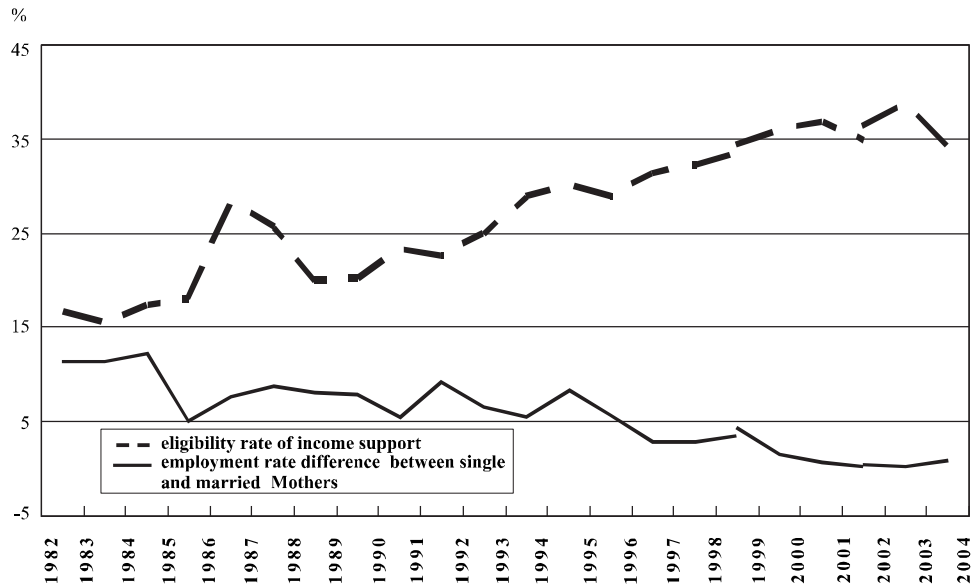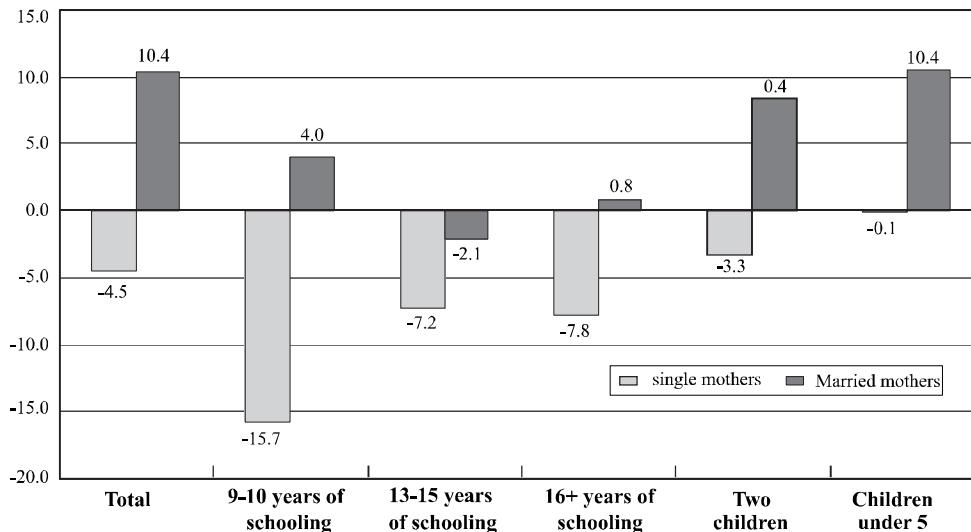

[a] Established mothers with children under 18. In 1998 and 2001 changes were made in the extrapolation method used in the Labor Force Survey. The gaps in the graphs in those years represent the transition to a different method of extrapolation.

[b] The proportion of families receiving benefit refers to all single-parent families, including those headed by a man.

SOURCE: Based on the Labor Force Surveys of the CBS, and National Insurance Institute data.

finding employment, and is poorly paid when it does find work (Flug, Kasir (Kaliner), Ribon, 2000), tends to rely to a greater extent on income support benefits, so that the changes made in 1992–1995 were very relevant to this segment; 2. to a lesser extent, among mothers with more than one child and mothers whose youngest child is under five years old – the more children they have and the younger the children are, the greater the costs of their return to work, and hence it is reasonable to assume that the increase in the benefit payment will mainly affect this group. In addition, exemption from the employment test made it easier for mothers of small children to obtain the benefit.

Figure 6
**Changes in Employment Rates of Mothers in Established Population,**
1991-2002[a]

a Mothers with children under 18 years of age, excluding Arabs and the ultra-orthodox.
SOURCE: Based on Labor Force Surveys of the CBS for 1991 and 2002.

An examination of the extent of the posts held by mothers by family status reveals a similar picture to that obtained from observing the changes in their employment and participation rates (Figures 7 and 8 and Appendix 1). Whereas the proportion of single mothers in full-time employment has remained roughly stable, this proportion has risen steadily among married mothers, so that the gap has narrowed, and in the last few years the proportion of full timers is even higher among married mothers. A similar trend is also evident in the data on weekly hours worked. It would seem, therefore, that the legislative changes made in 1992–1995 also served to reduce the extent of employee posts among employed mothers. This is particularly apparent among immigrant single mothers who, despite their greater tendency to participate in the labor market, are employed in part-time work to a greater extent than mothers in the established population, and also than married immigrant mothers – the number of hours worked by single immigrant mothers in 2002–2003 was 31, compared with 38 among married immigrants with children.

From the above it is apparent that the Single Parent Law operated to reduce the participation of single mothers in the labor market. Among mothers in the established population this was expressed in the decline in their participation and employment rates as well as in the fall in the number of hours worked by those who were employed. Among immigrants the process of their absorption in Israel was predominant in affecting their entry into the labor market, so that their participation and employment rates have risen steadily ever since the influx of immigrants first began. Notwithstanding, the effect of the law is evident in the sharp drop in the number of hours they worked (which fell even more steeply than among the established population).

Figure 7
Proportion of Mothers[a] in Full-Time Employment, 1990-2003
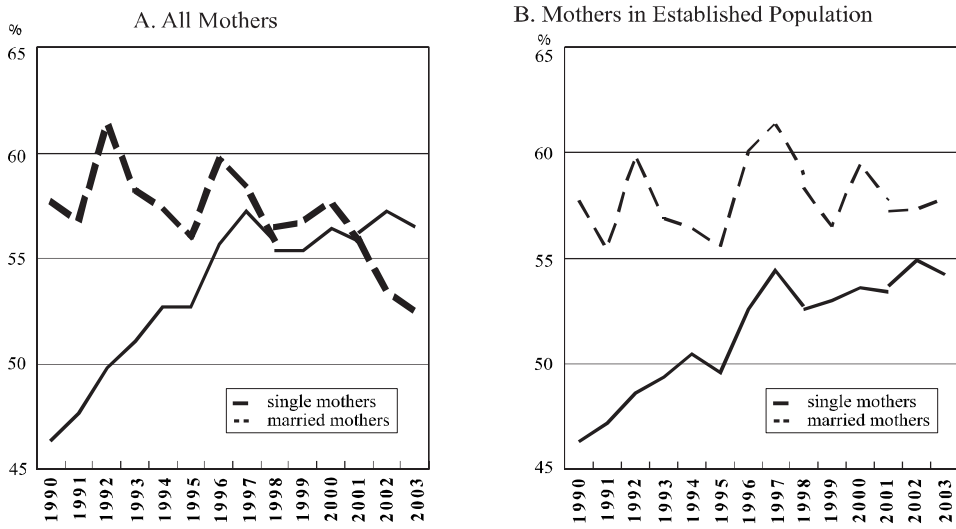
A. All Mothers

B. Mothers in Established Population

[a] Mothers with children under 18 years of age.
SOURCE: Based on Labor Force Surveys of the CBS,1990-2003.

Figure 8
Average Number of Weekly Hours Worked by Working Mothers,[a] 1990-2003
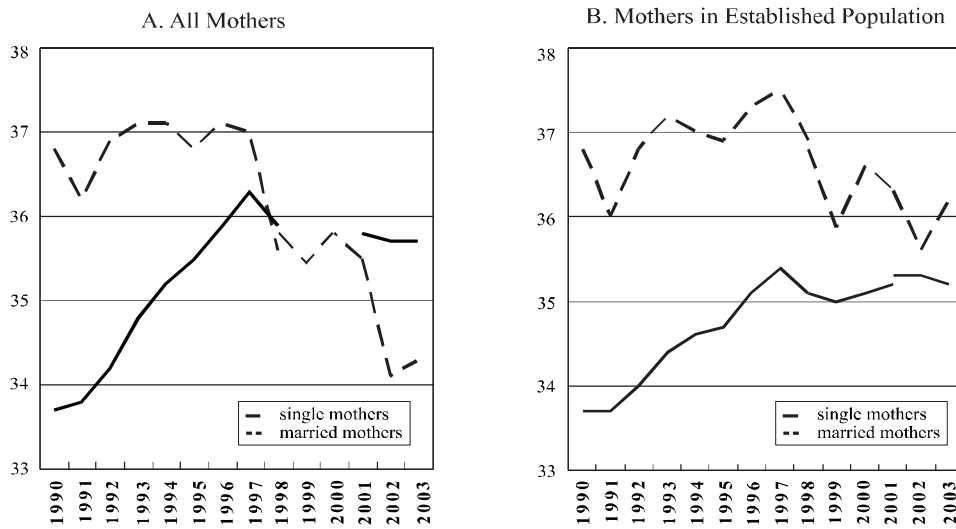
A. All Mothers

B. Mothers in Established Population

[a] Mothers with children under 18 years of age.
SOURCE: Based on Labor Force Surveys of the CBS,1990-2003.

4.2 Poverty among single–parent families and dependence on the welfare system

In 2003 single-parent families constituted 8 percent of all poor families (Table 4), and they have always been a prominent segment among those with a relatively high poverty rate.[13] On the other hand, the depth of poverty among poor single-parent families is slightly lower than it is in the poor population as a whole. The object of the policy adopted in 1992–1995 was to improve the economic position of single-parent families and reduce their poverty rates. In this section we examine the changes which have occurred in the wake of the legislative changes, in the poverty rates among them and in dependence on the welfare system.

Table 4
The Incidence of Poverty Among Single-Parent Families,[a] 1987–2003

	Incidence of poverty among single-parent families	Share of single-parent families among poor families
1987	22.4	6.2
1988	30.7	8.2
1989	29.0	7.5
1990	34.0	8.7
1991	31.0	7.5
1992	28.5	6.8
1993	30.7	7.1
1994	39.0	8.2
1995	26.0	6.8
1996	29.1	7.3
1997	31.6	9.3
1998	26.4	8.0
1999	24.6	7.0
2000	28.6	8.3
2001	27.1	8.5
2002	27.0	8.0
2003	28.9	8.1

[a] From 1997 the CBS has published a Combined Income Survey based on the Income Survey and the Survey of Family Expenditure. The sample in the combined survey is 1.8 times larger than the previous one and covers almost the entire population of Israel, with all its different forms of settlement. The 1997 survey was published in two versions. Since 1998 the series have been chained on the basis of the rates of change between the two sets of data published in 1997.
SOURCE: Based on the Income Surveys of the CBS, 1987–2003.

In 2003 the income of about 29 percent of single-parent families, after transfer payments and taxes, was below the poverty line (compared with 19 percent of the general population). An examination of the development of poverty rates among single-parent families over time shows that these rates declined from an average of about 33 percent in

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[13] Since the year 2000 the group of single parents has been the fifth poorest group, after families without a breadwinner (some of which are single-parent families), non-Jewish families, families with four or more children, and elderly families.

the first half of the 1990s to about 28 percent subsequently. This decline appears to be connected to the legislation which favored single-parent families both by introducing the Single Parent Law, which extended their eligibility for income support benefits and increased the actual benefit payment, and by the introduction of legislation intended to reduce poverty and economic inequality in 1994 and 1995. In 2003 the financial income (i.e., labor and capital income) of about half the single-parent families was below the poverty line, compared with about a third of the general population. Transfer payments and taxes brought about half of the single-parent families who had been defined as poor by virtue of their financial income out of poverty – a higher rate than among other population segments (except for the elderly). The large proportion of recipients of benefits among the single-parent families, and the relatively large payments for which they were eligible, served to reduce the depth of poverty among poor single-parent families to a level that was lower than that of the general population of poor people.

Alongside the high poverty rates among single mothers and the legislative changes which made it easier for them to obtain income support benefits as well as making it more worthwhile to take them, the dependency rate of single-parent families on the welfare system has increased over the last decade. The number of single-parent families receiving income support has soared since the introduction of the Single Parent Law, from about 10,000 in 1991 to some 15,500 in 1992 and 49,000 in 2003 (Table 5). This took place against the backdrop of the influx of immigrants from the former USSR and included a rapid rise in the eligible population among the immigrants, who entered the income support system in 1992. Immigrants accounted for about one quarter of the eligible population in 1992 and about half in 2003. At the end of the period reviewed almost every single-parent immigrant family was eligible for income support. Among the established population the rate of recipients of income support rose from 20 percent of all single parents at the end of the 1980s to about 40 percent in 2003.

Table 5
Single-Parent Families Receiving Income Support, Breakdown by Immigrants and the Established Population (annual average)

	Total	Established population	Immigrants[a]
1990	9,229	9,228	1
1991	9,773	9,769	4
1992	15,508	11,346	4,162
1993	21,148	12,928	8,219
1994	23,835	13,727	10,108
1995	26,995	14,869	12,126
1996	30,497	16,095	14,402
1997	33,945	17,284	16,661
1998	37,958	19,022	18,936
1999	42,020	20,949	21,071
2000	45,674	22,564	23,110
2001	49,774	24,075	25,699
2002	52,069	24,990	27,079
2003	49,062	23,588	25,474

[a] The eligibility of immigrants for income support begins only from their second year in Israel.
SOURCE: National Insurance Institute.

As well as bringing single-parent families out of poverty, the Single Parent Law and the other legislation appears also to have increased the dependence of these families on non-labor sources of income. While over 80 percent of the income of families of married women with children was from work, only about 50 percent of the income of single mothers families was from work. This was the result of the expansion of the population of those eligible for income support and the increase in the actual benefit paid, but was also due to the effect of the legislation on reducing the employment rates of single mothers, and on the relative wage of those who were employed, inter alia also as a result of the reduction of the extent of their employee posts. The total wage income of established single mothers was 15 percent higher in 1987–1993 than that of married mothers, but 8 percent lower than that of married women in 1994–2003.

5. THE DATA, THE EMPIRICAL METHODOLOGY, AND THE RESULTS

5.1 The data

The data used for our empirical examination were those for individuals in the Labor Force Surveys between 1985 and 2003, which were combined into a unified data file. The data contain information about employment status, hours worked, individual characteristics, the household composition, education, number of children, year of immigration, age, ethnic origin, etc. The definition of the household of a single mother in the Labor Force Survey used in the study was that of a woman who is not married (i.e., unmarried, divorced, widowed, or separated) who has children under 18 and does not have a partner living with her.

In addition, we used the data on households from the Income Surveys between 1987 and 2003, which were also combined into one data file. In addition to individual characteristics and demographic factors, it includes data on individuals' income from various sources. These were used to examine the change in the probability of being poor over time. Because of the lack of information about children in the household, the Income Surveys define single mothers as unmarried women who are heads of households and have persons under the age of 18 living with them (additional persons living with them were also included, provided they were younger than 24).

The research focuses on mothers in the established population (with children under 18) of prime working age (25–54). The established population was used because the main factor affecting the employment patterns of immigrant mothers (both single and married mothers) in the years reviewed was the length of their residence in Israel, as the longer they had been in the country the higher their labor-force participation (and employment) rate. Note that the inclusion of immigrant mothers in the regressions (and adding dummy variables for the immigrants) did not alter the results substantially.

5.2 The empirical methodology

The empirical analysis deals with two questions: first, how was the propensity to work[14] and tendency to participate in the labor force of single mothers affected by the various changes in the transfer payments system and the attendant benefits instituted in 1992–1995?[15] Second, how was the probability of being poor among these families affected by those changes? Note that the changes included some components which served as incentives to work as well as some which served as disincentives, and that they have income and substitution effects. Since most of the measures were taken concurrently with one another or within a relatively short space of time, it is generally possible to examine only the net effect of the measures as a whole.[16]

The empirical examination compares the changes in trends of labor-force participation, employment, and poverty among single mothers after the policy measures of 1992–1995 were introduced with those among married mothers.

The methodological approach
Underlying the methodological approach is a utility function which is affected by the amount of leisure and consumption (similar to that presented in Flug and Kasir (Kaliner), 2001). The mother (or family) determines the amount of leisure desired in such a way as to maximize that utility function.[17]

$$(1)\ \underset{L^{i1}}{Max}\ U^i\left(L^{i1}(x^i),L^{i2}(x^i),C^i\right)$$

$$s.t\ C^i = I^i + T^i(x^i,L^{i1},L^{i2})$$

[14] In principle, we are interested in examining the effect on the labor supply reflected in the labor-force participation rate. However, since the measurement of the labor force is based on the subjective classification of people regarding the active search for work – a classification which is also influenced by the state of the economy – it is reasonable to also examine actual employment, measurement of which is 'objective.' The labor supply is also expressed in the number of hours worked and part-time posts, for which we have actual data (although this may also be affected by the availability of full-/part-time jobs).

[15] Naturally, the entire empirical analysis relates solely to reported work, and we are unable to examine the extent to which the disincentive to work embodied in the benefits affect the extent to which work is reported or on the actual labor supply (Sussman and Romanov, 2001).

[16] Nevertheless, the effect of the change in the structure of the benefit on the labor supply of single mothers is analyzed later in this study.

[17] The approach presented in this model is in accordance with the classical approach, which regards a married woman as a secondary breadwinner most of whose work is in the home and her market labor supply (the decision whether and to what extent to go out to work) derives from the employment situation and the wage of the main breadwinner, her husband (Eckstein and Wolpin, 1989; Heckman and Macurdy, 1980, 1982). However, the directions of effect of the various factors on the labor supply would be identical even if we had adopted the modern approach and regarded the decision about the family's labor supply as being made jointly by husband and wife.

Where: U^i -   is the utility function of family i

L^{i1}, L^{i2} -   is the amount of leisure (i1 for the mother and i2 for the father)

x^i -   is the family's characteristics (e.g., family size, education, religion, etc.)

C^i -   is the family's consumption

I^i -   is the family's labor income

T^i -   the transfer payments received by the family

For the sake of simplicity, we have assumed that all income is consumed. The implicit assumption in the model is that anyone who wishes to work can do so, and to the extent desired, hence no distinction is made between employment and labor-force participation.

$$(2) \quad I^i = \left[N^{i1} - L^{i1}(x^i) \right] \cdot W^{i1}(x^i) + I^{i2}(x^i)$$

where:

N^{i1} is the mother's maximum possible labor

$W^{i1}(x^i)$ is the wage per unit of labor

$I^{i2}(x^i)$ is the total labor income of the rest of the household (the father)

The model assumes that the mother's decision about her labor supply takes the father's labor income as given. Under conditions of competition, the wage is determined by the characteristics of the employed individuals.

Assume that:

$$\frac{\partial^2 U^i}{\partial C^2} < 0, \quad \frac{\partial^2 U^i}{\partial L^2} < 0, \quad \frac{\partial^2 U^i}{\partial L \partial C} > 0, \quad \frac{\partial U^i}{\partial C} > 0, \quad \frac{\partial U^i}{\partial L} > 0$$

In reality, there is no continuity for some of the variables, such as L^i. Nevertheless, for the sake of simplicity, we assume that there is continuity for all the variables.

From the first order condition, we get:

$$(3) \quad \frac{U_L^i}{U_C^i} = W^{i1}(x^i) - \frac{\partial T^i}{\partial L^{i1}}$$

where:

U_C^i and U_L^i are partial derivatives of the relative utility function of C and L respectively. It is easy to see that $\dfrac{U_L^i}{U_C^i}$ is a declining function of L, assuming the declining marginal utility of leisure and consumption, (as $U_L(\bar{L})$ and $U_C(\overset{+}{L})$).

Solving equation (3) gives the optimal L^{i1}, indicating that it depends on the utility function, and its parameters define the marginal utility function of leisure and consumption (U_L and U_C respectively), in wage (W^{i1}), the structure of benefits and the effect of the labor supply on the value of benefits (T_L), where:

U_L is the marginal utility of leisure, which depends for each household on the parameters of its utility function. These parameters are affected by the characteristics of individuals, such as family size, religious orthodoxy, and age.

U_C is the marginal utility of consumption (the marginal utility of income), which declines as income rises, and hence is affected by the level of benefits and wages.

W^{i1} is the wage, which is affected by the individual's human capital, the existence or absence of discrimination in the labor market, the amount of time spent in a job (in accordance with the theory of specific human capital), etc.

T_L is the extent to which the benefit payments are offset when the individual works (the effect of the amount of work on the value of transfer payments), expressed for example by the means test, namely, income from benefit payments increases as leisure increases and labor income declines.

From equation (3) we see that as T_L declines, namely the smaller the effective tax on the various benefit payments (e.g., when benefits such as tax credits are extended to workers), so does the disincentive to work implicit in benefits.

Hence, the family's labor supply is a function of the following variables:

(4) $L^{i1} = f(x^i,\ T^i(x^i),\ W^{i1}(x^i),\ I^{i2}(x^i),\ T_L(x^i))$

and in a reduced form:

(5) $L^{i1} = f\left(x^i\right)$

where x^i affects L^{i1} by influencing $T^i, W^{i1}, I^{i2}(x^i)$ and T_L, but also via its effect on the various parameters of the utility function. One of the main variables we examine in this study is the effect of changes in the parameters of function $T^i(x^i, L^{i1}, L^{i2})$ on the labor supply of single mothers.

Determining L^{i1} together with the wage equation determines the labor supply and hence the mother's wage income. Given L^{i1} and the other characteristics of the household, we can also determine the extent of the household's transfer payments. All these, together with the characteristics of the household, define its total income and the income per capita (standardized) , and hence where the household is situated in relation to the poverty line:

(6) $Pov = g\{ L^{i1}(x^i,\ T^i(x^i)),\ T^i(x^i),\ W^{i1}(L^{i1},x^i),\ I^{i2}(x^i),\ x^i\}$

Poverty is determined unequivocally on the basis of T^i, I^i and the composition of the household; when for the individual household, the median income which defines the level of the poverty line is given.

Hence, the reduced form of equation (6) is:

(7) $\quad Pov = g\left(x^i\right)$

The empirical approach
The empirical approach in the study is to estimate the reduced form as presented in equations (5) and (7), while referring to the changes made in the system of benefits to single mothers, in the spirit of the methodological approach described above.

The labor supply: the dependent variable in the regression represents the various dimensions of the labor supply (participation, employment, hours worked, part- or full-time post), and the explanatory variables include the individual characteristics which affect the propensity to work (and the potential wage) and time variables, both general representing trend shifts, and in interaction with family status, representing the effect of policy, namely, the effect of a change in the T function.

Y denotes the employment status of the mother:

$$Y_t^i \quad = \quad \begin{cases} 1 & \text{Employed} \\ \\ 0 & \text{Unemployed} \end{cases}$$

And *D* denotes the family status of the mother:

$$D^i \quad = \quad \begin{cases} 1 & \text{Single} \\ \\ 0 & \text{Married} \end{cases}$$

x_t^i is the mother's demographic characteristics (e.g., education, number of children, ethnic origin, religious orthodoxy, etc.)

D_t is the vector of the dummy variable, indicating the sample year, i.e., for this vector all the components take the value 0, except the t value, which is 1.

We run the regression:

$$Y_t^i = \alpha + \beta \cdot x_t^i + \gamma \cdot D^i + \delta \cdot D_t + \eta \cdot D_t \cdot D^i + \varepsilon_t^i$$

In addition to this regression, we run additional regressions, using alternative dependent variables, such as labor-force participation, and for employed mothers the extent of their employee post and hours worked.

In order to answer the questions we have posed in this study, in each of the regressions we focus on the coefficients of the interaction variables between the year and the mother's family status, D^i.[18] This was done in order to examine whether, in addition to the general effect of the time coefficient on the labor supply, it is possible to identify a trend shift

[18] A similar approach was adopted by Meyer and Rosenbaum, 2001 (see Table 3 on p. 1087).

among single mothers after the introduction of the Single Parent Law and the legislation intended to reduce poverty and income inequality. Note that the basic difference, which does not change over time, in the tendency to participate in the labor market between married and single mothers is captured by the coefficient of the D^i variable, and reflects the absence of an additional breadwinner in the household of a single mother.

According to economic theory, the expected income effect of greater liberalism in extending benefits and the larger size of the benefit paid to single mothers should reduce their labor supply. However, the substitution effect of the measures introduced is more complex: on the one hand, the larger benefit increases the disincentive to work, while on the other, the structure of the benefit paid to single mothers – the annulment of the wage ceiling determining whether the individual is eligible for the benefit or not – should reduce the disincentive implicit in it relative to the previous situation (and relative to the situation of married mothers).

In order to examine the effect of the change in the structure of the benefit on the labor supply, we also run the regression on the income surveys, adding to each year two dummy variables for the mother's potential eligibility for income support – one for single mothers and the other for married mothers – in accordance with the eligibility rules as defined by law each year and assuming that the mother does not work. Note that following the change in the law the benefit 'became relevant' for the segment of the population with a higher earning potential, a segment which from the outset has a higher propensity to work. This component will be captured in the regression as the effect of the benefit if the identity contains information beyond the perceived individual characteristics indicating potential earnings.

In order to examine the effect of the Single Parent Law on the probability that a single-parent family will be poor, we ran an equation which is similar to the one we ran on the labor supply variables, where the dependent variable, P_t^i, reflects the status of the household (poor, not poor).

$$P_t^i \quad = \quad \begin{cases} 1 & \text{Below the poverty line} \\ \\ 0 & \text{Above the poverty line} \end{cases}$$

The equation was run on the special database of income surveys for 1990–2003, with the observations referring to households.

Dealing with possible bias in the control group
From the outset we chose to focus on the empirical analysis of mothers, as with regard to them the decision to go out to work and to work on a full- or part-time basis is associated with the question of child care. This is common practice in most studies of this subject (see, for example, Gregg and Harkness, 2003; Doiron, 2004).[19] Nonetheless, without dealing

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[19] In some of the programs introduced in the various countries the treatment focused on parents. In effect, many of the families were single mothers. Consequently, in several studies the peer group chosen for single mothers included unmarried women without children who were not eligible to participate in the program (see, e.g., Eissa and Liebman, 1996; Meyer and Rosenbaum, 2001). Because of the importance of the subject of child care in the decision to go to work some of the researchers, even in those cases, chose to undertake the comparison for both segments of the population – married mothers and unmarried women without children (see, e.g., Meyer and Rosenbaum, 2000; DeLeire and Levy, 2005).

with the choice of an appropriate control group from among married mothers, there may be some bias in the quantitative estimates of the effect of a change in the income support benefit on the labor supply. This is because the other characteristics of single and married mothers which affect the labor supply are not necessarily similar. Thus, for example, families whose propensity to participate in the labor market is low from the outset and whose earning potential is low, may have chosen to be single parents (or vice versa).

In order to tackle the problem we chose from the group of married mothers a sample which will constitute an appropriate control group for the group of single mothers. Each single mother was matched with a married mother with similar demographic and personal characteristics (excluding the single-parent characteristic); the matching was done by using the propensity score matching method (Rosenbaum and Rubin, 1983, 1984) in the following way: using a Probit model, we first calculate the predicted probability of being a single mother – the propensity score – as a function of demographic and individual variables. Then, in accordance with the estimated probability of being a single mother, we match each single mother with the married mother who is nearest to her.

After constructing the control group we examine the development of employment in both groups. The basic assumption of this method is that the undue effect of economic changes that occurred in the period reviewed, including those in the labor market, was the same for the single mothers and the married mothers in the control group. This is because the control group is chosen in such a way that the two groups have similar characteristics (except for that of being a single mother). Hence, if their employment rates develop differently (extent of employee post and participation rate) after the legislative changes of 1992–1995 this will indicate that the legislation had an effect on the propensity to work.[20]

Note that the use of propensity score matching, by which for *each year* an appropriate control group is chosen from among the married mothers in accordance with the characteristics of the single mothers of that year, greatly reduces the bias which could have emerged if there was an endogenous response of creating single-parent families in the wake of the legislative changes. Moreover, as stated, the tendency to create single-parent families (among the established population) slowed after the introduction of the Single Parent Law (Figure 1). It would seem therefore that the legislative changes cannot be regarded as having been responsible for creating single-parent families, in line with findings from many other studies throughout the world which examined the effect of government aid programs, including welfare programs, on the creation of single-parent families (see footnote 4). The increase in the number of single-parent families also occurred primarily among women with a high level of education, who may be assumed to be less influenced by the legislative changes.

Note that while propensity score matching greatly reduces the bias of the control group, it also greatly reduces the size of the control group, causing some information to be lost. Thus, since the observed individual characteristics of the mothers were also included in the general regression, it is advisable to examine the results obtained from both methods.

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[20] This method was implemented in other studies undertaken elsewhere in the world which dealt with the effect of policy measures on single parents in various spheres of life, such as, their effect on the standard of living (Brzozowkski, 2004), and on the labor supply (Gregg and Harkness, 2003). The latter examined their effect in the UK and Doiron, 2004 examined their effect in Australia.

5.3 The results of the empirical analysis

(i) The results regarding the labor supply

In all the regressions we ran (Table 6) relating to the labor supply (employment, participation, and extent of employee post), the effects of the demographic and personal characteristics obtained were consistent with both labor theory and other empirical research findings which examined the labor supply of women and the factors behind their entry into the labor market (see, e.g., Eckstein and Wolpin, 1989; Heckman and Macurdy, 1980, 1982). The regressions relating to the labor supply were calculated on the basis of OLS as well as Probit and Logit, and the results obtained by all three methods were qualitatively similar. The results obtained using the OLS method are presented below.

As expected, an increase in the number of children reduces the labor supply because of the existence of higher costs if the mother goes out to work; a greater number of years of schooling increases the labor supply by increasing the chances of finding work as well as a higher wage; the propensity to work is lower among women who are not Jewish or who are ultra-orthodox.[21] The propensity to work rises with age, until the age of 44. Among married mothers we found that the existence of another breadwinner increases their propensity to go out to work. Ex-ante, it is not possible to predict the sign of this variable; on the one hand, the existence of another breadwinner in the household operates to reduce the mother's labor supply through the income effect, but on the other, because there is a correlation between the characteristics of a husband and a wife and especially as regards earning potential (as is the case with level or quality of education and other, unobserved characteristics), there is also a positive correlation in the probability that couples will be employed. As stated, the findings of the regression indicate that the effect of the correlation is dominant.

The dummy variable for the various years indicates that there is a clear and consistent upward trend in the labor supply (participation, employment, hours worked, and full-time employment) of women. This finding is striking in view of the decline in the participation and employment rates of men over time. Note that it reflects a rise in the propensity to participate in the labor market beyond that which derives from the increase in women's education over time, as well as from the decline in the number of children. As expected, being a single mother, i.e., not having another (potential) breadwinner, increases the labor supply.

As regards the research question – the effect of the changes made in 1992–1995 in the terms of eligibility for and extent of income support payments on the labor supply of single mothers – we found that the changes had a significant effect on reducing the labor supply, as regards both participation in employment and its extent.[22] In all the equations the

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[21] The lack of an unequivocal definition of the concept of 'ultra-orthodox' in the official statistics makes it difficult to identify this category in the population. Identifying a population group that has similar characteristics to the ultra-orthodox segment is achieved by the variable of study at a religious seminary (yeshiva) by one of the members of the family (see, e.g., Dahan, 1998; Berman and Klinov, 1997). On the other hand, it is obvious that some of those who studied at a religious seminary do not define themselves as ultra-orthodox, while there are some members of the ultra-orthodox community who have not studied at a yeshiva.

[22] A priori the effect on actual employment and the amount of hours worked is not necessarily expected to go in the same direction (Heckman, 1993). Thus, for example, Meyer, 2002, found that the policy measures introduced in the US had an effect on the employment of single mothers, but not on the number of hours worked.

Table 6
Entry into the Labor Market of Mothers in the Established Population[a,b]
(main results)

Exlanatory variables \ Dependent variable	Labor-force participation (participation=1)	Employment (employment =1)	Full-time work (full-time work=1)	Hours worked
No. of children (relative to 2 children)				
1	0.02	0.02	0.03	1.11
3	-0.05	-0.05	-0.06	-2.40
4–5	-0.13	-0.12	-0.01	-5.50
6+	-0.21	-0.20	-0.14	-7.52
Years of schooling (relative to 11–12 years)				
0–8	-0.23	-0.22	-0.15	-8.13
9–10	-0.13	-0.14	-0.12	-5.45
13–15	0.15	0.18	0.03	4.66
+16	0.20	0.23	0.05	6.55
Single mothers	0.16	0.10	0.12	5.19
Existence of additional breadwinners[c]	0.11	0.32	0.05	2.60
Dummy variable for 1986–2003 (average)	0.05	0.03	0.05	1.93
Year x single mother				
Dummy variable for 1986–94	insignificant	insignificant	insignificant[d]	insignificant
Single mother x Year 1995	* -0.04	-0.06	-0.06	-2.33
Single mother x Year 1996	-0.05	-0.08	-0.06	-3.27
Single mother x Year 1997	* -0.04	-0.06	-0.05	-2.53
Single mother x Year 1998	* -0.04	-0.08	-0.08	-3.34
Single mother x Year 1999	-0.07	-0.10	-0.01	-5.13
Single mother x Year 2000	-0.06	-0.09	-0.01	* -3.66
Single mother x Year 2001	-0.08	-0.11	-0.09	-5.05
Single mother x Year 2002	-0.08	-0.11	-0.11	-5.24
Single mother x Year 2003	-0.07	-0.11	-0.11	-4.91

[a] Mothers aged between 25 and 54 of children under 18; full results are given in Appendix 2, Tables A1−2, A2−2, A2−3, and A2−4.

[b] The results given here are significant at 1 percent, except for those marked with an asterisk, which are significant at 5 percent.

[c] In families which do not have only one parent. The reference is to the dummy variable which takes the value 1 if there are additional breadwinners.

[d] Insignificant except for 1994.

SOURCE: Based on Labor Force Surveys of the CBS, 1985−2003.

interaction factor for 1995 and subsequent years with family status – being a single parent – was negative and significant (in some of the equations this factor was negative and significant already beforehand, after 1992). The negative effect intensified over time.[23]

In order to examine the overall effect of time on the labor-force participation of single mothers it is necessary to add up the coefficients of the year with those of the interaction variable.

The findings show that the income effect of increased benefit payments and the expansion of the population that is eligible for them was dominant in its effect on the labor supply. This was the case in spite of the fact that, as stated, the changes in the law exempted single mothers from the 'determining wage' test which deprived the rest of the population of eligibility for the income support payment if income exceeded that threshold. In other words, the reduction of the disincentive implicit in the structure of eligibility for the benefit (and attendant benefits) was not sufficient to offset the disincentive embodied in the larger payment and the expansion of eligibility.

The fact that the negative effect of the legislative changes, some of which went into effect already at end–1992, intensified over time (while for most of the dependent variables and most of the regressions run it is evident only at a later stage) attests to their effect with a lag. The delayed response stems from the fact that the changes in the law influenced primarily 'new entrants' into the system, whereas their effect on reducing the employment of single mothers who were working at the time the amendments were made was smaller. Similarly, some of the policy measures – which influence the employment patterns of single mothers – were adopted at a later stage, in 1994 and 1995. the estimate of the intensity of the effect of the legislative changes indicates that they reduced the labor-force participation rate of single mothers by 4 percentage points in the short term (until 1998) and by another 4 percentage points by the end of the decade. Their effect on employment was even greater: 6 percentage points in the short term and another 4 percentage points by the end of the decade.

The regressions reported so far covered the general population of single mothers as 'the population in question', as most of the legislative changes in 1992–1995 applied to most single mothers; hence we made no distinction between, for example, widows, divorcees, separated and unmarried mothers. The only exception was that we added separate dummy variables for widows and unmarried mothers in some of the regressions. All the equations in these regressions indicate that divorced single mothers tend to work more and widowed single mothers tend to work less than other single mothers. Thus, for example, the labor-force participation rate of divorcees is 6 percentage points higher and of widows 4 percentage points lower than that of other single mothers (with similar other characteristics). A similar qualitative result was obtained in Meyer and Rosenbaum, 2001. For all the other variables the results obtained in the regressions which included the aforementioned dummy variables were similar to those obtained in the regressions described in Table 6. (The main results that obtained in the regression that distinguishes between widows and other single mothers are described in Table 7.)

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[23] These results were obtained when we ran the regressions on the Labor Force Surveys. Similar results were also obtained when we ran the same regressions on data from the Income Surveys for 1987-2003. Note that the directions of the results in our study did not change even when the control groups were restricted to married mothers whose husbands did not work.

Table 7
Labor-Force Participation, Widows vis-à-vis Other Single Mothers[a]
(Main results, dependent variable: labor-force participation = 1)[b,c]

Explanatory variables	Coefficients
Dummy for single mothers (not widows)	0.18
Dummy for widowed mother	-0.01
Non-Widowed Single Mother x Year	
Non-Widowed Single Mother X Year 1986	**-0.03
Non-Widowed Single Mother X Year 1987	*-0.04
Non-Widowed Single Mother X Year 1988	**-0.03
Non-Widowed Single Mother X Year 1989	**0.00
Non-Widowed Single Mother X Year 1990	**-0.02
Non-Widowed Single Mother X Year 1991	**0.02
Non-Widowed Single Mother X Year 1992	**0.02
Non-Widowed Single Mother X Year 1993	**-0.03
Non-Widowed Single Mother X Year 1994	**-0.02
Non-Widowed Single Mother X Year 1995	*-0.04
Non-Widowed Single Mother X Year 1996	-0.05
Non-Widowed Single Mother X Year 1997	-0.05
Non-Widowed Single Mother X Year 1998	-0.04
Non-Widowed Single Mother X Year 1999	-0.07
Non-Widowed Single Mother X Year 2000	-0.05
Non-Widowed Single Mother X Year 2001	-0.06
Non-Widowed Single Mother X Year 2002	-0.07
Non-Widowed Single Mother X Year 2003	-0.04
Widowed Single Mother X Year	
Widowed Single Mother X Year 1986	*0.05
Widowed Single Mother X Year 1987	*0.05
Widowed Single Mother X Year 1988	0.10
Widowed Single Mother X Year 1989	*0.06
Widowed Single Mother X Year 1990	0.10
Widowed Single Mother X Year 1991	0.11
Widowed Single Mother X Year 1992	0.08
Widowed Single Mother X Year 1993	0.11
Widowed Single Mother X Year 1994	0.13
Widowed Single Mother X Year 1995	0.07
Widowed Single Mother X Year 1996	0.09
Widowed Single Mother X Year 1997	0.12
Widowed Single Mother X Year 1998	0.09
Widowed Single Mother X Year 1999	*0.05
Widowed Single Mother X Year 2000	0.10
Widowed Single Mother X Year 2001	*0.06
Widowed Single Mother X Year 2002	*0.05
Widowed Single Mother X Year 2003	**0.04

[a] Mothers from the established population with children under 18.

[b] The control variables included in this regression are identical with those in Table A1─2 in Appendix 2.

[c] Significant results at the 5 percent level, except for those marked with an asterisk, which are significant at 10 percent, and those marked with two asterisks, which are not significant even at the 10 percent level.

SOURCE: Based on Labor Force Surveys of the CBS, 1985─2003.

Effect of legislative changes on the labor supply at different levels of education

One of the main variables determining both the probability of finding work and the earning potential is the level of education. Consequently, the legislative changes of 1992–1995 can be expected to have a special effect on single mothers with a low level of education, and this has been borne out by other studies from other countries (e.g., Schoeni and Blank, 2000) as well as by our basic comparison, presented in Figure 6. In order to investigate this subject more thoroughly and examine whether the legislative changes also affected single mothers with a higher level of education, we ran the regressions on sub-groups, in accordance with their level of schooling.

Figure 9
Development of Marginal Propensity to Participate in the Labor Force of Single Mothers, by Level of Education[a]
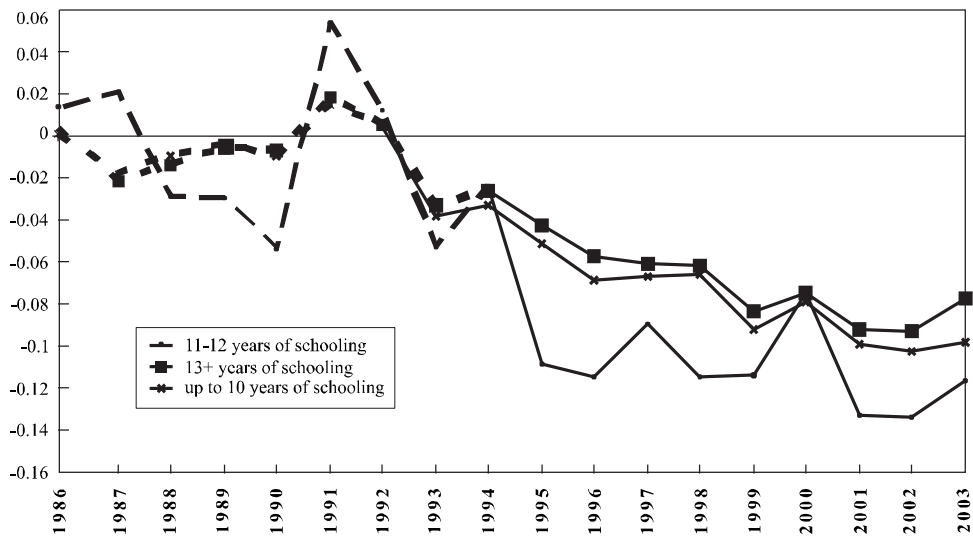
[a] The coefficient of the interaction variable – single mother x year – in the regressions in which the dependent variable is labor-force participation. The interrupted lines describe a period when the coefficients are not significant
SOURCE: Based on Labor Force Surveys of the CBS, 1985-2003.

The main finding indicated by these regressions is that at all levels of education the tendency for labor-force participation declined among single mothers after the legislative changes. The differences between the groups with different levels of education lie in the intensity and speed of their response. The response to the increased generosity of the system was most rapid among single mothers with 10 years of schooling, among whom the negative effect was significant already in 1992, while in the other groups the negative effect became significant only from 1994 (Figure 9). The intensity of the negative effect is particularly prominent among single mothers with a low level of education, and especially among those with 11–12 years of schooling. At the end of the 1990s the negative effect of the legislative changes accounted for a 12 percentage-point reduction in the propensity of single mothers with 11–12 years of schooling to participate in the labor force. During the

same period the effect of the changes on single mothers with more years of schooling (13 or more) accounted for an 8 percentage-point reduction in their labor-force participation rate.

Effect of legislative changes on the labor supply of various age groups
In order to examine the extent to which the legislative changes affected different age groups differently, we ran the various regressions on sub-groups according to the mothers' ages: 25–34; 35–44; and 45–54.

Table 8
Labor-Force Participation, by Age Group[a]
(main results, dependent variable: labor-force participation = 1)[b]

Explanatory variables	Age Group		
	25–34	35–44	45–54
Dummy for single mothers	0.20	0.18	0.10
Single mother x Year			
Single mother x Year 1986	*0.03	*0.01	*0.03
Single mother x Year 1987	*-0.03	*-0.03	*0.05
Single mother x Year 1988	*-0.05	*-0.02	0.08
Single mother x Year 1989	*-0.06	*0.00	*0.06
Single mother x Year 1990	*-0.10	*0.01	*0.06
Single mother x Year 1991	*0.02	*-0.01	0.10
Single mother x Year 1992	*0.01	*-0.01	*0.06
Single mother x Year 1993	-0.11	*-0.01	*0.05
Single mother x Year 1994	-0.08	*-0.02	*0.05
Single mother x Year 1995	-0.09	-0.06	*0.04
Single mother x Year 1996	-0.12	-0.06	*0.02
Single mother x Year 1997	-0.12	-0.05	*0.04
Single mother x Year 1998	*-0.06	-0.06	*0.01
Single mother x Year 1999	-0.11	-0.10	*-0.00
Single mother x Year 2000	-0.11	-0.07	*-0.01
Single mother x Year 2001	-0.10	-0.12	*-0.01
Single mother x Year 2002	-0.12	-0.10	*-0.03
Single mother x Year 2003	-0.07	-0.11	*-0.00

[a] Mothers from the established population with children under 18.

[b] The control variables included in this regression are identical with those in Table A2−1.

* Represents a coefficient that is not significant at the 10 percent level.

SOURCE: Based on Labor Force Surveys of the CBS, 1985−2003.

This examination (expressing differences in the extent of single mothers' absorption and seniority in the labor market before the legislative changes) indicates that, as expected, the negative effect of the changes was correlated with age (Table 8). The effect was fastest and strongest among single mothers in the 25–34 age group, for many of whom the pattern of labor-force participation had not yet been formed before the policy changes were made.

For them the extent of the reduction in the participation rate was about 10 percent in the short term (1993–1995) and became only slightly stronger subsequently. By contrast, the effect on the participation rate of single mothers in the intermediate age group (35–44) was more gradual, and reached 10 percentage points at the end of the decade; the participation rate of older single mothers hardly changed at all as a result of the changes.

Effect of legislative changes on the labor supply of various groups, by age of youngest child

Restricting the quantitative analysis to sub-group of single and married mothers in accordance with the age of their youngest child – under 5, between 5 and 10, between 10 and 18 – yielded similar results to those of the analysis of the general population of mothers with children under 18, and this applied to every age group. This picture emerged despite the fact that a priori it was possible to expect that the effect of the changes on mothers with younger children would be greater, both because of the need to find child-care arrangements for their children and because they were exempt from the employment test, which made it easier for them to meet the criteria of eligibility for the benefit. The finding which emerges from our study is consistent with that in Pingle, 2003, which examined the effect of the exemption from the employment test given in the US to single mothers with small children, where the age of the child for which the exemption was awarded varied between states. Pingle's study found no correlation between the exemption and employment – the employment of single mothers who were exempt from the employment test rose in the late 1990s at a similar rate to that of single mothers who were not exempt.

Estimation using propensity score matching

The regressions reported so far included all mothers in the established population aged between 25 and 54 with children under the age of 18. A comparison of the various characteristics of the single mothers with those of the married ones (excluding that of being a single mother) attest to differences between the two groups (Table 9), the most salient ones being that single mothers have a relatively high rate of one-child families and a lower rate of families where the youngest child is under 5; the proportion of non-Jewish and ultra-orthodox single mothers is relatively low. Some of the characteristics which differ between the two groups could have an effect on the labor supply. In addition, although the development of the different personal characteristics of the two groups over time generally went in the same direction, its intensity varied. As a result, the quantitative estimates of the effect of the change in benefits on the labor supply may be biased to some extent.

In order to deal with this possible problem, we chose a sample control group from the group of married women whose characteristics matched those of the group of single mothers. For each year a sample of married mothers was chosen whose characteristics were similar to those of the single mothers, using propensity score matching. The technique selected was one-to-one (nearest neighbor without replacement). Each single mother was matched with a married mother whose personal characteristics were as near to hers as possible. Using the without replacement option ensures that a married mother will be chosen only once. The choice of variables for matching was made in accordance with two sets of considerations: 1. characteristics which differed markedly between single and married mothers; 2. characteristics which had an effect on the decision to work or to enter the income support system (as found in various studies). Table 9 shows that, as expected,

the characteristics of the married mothers in the sample chosen were relatively similar to those of the single mothers.

Table 9

Characteristics of the Population of Mothers,[a] 2003

(single mothers, all married mothers, and married mothers in the sample)

	Single Mothers	Married Mothers	Married Mothers Sampled
	Distribution (percentage)		
All single mothers	**100**	**100**	**100**
Religion			
Jewish	89	76	85
No. of children under 18			
1	47	26	47
2	33	31	32
+3	20	43	17
Youngest child under 5	23	52	23
Youngest child under 10	54	75	55
Years of schooling			
0−8	11	10	15
9−10	11	7	10
11−12	41	38	39
13−16	22	21	17
+16	16	24	20

[a] Prime-age mothers (25−54) from the established population with children under 18.

SOURCE: Based on Labor Force Surveys of the CBS, 2003.

A comparison of the development of the employment and participation rates of single mothers and married mothers in the sample shows that these rates rose among the married mothers and fell among the single ones in the wake of the legislative changes of 1992–1995 (Figure 10). The conclusion which may be drawn from these comparisons is that the differences in the development of the participation and employment rates derive primarily from the changes in the laws and not from differences in personal and other characteristics. In other words, the Single Parent Law and the other legislative changes served to reduce the labor supply of single mothers.

Figure 10
Changes in the Participation and Employment Rates of Mothers,[a] 1991–2002
(percentage points)
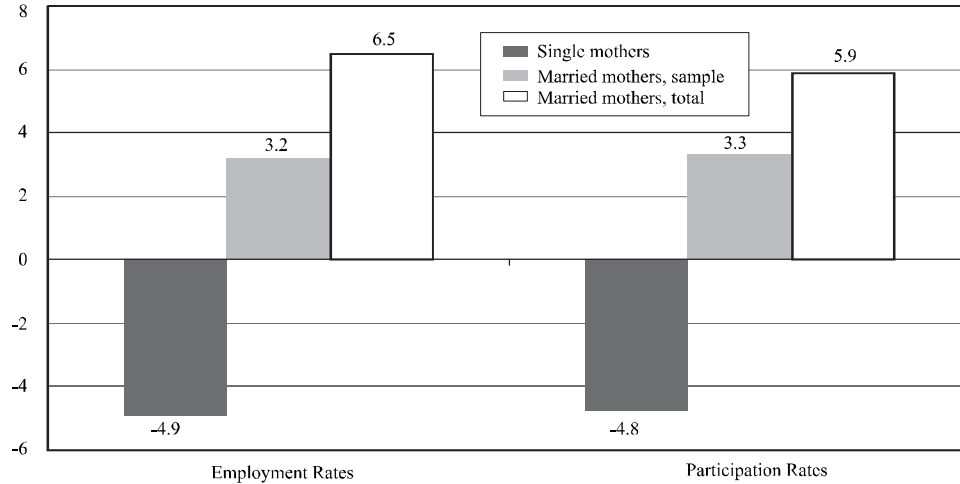
[a] Mothers aged 25–54 from the established population with children under 18.
SOURCE: Based on Labor Force Surveys of the CBS, 1991 and 2002.

Results of the regressions

The results of the regressions[24] which are based on the population of single mothers and the matched sample of married mothers are summarized in Table 10. The coefficients of the demographic and personal variables turn out to be similar to what is customary and to those obtained in the regressions run on the entire population of mothers from the established population. The exception to this is the negative effect of higher education on the number of hours worked and the propensity to work full time. This result would seem to be connected with the special characteristics of the population in the sample (compared with those of the general population of single mothers). As regards the research question, in the regression in which the labor-force participation rate is the dependent variable the coefficient that is obtained for the participation rate of single mothers from 1993 is negative and significant and increases over time, while in most years before that the coefficient is positive and not significant.

In the regression in which employment is the dependent variable, the interaction coefficient between the year and being a single mother is negative and significant for most years, but increases significantly after 1992. In the regression for hours worked the coefficient of the single mothers also becomes negative and significant in almost every year from 1995 (with the exception of 1997).

[24] Note that the results below did not change substantially even after the group of explanatory variables introduced using the Probit model for the probability of being a single mother was changed.

Table 10
Absorption of Mothers from the Established Population in the Labor Market [a,b]
(main results)

Explanatory variables \ Dependent variable	Participation in labor force (participation=1)	Employment (employment=1)	Full-time work (full-time work=1)	Hours worked
No. of children				
(relative to 2 children)				
1	0.02	0.02	0.03	0.85
3	-0.06	-0.06	-0.03	-0.95
4−5	-0.14	-0.13	-0.05	-1.94
6+	-0.20	-0.18	-0.20	-5.54
Years of schooling				
(relative to 11−12 years)				
0−8	-0.28	-0.27	-0.12	-3.62
9−10	-0.14	-0.14	-0.08	-2.35
13−15	0.11	0.14	-0.03	-1.06
+16	0.13	0.19	-0.05	-1.34
Single mothers	0.16	0.12	0.05	1.24
Existence of additional breadwinners [c]	0.14	0.09	0.04	1.12
Dummy variable for 1986−2003 (average)	0.05	0.04	0.07	0.03
Single Mother x Year				
Single Mother x Year 1986	** 0.00	*-0.01	** -0.01	0.63
Single Mother x Year 1987	0.02	** 0.00	0.02	** 0.25
Single Mother x Year 1988	** -0.00	-0.03	* -0.02	** 0.33
Single Mother x Year 1989	*0.01	-0.02	** -0.01	0.82
Single Mother x Year 1990	** 0.00	-0.05	-0.03	-0.57
Single Mother x Year 1991	0.03	-0.02	-0.02	*-0.38
Single Mother x Year 1992	** 0.01	-0.06	-0.02	** 0.04
Single Mother x Year 1993	-0.03	-0.06	-0.04	** -0.32
Single Mother x Year 1994	-0.05	-0.08	-0.03	** 0.25
Single Mother x Year 1995	-0.07	-0.10	-0.06	* -0.35
Single Mother x Year 1996	-0.05	-0.08	** -0.00	* -0.42
Single Mother x Year 1997	-0.03	-0.05	0.03	** 0.12
Single Mother x Year 1998	-0.03	-0.08	-0.04	-0.51
Single Mother x Year 1999	-0.05	-0.09	-0.06	-3.00
Single Mother x Year 2000	-0.06	-0.09	-0.03	-0.68
Single Mother x Year 2001	-0.07	-0.11	-0.04	-1.96
Single Mother x Year 2002	-0.07	-0.11	-0.06	-1.66
Single Mother x Year 2003	-0.04	-0.08	-0.03	-0.51

[a] Mothers aged 25−54 with children under 18. The regressions were run on the single mothers and the matched sample of married mothers, using propensity score matching.

[b] The results are significant at the 1 percent level, except for those marked with an asterisk, which are significant at the 5 percent level, and those marked with two asterisks, which are not significant even at the 5 percent level.

[c] In families which do not have only one parent. The reference is to the dummy variable which takes the value 1 if there are additional breadwinners.

SOURCE: Based on Labor Force Surveys of the CBS, 1985−2003.

In sum the regression analysis of the labor supply of single mothers relative to the group of married mothers in the matched control group supports the finding that the labor supply of single mothers declined as a result of the legislative changes.

Note that the sizes of the coefficients of the interaction factors between the year and being a single parent relative to employment and participation are very similar to those found in the regression which included all married mothers (Table 6), and the current examination by means of propensity score matching, in addition to confirming the existence of the effect, also substantiates its size. In other words, the reference solely to the control group which has similar characteristics to the group of single mothers does not alter the results. As regards the number of hours worked, here, too, the directions (and significance) of the interaction factor coefficients between the year and being a single parent in the regression which included all the married women were similar to those obtained when the control group was restricted by means of propensity score matching. Nonetheless, the coefficients obtained in the regression which included only the limited sample were lower (absolute values), i.e., the results obtained in the regression after selecting the control group also uphold the existence of the effect of the legislative changes on the number of hours worked by single mothers, albeit with less intensity.

Effect of potential eligibility to receive income support on the labor supply

The main differences between the system of income support confronting the population of single mothers and that for married mothers can be summed up as follows: 1. the proportion of the general population which is potentially eligible for income support (i.e., persons who are not employed) is higher among single mothers than among married mothers; 2. the income support payment is larger for single mothers than for married ones; 3. the structure of the income support payment – the absence of a determining wage for single mothers – embodies a greater disincentive to work for married mothers than for single ones.

An empirical examination of the effect of the totality of changes (i.e., the creation of a special and preferred status of single mother as represented by the differences described above), as has been done till now on the basis of the Labor Force Surveys, attests to the dominant effect of the increase in potential eligibility for income support and the larger payment, namely, of factors 1 and 2. Using data from the Income Surveys reduces the sample but incorporates information about wage and nonwage income and makes it possible to examine the effect of *potential eligibility for income support* (i.e., the effect of the structure of the benefit) on the labor supply.

The effect on the labor supply of the changes in the terms of eligibility, relating also to potential eligibility for income support, among both single and married mothers, was examined by adding a variable for potential eligibility each year in accordance with the eligibility rules set out in the law, and assuming that the mother does not work.[25] The results of the regression indicate, as we saw earlier, that single mothers tended to work more, but as a result of the expansion of the population that was eligible for the benefit and the increased size of the benefit paid, this tendency declined over time (Appendix table A 2–5). Note that according to the results of this estimation the decline in the employment of single mothers relative to married mothers occurred together with the introduction of the law.

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[25] For the way this variable was calculated, see Brender, Peled-Levy, and Kasir-Kaliner, 2002.

From observing the coefficients of potential eligibility among single mothers compared with married ones, we find that a single mother who is potentially eligible for the benefit tends to work more than a mother who is married and is also potentially eligible for the benefit. In other words, when we isolate the effect of the increase in the population that is eligible for income assurance benefit (i.e., neutralize factor 1), with differences between single and married mothers, it is factor 3, namely, the extent of the disincentive implicit in the system, which predominates. Thus, the change in the actual benefit – which enabled single mothers to work at a relatively high wage without completely losing the benefit – embodied an incentive to increase the labor supply of single mothers beyond that implicit in the structure of the income support benefit for married mothers. This was expressed in the greater tendency of single mothers (who are potentially eligible for income support) to work in comparison with the married mothers with whom they were matched in the sample.[26]

(ii) The results regarding poverty

In the regression that examines the probability of being below the poverty line, the demographic variables had the expected effect (Table 11). The higher the education of the head of the household, the lower the probability of being poor; the greater the number of children, the higher the probability of being poor; ultra-orthodox and Arab families have a higher probability of being poor; over time the probability that families with children (not single-parent families) will be poor increases. Single-parent families also have a higher probability of being poor than other families – a finding which is connected with the low number of breadwinners in such families.

The interaction variables between the year and family status (being a single parent), which were introduced into the regression, examine the effectiveness of the Single Parent Law and the changes in the benefits (including the potential eligibility for the benefit) in extricating single parents from poverty. The significant negative coefficient of this variable starting in 1995 indicates that the policy did indeed reduce the probability of poverty among single-parent families by 4 percentage points. Thus, even though the legislative changes served to reduce the relative wage income of single mothers – by reducing both their employment rate and the number of hours worked – the effect of the greater generosity of the benefits on the sources of income of single parents was greater[27].

6. SUMMARY AND CONCLUSIONS

The Single Parent Law, which was introduced in 1992, gave special treatment to single parents, particularly under the Income Support Law. In 1994 and 1995, in the framework of

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[26] The legislative changes of 1992-95 also expanded the population that was potentially eligible among single mothers to those whose potential earnings were relatively high, and they anyway tend to work more.

[27] An examination of the interaction variable between the year and the status of single mothers, in the standard wage equation (total wages and wage per hour worked), shows that the coefficient is negative throughout the period, but its absolute value rose after 1995. This result for wage per hour worked is consistent with the predominance of the cancellation of the determining wage, which enabled single mothers to work for a relatively high wage (the total wage) without completely losing the benefit, which reduced the gross threshold wage per hour worked of single mothers. For the total wage, there is also the effect of the decline in the number of hours worked among employed single mothers.

the laws designed to reduce the extent of poverty and income inequality, as well as amendments to the Single Parent Law, additional changes were made which affected the terms of eligibility of this segment of the population. These changes increased the size of the benefit paid to single-parent families and expanded the population of eligible persons, but also enabled them to work for a relatively high wage without completely losing the benefit. The present study examines the effect of these changes on the propensity of single mothers from the established population to participate in the labor market and to work, as well as on the extent of their work and their probability of being poor.

Table 11
The Link Between Poverty and Other Characteristics[a]
(main results[b], dependent variable: being below the poverty line = 1)

Explanatory variable	Coefficient
No. of children (relative to 2 children)	
1	-0.03
3	0.05
4−5	0.12
6+	0.19
Years of schooling of head of household	
(relative to 11−12 years)	
0−8	0.17
9−10	0.09
13−15	-0.06
+16	-0.10
Single parents	0.23
Dummy variables	
For 1988−2003 (average)	0.02
Single mother x Year	
1988−1994 average[c]	0.003
Single mother x Year 1995	-0.11
Single mother x Year 1996	-0.02
Single mother x Year 1997	0.03
Single mother x Year 1998	-0.02
Single mother x Year 1999	-0.06
Single mother x Year 2000	-0.03
Single mother x Year 2001	-0.06
Single mother x Year 2002	-0.07
Single mother x Year 2003	-0.05

[a] Families from the established population with children under the age of 18, head of household aged between 25 and 54.

[b] The full results are given in Table 2−6 in Appendix 2.

[c] The coefficient of the interaction variable takes positive values in 1988, 1990, 1993, and 1994, and negative values in 1989, 1991, and 1992.

SOURCE: Regression run on Income Survey data of CBS for 1987−2003.

The examination of the effect of the increased benefits and easing the eligibility criteria as applied to single parents in 1992–1995 indicates that the changes acted to reduce the labor supply of single mothers in all respects: their labor-force participation rate fell, as did their employment rate and the number of hours worked, while their employment in part-time positions rose. This was in contrast with the continued upward trend in the labor supply of married mothers. This result was obtained for the various groups of single mothers (divorcees, unmarried mothers, separated mothers, and widows). The result is also valid when the trends among single mothers were compared with those in a matched sample of married mothers selected for characteristics similar to those of the single mothers, thereby constituting a control group. Notwithstanding, our research shows that a change in the structure of the actual benefit – which enabled single mothers to work for a relatively high wage without losing the full benefit – embodied an incentive to increase their labor supply beyond that which was implicit in the structure of the income support benefit for married mothers. Consequently, the single mothers who were potentially eligible for income support tended to work more than their married counterparts. Our research also shows that the changes in the size of the benefit and the eligibility rules reduced the extent of poverty among single-parent families.

In conclusion, the combination of findings regarding the effect of the Single Parent Law on the labor supply and the probability of being poor indicates that the policy did in fact succeed in reducing the extent of poverty but by doing so increased growing dependence on welfare and reduced labor income. The policy measures introduced in 2002, which included a sharp reduction in welfare payments and attendant benefits to single mothers, and the introduction of subsidies for employment and the costs of going out to work in August 2003, helped to increase the participation and employment rates of single mothers as of 2003, and more intensively in 2004, compared with the slight fall in the participation and employment rates of married mothers. However, the order in which the changes were introduced – slashing benefit payments before subsidizing employment – and the fact that these measures were adopted at a time of growing unemployment, were reflected in a steep increase in the poverty rate among single-parent families in 2003 and a decline in the rate at which families emerged from poverty with the aid of the welfare system.

APPENDIX 1
THE CONNECTION BETWEEN THE PARTICIPATION AND EMPLOYMENT
RATES OF SINGLE MOTHERS AND DEMOGRAPHIC CHARACTERISTICS
(TABLES)

Table A1–1
Participation and Employment Rates of Single Mothers by Selected Demographic Characteristics, 1991–2003

	Participation rate				Employment rate			
	1991	1995	2002	2003	1991	1995	2002	2003
Total	**66.4**	**65.4**	**68.0**	**70.9**	**54.3**	**56.6**	**58.4**	**59.2**
Religion								
Jewish	71.3	69.5	72.8	76.3	58.3	60.0	62.4	63.7
Non-Jewish	13.7	17.8	19.7	9.4	10.8	17.0	18.1	8.0
Length of residence								
Established	68.9	68.7	66.4	69.0	59.9	60.1	57.1	57.4
Immigrants	50.5	56.1	71.5	74.7	17.6	43.7	61.0	62.8
No. of children under 18								
1	69.7	70.2	73.5	76.4	57.0	60.1	63.9	66.1
2	67.6	66.2	68.0	70.5	56.2	58.3	58.3	56.9
+3	48.4	44.8	49.2	54.4	37.1	38.7	39.4	41.2
Youngest child under 5	56.1	48.7	53.1	56.6	41.6	38.7	43.4	39.5
Youngest child under 10	64.3	59.4	63.3	65.8	48.5	50.5	53.5	51.8
Years of schooling								
0–8	30.5	29.5	26.9	25.2	22.7	22.9	23.6	16.3
9–10	62.5	58.1	46.8	54.8	47.2	49.5	39.4	38.9
11–12	80.0	68.1	69.5	71.1	64.7	58.7	56.7	55.9
13–15	82.6	79.0	82.6	84.6	69.6	70.7	73.9	76.8
+16	80.3	85.3	86.4	88.2	70.9	78.4	76.0	78.6

SOURCE: Based on Labor Force Surveys of the CBS, 1991, 1995, 2002 and 2003.

Table A1–2
Participation and Employment Rates of Married Mothers by Selected Demographic Characteristics, 1991–2003

	Participation rate				Employment rate			
	1991	1995	2002	2003	1991	1995	2002	2003
Total	**55.5**	**60.4**	**63.7**	**64.0**	**49.1**	**56.3**	**58.5**	**58.2**
Religion								
Jewish	65.1	71.3	76.2	76.9	57.5	66.4	69.9	69.6
Non-Jewish	8.1	11.5	18.3	19.3	7.4	10.8	17.3	18.4
Length of residence								
Established	55.9	59.1	61.5	61.8	50.6	55.4	56.8	56.4
Immigrants	48.8	70.1	75.7	76.4	25.2	62.7	67.7	68.3
No. of children under 18								
1	60.8	67.4	73.6	73.0	52.0	62.7	67.2	66.8
2	63.1	68.2	70.7	70.9	56.5	63.5	64.8	63.8
+3	46.2	48.7	49.7	50.7	41.5	45.5	46.1	46.4
Youngest child under 5	50.7	51.7	56.8	58.5	44.1	47.2	51.4	52.3
Youngest child under 10	53.5	57.2	60.2	61.3	46.9	52.7	54.8	55.2
Years of schooling								
0–8	18.0	17.3	14.6	14.0	14.9	15.9	12.4	11.7
9–10	42.7	41.0	35.6	35.2	34.6	37.1	30.7	29.1
11–12	58.9	60.8	61.5	61.9	50.6	54.7	54.8	54.6
13–15	75.2	79.0	76.2	76.0	68.7	75.0	70.2	70.1
+16	81.6	85.1	87.2	86.0	76.7	82.3	83.7	81.8

SOURCE: Based on Labor Force Surveys of the CBS, 1991, 1995, 2002 and 2003.

Table A1–3
Participation and Employment Rates of Single Mothers in the Established Population, by Selected Demographic Characteristics, 1991–2003

	Participation rate				Employment rate			
	1991	1995	2002	2003	1991	1995	2002	2003
Total	**68.9**	**68.7**	**66.4**	**69.0**	**59.9**	**61.1**	**57.1**	**57.4**
No. of children under 18								
1	73.8	73.5	71.3	74.6	65.3	65.0	62.4	64.7
2	69.2	71.4	67.3	70.5	60.2	64.3	57.8	56.9
+3	48.6	48.2	51.2	52.3	37.8	42.6	41.7	39.8
Youngest child under 5	60.3	57.1	54.2	57.7	47.6	47.8	43.3	41.9
Youngest child under 10	66.8	65.0	62.6	64.1	54.3	57.8	53.4	50.7
Years of schooling								
0–8	30.9	34.6	28.8	19.0	24	26.8	25.0	12.6
9–10	61.8	57.3	35.8	42.3	47.6	45.0	26.7	26.8
11–12	81.6	70.7	69.4	72.1	67.9	61.3	55.3	56.1
13–15	90.4	87.6	83.0	84.4	86.2	83.8	78.8	77.3
+16	91.6	90.5	89.9	92.5	89.2	86.7	82.1	85.0

SOURCE: Based on Labor Force Surveys of the CBS, 1991, 1995, 2002 and 2003.

Table A1–4
Participation and Employment Rates of Single Mothers in the Established Population, by Selected Demographic Characteristics, 1991–2003

	Participation rate				Employment rate			
	1991	1995	2002	2003	1991	1995	2002	2003
Total	**68.9**	**68.7**	**66.4**	**69.0**	**59.9**	**61.1**	**57.1**	**57.4**
No. of children under 18								
1	73.8	73.5	71.3	74.6	65.3	65.0	62.4	64.7
2	69.2	71.4	67.3	70.5	60.2	64.3	57.8	56.9
+3	48.6	48.2	51.2	52.3	37.8	42.6	41.7	39.8
Youngest child under 5	60.3	57.1	54.2	57.7	47.6	47.8	43.3	41.9
Youngest child under 10	66.8	65.0	62.6	64.1	54.3	57.8	53.4	50.7
Years of schooling								
0–8	30.9	34.6	28.8	19.0	24	26.8	25.0	12.6
9–10	61.8	57.3	35.8	42.3	47.6	45.0	26.7	26.8
11–12	81.6	70.7	69.4	72.1	67.9	61.3	55.3	56.1
13–15	90.4	87.6	83.0	84.4	86.2	83.8	78.8	77.3
+16	91.6	90.5	89.9	92.5	89.2	86.7	82.1	85.0

SOURCE: Based on Labor Force Surveys of the CBS, 1991, 1995, 2002 and 2003.

Table A1–5
Participation and Employment Rates of Married Mothers in the Established Population, by Selected Demographic Characteristics, 1991–2003

	Participation rate				Employment rate			
	1991	1995	2002	2003	1991	1995	2002	2003
Total	**55.9**	**59.1**	**61.5**	**61.8**	**50.6**	**55.4**	**56.8**	**56.4**
No. of children under 18								
1	62.3	65.9	71.8	70.3	56.1	62.4	65.9	64.4
2	64.3	67.5	68.5	69.2	58.6	62.9	63.2	62.4
+3	46.3	48.8	49.6	50.5	41.8	45.6	46.2	46.4
Youngest child under 5	51.1	51.9	55.6	57.0	45.2	47.6	50.6	51.2
Youngest child under 10	54.0	56.6	58.5	59.6	48.3	52.3	53.6	53.8
Years of schooling								
0–8	17.8	16.7	12.0	12.0	14.9	15.5	10.4	10.4
9–10	42.6	38.5	26.7	26.9	35.1	34.6	22.6	22.1
11–12	59.2	60.3	60.5	60.1	51.3	54.4	54.1	52.6
13–15	78.6	79.3	75.2	74.8	74.5	76.4	70.3	68.9
+16	86.3	86.5	87.6	86.8	84.2	84.5	84.5	83.3

SOURCE: Based on Labor Force Surveys of the CBS, 1991, 1995, 2002 and 2003.

Table A1–6
Participation and Employment Rates of non-Ultra-Orthodox Jewish Mothers in the Established Population, by Selected Demographic Characteristics, 1991–2003

	Participation rate				Employment rate			
	1991	1995	2002	2003	1991	1995	2002	2003
Total	**65.6**	**66.9**	**63.2**	**64.4**	**61.4**	**68.8**	**72.5**	**72.2**
No. of children under 18								
1	69.7	69.6	67.3	69.9	62.7	70.4	74.9	73.9
2	64.4	66.0	62.0	62.7	65.5	72.3	74.5	74.3
+3	49.0	57.0	51.0	50.9	56.6	64.0	68.0	68.1
Youngest child under 5	51.2	52.9	51.4	46.6	56.6	62.6	67.9	68.9
Youngest child under 10	58.4	63.9	59.5	57.3	59.8	66.4	70.6	70.7
Years of schooling								
0–8	33.9	37.2	41.0	27.7	31.5	42.4	40.6	43.2
9–10	46.9	49.9	31.4	33.8	43.3	51.7	48.7	47.5
11–12	70.1	63.2	57.1	59.4	56.6	62.0	66.1	64.5
13–15	86.8	85.0	79.4	77.9	78.9	81.7	77.4	78.0
+16	89.2	87.9	82.0	85.5	85.7	86.2	86.4	85.3

SOURCE: Based on Labor Force Surveys of the CBS, 1991, 1995, 2002 and 2003.

APPENDIX 2
RESULTS OF REGRESSIONS

Table A2–1
Labor-Force Participation of Prime-Age Mothers from Established Population,[a]
1985–2003
(OLS, participant = 1, R^2 = 0.32)

EXPLANATORY VARIABLES	Coefficient	p-value	EXPLANATORY VARIABLES	Coefficient	p-value
Intercept	0.23	<0.0001	Year 1991	0.04	<0.0001
No. of children			Year 1992	0.05	<0.0001
(relative to 2 children)			Year 1993	0.06	<0.0001
1	0.02	<0.0001	Year 1994	0.06	<0.0001
3	-0.05	<0.0001	Year 1995	0.06	<0.0001
4–5	-0.13	<0.0001	Year 1996	0.07	<0.0001
6+	-0.21	<0.0001	Year 1997	0.06	<0.0001
Years of schooling			Year 1998	0.07	<0.0001
(relative to 11–12 years)			Year 1999	0.07	<0.0001
0–8	-0.23	<0.0001	Year 2000	0.08	<0.0001
9–10	-0.13	<0.0001	Year 2001	0.09	<0.0001
13–15	0.15	<0.0001	Year 2002	0.08	<0.0001
+16	0.20	<0.0001	Year 2003	0.09	<0.0001
Age groups			**Single mother x Year**		
(relative to 35–44)			Single mother x Year 1986	0.01	0.712
25–29	-0.11	<0.0001	Single mother x Year 1987	0.00	0.839
30–34	-0.04	<0.0001	Single mother x Year 1988	0.00	0.954
44–54	-0.05	<0.0001	Single mother x Year 1989	0.00	0.790
Single mothers	0.16	<0.0001	Single mother x Year 1990	0.00	0.922
Existence of additional breadwinners[b]	0.11	<0.0001	Single mother x Year 1991	0.03	0.142
			Single mother x Year 1992	0.02	0.301
Other demographic variables			Single mother x Year 1993	-0.02	0.394
Jewish	0.36	<0.0001	Single mother x Year 1994	-0.01	0.695
Asian-African origin	-0.01	<0.0001	Single mother x Year 1995	-0.04	0.046
European-American origin	0.01	0.0505	Single mother x Year 1996	-0.05	0.008
			Single mother x Year 1997	-0.04	0.050
Ultra-orthodox	-0.15	<0.0001	Single mother x Year 1998	-0.04	0.050
Dummy variables for 1986–2003			Single mother x Year 1999	-0.07	0.0002
			Single mother x Year 2000	-0.06	0.014
Year 1986	0.00	0.9448	Single mother x Year 2001	-0.08	<0.0001
Year 1987	0.00	0.2768	Single mother x Year 2002	-0.08	<0.0001
Year 1988	0.02	0.0003	Single mother x Year 2003	-0.07	<0.0001
Year 1989	0.03	<0.0001			
Year 1990	0.03	<0.0001			

[a] Mothers aged 25–54 with children under 18.

[b] Families which are not single-parent, i.e., dummy variable which takes the value 1 if there are additional breadwinners.

SOURCE: Based on data from Labor Force Studies of CBS, 1985–2003.

Table A2–2
Employment of Prime-Age Mothers from Established Population,[a] 1985–2003
(OLS, employed = 1, $R^2 = 0.29$)

EXPLANATORY VARIABLES	Coefficient	p-value	EXPLANATORY VARIABLES	Coefficient	p-value
Intercept	0.27	<0.0001	Year 1991	0.02	0.001
No. of children (relative to 2 children)			Year 1992	0.02	0.0003
1	0.02	<0.0001	Year 1993	0.03	<0.0001
3	-0.05	<0.0001	Year 1994	0.04	<0.0001
4–5	-0.12	<0.0001	Year 1995	0.05	<0.0001
6+	-0.20	<0.0001	Year 1996	0.06	<0.0001
Years of schooling (relative to 11–12 years)			Year 1997	0.04	<0.0001
0–8	-0.22	<0.0001	Year 1998	0.05	<0.0001
9–10	-0.14	<0.0001	Year 1999	0.05	<0.0001
13–15	0.18	<0.0001	Year 2000	0.06	<0.0001
+16	0.23	<0.0001	Year 2001	0.05	<0.0001
Age groups (relative to 35–44)			Year 2002	0.05	<0.0001
25–29	-0.13	<0.0001	Year 2003	0.05	<0.0001
30–34	-0.05	<0.0001	**Single mother x Year**		
44–54	-0.04	<0.0001	Single mother x Year 1986	0.00	0.964
Single mothers	0.10	<0.0001	Single mother x Year 1987	0.00	0.927
Existence of additional breadwinners[b]	0.07	<0.0001	Single mother x Year 1988	0.00	0.982
Other demographic variables			Single mother x Year 1989	-0.01	0.530
Jewish	0.32	<0.0001	Single mother x Year 1990	-0.03	0.136
Asian-African origin	-0.03	<0.0001	Single mother x Year 1991	0.00	0.881
European-American origin	0.00	0.5697	Single mother x Year 1992	-0.02	0.294
Ultra-orthodox	-0.15	<0.0001	Single mother x Year 1993	-0.04	0.077
Dummy variables for 1986–2003			Single mother x Year 1994	-0.03	0.164
Year 1986	0.00	0.426	Single mother x Year 1995	-0.06	0.007
Year 1987	0.00	0.616	Single mother x Year 1996	-0.08	<0.0001
Year 1988	0.01	0.048	Single mother x Year 1997	-0.06	0.006
Year 1989	0.01	0.016	Single mother x Year 1998	-0.08	0.0003
Year 1990	0.01	0.027	Single mother x Year 1999	-0.10	<0.0001
			Single mother x Year 2000	-0.09	<0.0001
			Single mother x Year 2001	-0.11	<0.0001
			Single mother x Year 2002	-0.11	<0.0001
			Single mother x Year 2003	-0.11	<0.0001

[a] Mothers aged 25–54 with children under 18.

[b] Families which are not single-parent, i.e., dummy variable which takes the value 1 if there are additional breadwinners.

SOURCE: Based on data from Labor Force Studies of CBS, 1985–2003.

Table A2–3
Extent of Employee Post of Prime-Age Mothers from Established Population,[a]
1985–2003
(OLS, full-time post = 1, $R^2 = 0.14$)

EXPLANATORY VARIABLES	Coefficient	p-value	EXPLANATORY VARIABLES	Coefficient	p-value
Intercept	0.16	<0.0001	Year 1991	0.02	<0.0001
No. of children			Year 1992	0.03	<0.0001
(relative to 2 children)			Year 1993	0.05	<0.0001
1	0.03	<0.0001	Year 1994	0.06	<0.0001
3	-0.06	<0.0001	Year 1995	0.06	<0.0001
4–5	-0.01	<0.0001	Year 1996	0.08	<0.0001
6+	-0.14	<0.0001	Year 1997	0.09	<0.0001
Years of schooling			Year 1998	0.08	<0.0001
(relative to 11–12 years)			Year 1999	0.08	<0.0001
0–8	-0.15	<0.0001	Year 2000	0.08	<0.0001
9–10	-0.12	<0.0001	Year 2001	0.05	<0.0001
13–15	0.03	<0.0001	Year 2002	0.05	<0.0001
+16	0.05	<0.0001	Year 2003	0.08	<0.0001
Age groups			**Single mother x Year**		
(relative to 35–44)			Single mother x Year 1986	-0.01	0.786
25–29	-0.10	<0.0001	Single mother x Year 1987	-0.02	0.484
30–34	-0.04	<0.0001	Single mother x Year 1988	0.00	0.837
44–54	-0.04	<0.0001	Single mother x Year 1989	0.01	0.617
Single mothers	0.12	<0.0001	Single mother x Year 1990	-0.02	0.499
Existence of additional breadwinners[b]	0.05	<0.0001	Single mother x Year 1991	-0.01	0.713
			Single mother x Year 1992	-0.02	0.372
Other demographic variables			Single mother x Year 1993	-0.04	0.052
Jewish	0.21	<0.0001	Single mother x Year 1994	-0.05	0.037
Asian-African origin	-0.03	<0.0001	Single mother x Year 1995	-0.06	0.036
European-American origin	0.01	0.0317	Single mother x Year 1996	-0.06	0.004
Ultra-orthodox	-0.19	<0.0001	Single mother x Year 1997	-0.05	0.016
Dummy variables for 1986–2003			Single mother x Year 1998	-0.08	0.0003
Year 1986	-0.01	0.2689	Single mother x Year 1999	-0.01	<0.0001
Year 1987	0.00	0.3832	Single mother x Year 2000	-0.01	0.0002
Year 1988	0.01	0.0865	Single mother x Year 2001	-0.09	<0.0001
Year 1989	0.02	0.0005	Single mother x Year 2002	-0.11	<0.0001
Year 1990	0.02	<0.0001	Single mother x Year 2003	-0.11	<0.0001

[a] Mothers aged 25–54 with children under 18.

[b] Families which are not single-parent, i.e., dummy variable which takes the value 1 if there are additional breadwinners.

SOURCE: Based on data from Labor Force Studies of CBS, 1985–2003.

Table A2–4
Weekly Hours Worked by Prime-Age Mothers from Established Population,[a]
1985–2003
(OLS, dependent variable = no. of hours worked = 1, R^2 = 0.25)

EXPLANATORY VARIABLES	Coefficient	p-value	EXPLANATORY VARIABLES	Coefficient	p-value
Intercept	9.23	<0.0001	Year 1991	0.82	<0.0001
No. of children			Year 1992	1.10	<0.0001
(relative to 2 children)			Year 1993	1.88	<0.0001
1	1.11	<0.0001	Year 1994	2.26	<0.0001
3	-2.40	<0.0001	Year 1995	2.74	<0.0001
4–5	-5.50	<0.0001	Year 1996	3.08	<0.0001
6+	-7.52	<0.0001	Year 1997	2.87	<0.0001
Years of schooling			Year 1998	2.77	<0.0001
(relative to 11–12 years)			Year 1999	2.69	<0.0001
0–8	-8.13	<0.0001	Year 2000	3.11	<0.0001
9–10	-5.45	<0.0001	Year 2001	3.08	<0.0001
13–15	4.66	<0.0001	Year 2002	3.19	<0.0001
+16	6.55	<0.0001	Year 2003	2.83	<0.0001
Age groups			**Single mother x Year**		
(relative to 35–44)			Single mother x Year 1986	-0.13	0.889
25–29	-5.52	<0.0001	Single mother x Year 1987	-0.77	0.403
30–34	-2.26	<0.0001	Single mother x Year 1988	0.00	0.997
44–54	-1.68	<0.0001	Single mother x Year 1989	0.00	0.999
Single mothers	5.19	0.0011	Single mother x Year 1990	-1.03	0.242
Existence of additional breadwinners[b]	2.60	<0.0001	Single mother x Year 1991	-0.04	0.964
Other demographic variables			Single mother x Year 1992	-0.76	0.378
Jewish	10.87	<0.0001	Single mother x Year 1993	-1.35	0.117
Asian-African origin	-1.43	<0.0001	Single mother x Year 1994	-1.27	0.140
European-American origin	0.22	0.0815	Single mother x Year 1995	-2.33	0.006
Ultra-orthodox	-8.14	<0.0001	Single mother x Year 1996	-3.27	<0.0001
Dummy variables for 1986–2003			Single mother x Year 1997	-2.53	0.003
Year 1986	-0.26	0.221	Single mother x Year 1998	-3.34	<0.0001
Year 1987	0.28	0.187	Single mother x Year 1999	-5.13	<0.0001
Year 1988	0.67	0.002	Single mother x Year 2000	-3.66	0.028
Year 1989	0.85	<0.0001	Single mother x Year 2001	-5.05	<0.0001
Year 1990	0.79	0.0002	Single mother x Year 2002	-5.24	<0.0001
			Single mother x Year 2003	-4.91	<0.0001

[a] Mothers aged 25–54 with children under 18.

[b] Families which are not single-parent, i.e., dummy variable which takes the value 1 if there are additional breadwinners.

SOURCE: Based on data from Labor Force Studies of CBS, 1985–2003.

Table A2–5
Employment of Prime-Age Mothers from Established Population,[a] 1990–2003
(OLS, employed = 1, $R^2 = 0.24$)

EXPLANATORY VARIABLES	Coefficient	p-value	EXPLANATORY VARIABLES	Coefficient	p-value
Intercept	0.39	<0.0001	**Single mother x Year**		
No. of children			Single mother x Year 1991	0.003	0.4440
(relative to 2 children)			Single mother x Year 1992	-0.07	<0.0001
1	0.03	<0.0001	Single mother x Year 1993	-0.06	<0.0001
3	-0.05	<0.0001	Single mother x Year 1994	-0.11	<0.0001
4–5	-0.16	<0.0001	Single mother x Year 1995	-0.04	<0.0001
6+	-0.27	<0.0001	Single mother x Year 1996	-0.16	<0.0001
Years of schooling			Single mother x Year 1997	-0.14	<0.0001
(relative to 11–12 years)			Single mother x Year 1998	-0.04	<0.0001
0–8	-0.20	<0.0001	Single mother x Year 1999	-0.13	<0.0001
9–10	-0.13	<0.0001	Single mother x Year 2000	-0.21	<0.0001
13–15	0.16	<0.0001	Single mother x Year 2001	-0.07	<0.0001
+16	0.23	<0.0001	Single mother x Year 2002	-0.20	<0.0001
Age groups			Single mother x Year 2003	-0.14	<0.0001
(relative to 35–44)			**Interaction between year and**		
25–29	-0.15	<0.0001	**potential eligibility for**		
30–34	-0.06	<0.0001	**income support**		
44–54	-0.03	<0.0001	(Year x Potential ligibility)		
Single mothers	0.02	<0.0001	Year 1991	-0.02	<0.0001
Other demographic			Year 1992	0.03	<0.0001
variables			Year 1993	0.01	<0.0001
Jewish	0.27	<0.0001	Year 1994	0.02	<0.0001
Asian-African origin	0.00	<0.0001	Year 1995	-0.04	<0.0001
European-American			Year 1996	0.01	<0.0001
origin	0.00	<0.0001	Year 1997	0.01	<0.0001
Ultra-orthodox	-0.16	<0.0001	Year 1998	0.03	<0.0001
Dummy variables for			Year 1999	-0.01	<0.0001
1991–2003			Year 2000	-0.00	0.0080
Year 1991	0.00	0.8460	Year 2001	-0.02	<0.0001
Year 1992	-0.01	<0.0001	Year 2002	-0.03	<0.0001
Year 1993	0.01	<0.0001	Year 2003	-0.01	<0.0001
Year 1994	0.02	<0.0001	**Interaction between year,**		
Year 1995	0.03	<0.0001	**potential eligibility for**		
Year 1996	0.03	<0.0001	**income support, and being**		
Year 1997	-0.001	0.1630	**a single parent**		
Year 1998	-0.003	<0.0001	(Year x Potential eligibility x		
Year 1999	0.03	<0.0001	Single parenthood)		
Year 2000	0.04	<0.0001	Year 1991	0.13	<0.0001
Year 2001	0.03	<0.0001	Year 1992	0.12	<0.0001
Year 2002	0.03	<0.0001	Year 1993	0.06	<0.0001
Year 2003	0.02	<0.0001	Year 1994	0.09	<0.0001
			Year 1995	0.18	<0.0001
			Year 1996	0.20	<0.0001
			Year 1997	0.13	<0.0001
			Year 1998	0.04	<0.0001
			Year 1999	0.16	<0.0001
			Year 2000	0.22	<0.0001
			Year 2001	0.07	<0.0001
			Year 2002	0.18	<0.0001
			Year 2003	0.13	<0.0001

Table A2–6
Poverty Among Families with Children,[a] 1987–2003
(OLS, below poverty line = 1, R^2 = 0.24)

EXPLANATORY VARIABLES	Coefficient	p-value
Intercept	0.24	<0.0001
No. of children		
(relative to 2 hildren)		
1	-0.03	<0.0001
3	0.05	<0.0001
4–5	0.12	<0.0001
6+	0.19	<0.0001
Years of schooling		
(relative to 11–12 years)		
0–8	0.17	<0.0001
9–10	0.09	<0.0001
13–15	-0.06	<0.0001
+16	-0.10	<0.0001
Age groups		
(relative to 35–44)		
25–29	0.09	<0.0001
30–34	0.04	<0.0001
44–54	0.004	<0.0001
Single mothers	0.23	<0.0001
Other demographic variables		
Jewish	-0.19	<0.0001
Asian-African origin	-0.00	<0.0001
European-American origin	-0.00	<0.0001
Ultra-orthodox	0.32	<0.0001
Dummy variables for 1988–2003		
Year 1988	-0.01	<0.0001
Year 1989	-0.00	<0.0001
Year 1990	0.01	<0.0001
Year 1991	0.00	<0.0001

EXPLANATORY VARIABLES	Coefficient	p-value
Year 1992	-0.01	<0.0001
Year 1993	0.00	<0.0001
Year 1994	0.01	<0.0001
Year 1995	0.00	<0.0001
Year 1996	0.00	<0.0001
Year 1997	0.01	<0.0001
Year 1998	0.02	<0.0001
Year 1999	0.03	<0.0001
Year 2000	0.03	<0.0001
Year 2001	0.05	<0.0001
Year 2002	0.06	<0.0001
Year 2003	0.07	<0.0001
Single mother x Year		
Single mother x Year 1988	0.04	<0.0001
Single mother x Year 1989	-0.03	<0.0001
Single mother x Year 1990	0.01	0.009
Single mother x Year 1991	-0.01	0.001
Single mother x Year 1992	-0.03	<0.0001
Single mother x Year 1993	0.01	<0.0001
Single mother x Year 1994	0.03	<0.0001
Single mother x Year 1995	-0.11	<0.0001
Single mother x Year 1996	-0.02	<0.0001
Single mother x Year 1997	0.03	<0.0001
Single mother x Year 1998	-0.02	<0.0001
Single mother x Year 1999	-0.06	<0.0001
Single mother x Year 2000	-0.03	<0.0001
Single mother x Year 2001	-0.06	<0.0001
Single mother x Year 2002	-0.07	<0.0001
Single mother x Year 2003	-0.05	<0.0001

[a] Families from established population with children, where head of household is aged between 25 and 54.

SOURCE: Based on data from Income Survey of CBS, 1987–2003.

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