

Household Expenditure on Preschools

Kyrill Shraberman and Nachum Blass*

Abstract

From 2003 until 2012, the average expenditure per child in preschool education (ages 2-5) rose by 43 percent. Beginning in the 2012-2013 school year, the Compulsory Education Law was fully implemented to include 3-4-year-olds, which resulted in a decrease of 3 percent in the average expenditure. It was found that for households with 3-4-year-olds only, the average decline in expenditure was less than the tuition fees, since most of those benefiting from the law's extension were relatively well-off households. Households in the lower income categories already received government subsidies before full implementation of the law, so their expenditures did not change. The main accomplishment from the law's full implementation was a rise in the number of 3-4-year-olds attending preschool. Although the expenditure burden is substantially lower among Arab Israeli households, the share of children in preschool from this sector is lower (79 percent in the 2013-2014 school year) than in the Jewish sector (89 percent in the same school year). Despite the rise in public expenditure on preschool education, the resource allocation relative to GDP did not change. This resulted in a rise in the public sector share in place of the private sector in financing preschool education.

Kyrill Shraberman, Researcher, Taub Center. Nachum Blass, Principal Researcher in education, Taub Center.

Introduction

Israel's education system is, for the most part, operated and funded by the state and local authorities through the State Education Law and the Compulsory Education Law. For most of the state's existence, the Compulsory Education Law applied to children aged 5 and over, except for special cases.¹ However, in the 2012-2013 school year, the Knesset decided on full implementation of the law for all children aged 3-4, in keeping with the recommendations of the Committee for Socioeconomic Change headed by Professor Manuel Trajtenberg (hereafter the Trajtenberg Committee). The factor behind the decision to fully implement the law, after many delays through the Economics Arrangements Law, was the social protests of 2011, which aimed the spotlight on the economic burden borne by young families due to the high cost of living. Expenditures on preschool, especially in private settings, had a special place among the protesters' demands, which found expression in the movement called "mechaat agalot" ("the Stroller Protest").

This chapter looks at how the law's full implementation affected Israeli households' expenditures on preschool. The analysis covered daycare centers, private preschools, heder (in the Haredi, or ultra-Orthodox, sector), public preschools and afternoon programs (afternoon program expenditures were included in the study because the public institutions generally operate only until the early afternoon, and are supplemented by a system of afternoon programs and after school clubs).²

1 The decision to extend the Compulsory Education Law to ages 3-4 was made many years ago, but was implemented only in part and only in localities and neighborhoods of low socioeconomic status.

2 Compulsory kindergartens (for ages 5 and over) were not included in the study, as kindergarten registration for this age group had been compulsory for all since 2003, while registration for pre-compulsory "preschool" programs was instituted, as noted, only in recent years. Also, the preschool system contains private institutions as well as public ones (in contrast to the compulsory kindergarten system, which is mainly public), necessitating a different research approach.

Figure 1 presents indices for average expenditure on educational programs at various levels, as well as indices for net income and consumption expenditure per capita, for the period 2003 to 2014.³ The figure shows that preschool expenditure increased by 40 percent, while per capita net income and consumption expenditure per capita rose by 25 percent and 30 percent, respectively. These data indicate that the relative burden of spending on preschool increased substantially during this period, both relative to all household expenditures and relative to household income. By contrast, parental payments for primary and post-primary education increased to a lesser degree than did household income and consumption expenditure, which is to say that the spending burden at these educational levels declined.

Figure 1. Various indices

Index year: 2003=100



Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

³ The year 2003 was chosen as the starting year for a number of reasons. Firstly, in that year the Israeli economy began to grow again after the crisis of the second intifada, meaning that household income and expenditures were then at a nadir. Had the indices started in an earlier time period, the rates of change would likely have been more modest. Secondly, the years preceding 2003 witnessed a change in the way variables were defined in household expenditure surveys; the choice of this year ensures uniformity of definitions throughout the research period.

The following sections will look at other breakdowns of household expenditures on preschool: by consumption level (consumption quintiles), geographic location and sector. This will make it possible to examine, in depth, the differences between Israeli society's various population groups and to understand the disparities and their development between 2003 and 2014. The impact on preschool expenditures of extending the Compulsory Education Law to 3-4-year-olds will be examined, both for the target population (households with children aged 3-4) and for other populations (especially households with 2-year-olds).

Literature review and data

The last few years have witnessed the publication of several studies that looked at household expenditure on education in Israel. These works were not necessarily concerned with expenditure on pre-compulsory programs, but they do constitute a major contribution to the study of education expenditures. The studies, carried out by the Central Bureau of Statistics, examined the level of household spending on education by cross-referencing data from two different sources: the Ministry of Education's pupil file, and the Central Bureau of Statistics (CBS) Expenditure Survey. Cross-referencing makes it possible to determine precisely the amount of expenditure per child, and the educational sector of the preschool setting.

Heller et al. (2007) looked at total education spending per pupil in 2003 for primary school pupils, and compared the expenditure share of households with that of the government and local authorities. They also assessed differences in education expenditure between types of supervisory authorities, and spending differences by household income level. Cohen-Lerner and Mansour (2015) examined the expenditure levels of households with children in primary and post-primary frameworks in 2012. What distinguishes the 2015 study from the earlier one is the addition of post-primary education, as well as an estimate of spending on education services (such as the purchase of books and notebooks, writing implements, computers and accessories, Internet services, and library memberships) – or in other words: the inclusion of household expenditures in areas of consumption that are directly or indirectly related to the household's children. To a certain degree, this is an attempt to estimate the cost of “educational infrastructure,” i.e., a range of services and means of consuming knowledge and experiences or of enriching one's inner life.

Brender and Strawczynski (2015) investigated the expenditures of households with children up to age 9 and analyzed spending on education

relative to current household income. The analysis included expenditures on different types of preschool, afternoon programs, primary school, and tutoring. In this chapter, education spending will be examined in relation to consumption spending – and not in relation to income, as was the case in the studies mentioned above.

Kaushal, Magnuson and Waldfogel (2011) looked at the impact of consumption expenditure on the level of spending on informal education.⁴ The rationale for examining this expenditure as a percentage of all consumption expenditures, rather than as a percentage of current income, is because households are assumed to base their consumption on permanent income, i.e., the permanent portion of their income, and not on current income which might also include variable or temporary elements. The permanent income hypotheses (Friedman, 1957) holds that individuals try to define their consumption so that it will not significantly change over different periods in their lives, even if their income changes due to factors beyond their control. Thus, they base their consumption on the “permanent” portion of their income, which depends on factors such as household members’ education, skills and ages, so as to minimize disruptions by uncontrollable factors (such as natural disasters or economic volatility). According to the hypothesis, financial consumption expenditures are an assessment of the permanent portion of a household’s income, meaning that an examination of the burden of education expenditure relative to consumption expenditure enables us to analyze the decisions that households make both given their current preferences (e.g., whether to invest in their children’s education rather than consuming in other areas), and given their expectations regarding the future (for instance investment in children’s education increases their chances of enjoying higher income later on).

Methodological remarks. As noted, this section will look at expenditure level per child in terms of various household attributes: economic ability, sector and area of residence (periphery versus center). In the CBS Expenditure Surveys, data for expenditure on preschool appear as an aggregate figure for each household, one that does not take into account differences in the number of household members between various groups in Israeli society. In order to control for these differences, the estimates offered in this chapter note both the average expenditure per child and the total household expenditure relative to the per capita consumption expenditure.

4 After-school activities, courses, tutoring, and the like.

Another question that arises from the data is that of survey timing relative to the time of tuition payment. For methodological reasons, expenditure surveys estimate households' expenditures over the three months that preceded the survey month, to give better statistical attributes when using the monthly estimates to make annual estimates. However, not all of the households with children in preschools that were included in the expenditure survey noted pre-school education related expenditures during the relevant quarter.⁵ Some households pay the entire year's tuition in one payment at the start of the school year, so that if the survey was administered to a household during the spring, for instance, the data would show no expenditures in that category. A similar problem exists regarding households that (for whatever reason) defer the year's payment until the end of the school year, but participated in the survey at the start of the school year. Thus, the figure "zero" in the expenditure item does not necessarily reflect the households' average payment. As such, calculating the average expenditure solely on the basis of data for households with preschool expenditures will constitute the upper limit for estimating the average, while the total for all households with children of preschool age, even those not sent to pre-school, will constitute the lower limit. The estimate of the average that is presented in this section is midway between the two options: it includes only households with children in preschool, but also takes into account households whose expenditure figure is "zero."

Ages covered. The population studied was limited to households whose children are in preschool and aged 2-5. The public preschool and daycare system accepts children from the age of 18 months, but the percentage of those aged 2 and under who are enrolled is not high. It was therefore decided to limit the children's age to 2 years in order to focus the estimates on preschools and daycare centers and not on family childcare frameworks that accept babies from the age of 3 months.

Frameworks covered. Classifying preschools into public and private is not without its ambiguities. For example, the data on public preschools that appear in the Statistical Abstract of Israel include children in Haredi preschools, while the CBS Household Expenditure Surveys refer to Haredi preschools as private preschools. In general, there are two types of public institutions: official institutions and institutions that are recognized but not

⁵ The children's enrollment in educational frameworks was established by averages of the "most recent school" variable in the CBS Household Expenditure Survey's individual files.

official (hereafter: recognized institutions). In the official institutions, budgeting and operations are the responsibility of government authorities (the Ministry of Education or local authority). Recognized institutions are operated by private entities or nonprofits (e.g., women's organizations or organizations affiliated with various Haredi education streams), they receive funding from state authorities (the Ministry of Education or Ministry of Economy) and they have to meet requirements and are subject to supervision. Both types of public frameworks have subsidy mechanisms in addition to parental payments. The remaining institutions that do not fall within these categories are regarded as private, and have no tuition limits or mechanisms for payment subsidies.

In the public preschool system, the institutions are clearly differentiated by age range: daycare centers are for children aged 18 to 33 months, while the "pre-compulsory" preschools are for children aged 34 months to 5 years. Among other things, this division stems from the fact that different governmental agencies are responsible for different age groups – the Ministry of Economy (formerly the Ministry of Industry, Trade and Labor) is in charge of daycare centers, while the Ministry of Education and local authorities are responsible for preschools. This division also manifests in parental payment levels. In the private system, by contrast, age distinctions are not consistent.

Despite the public-private distinction, changes in the public system (relating to, for example, parental payments and the availability of places in the various frameworks) also affect the private system. A special section will therefore be devoted to private institutions and their potential impact on average payment levels.

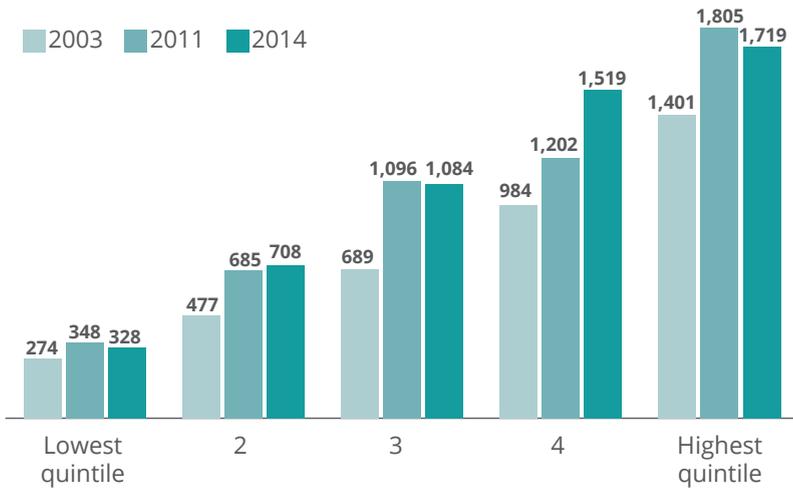
1. Education expenditure by quintile

Figure 2 presents the average monthly expenditure per child in preschools by household consumption quintiles.⁶ The findings paint a complex and unexpected picture. Trends in preschool expenditure are very similar between the highest and lowest quintiles, and also between the three middle quintiles. In the first and fifth quintiles, expenditure increased by a rate of 27 percent between 2003 and 2011, while between 2011 and 2014, the rate

⁶ Consumption quintiles were calculated in terms of financial expenditure per standard person, as weighted by the Central Bureau of Statistics. The population under examination is households with children aged 2-5 enrolled in preschools, by most recent educational institution of the child in the expenditure surveys' individual file.

declined by 5-6 percent. In the middle quintiles, the increase in spending between 2003 and 2011 was greater on the whole (except for Quintile 4, where there was a special data problem that is explained below), while between 2011 and 2014 spending levels hardly changed, even rising slightly.

Figure 2. Average monthly expenditure on preschool per child
By consumption quintile, 2014 prices, NIS



Preschool settings include daycare centers, private and public preschools. Consumption quintiles per standard person in households with children aged 2-5 in preschool.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

The data presented above are surprising. The Trajtenberg Committee's final report noted that the annual expenditure on education for children aged 3-4 reach nearly NIS 8,000 per year in public preschools. Since children are in programs for 10-11 months of the year, the Trajtenberg Committee calculated the monthly expenditure per child in public preschools to be NIS 700- 800 per month before the implementation of the Compulsory Education Law for 3-4-year-olds. One might have expected that a reduction of NIS 700-800 in monthly spending due to reduced tuition would have a large impact on household expenditures but, as noted, no such impact can be discerned. There are a number of possible explanations for this, which may apply separately or cumulatively to each of the income groups.

- It is possible that at the same time that expenditures on education for 3-4-year-olds declined in accordance with the law, there was a rise in spending on daycare centers and private preschools for 2-year-olds (this hypothesis will be verified later in the chapter).
- Paid services may have been added to the kindergartens (what is referred to as “supplementary curricula”) that did not exist before the law became applicable (this is a less likely possibility).
- Expenditure data for the lowest quintile are consistent with policy developments, as from that quintile’s perspective the universal implementation of the Compulsory Education Law produced a small decline overall for ages 2 to 5 and no change whatsoever for ages 3-4. Families in this quintile already had full or nearly full exemptions from tuition payments for their 3-4-year-old children, whether due to living in localities belonging to the lowest socioeconomic clusters (rankings 1-2) or in neighborhoods where renewal or social service projects were in operation, or because their income levels were low.
- Families in the highest quintile were nearly all affected by the law’s universal implementation, as their high income levels had not previously entitled them to tuition subsidies (Appendix Figure 6). However, it is likely that even after the implementation, these families were able to continue spending the same, or nearly the same, amount of money without compromising their well-being, and so they continued sending their children to private preschools that had not joined the Ministry of Education’s subsidy arrangement. It may also be that a small number of parents in this quintile live in localities with prior tuition exemptions, so that the average impact was smaller than expected. These explanations are also largely valid for Quintiles 2 and 3, but with a lesser degree of likelihood than Quintiles 4 and 5, due to income and spending differences between quintiles.
- The trend that is hardest to explain is that seen in Quintile 4. In this quintile, the tuition subsidy’s impact ought to have manifested in significantly reduced expenditure but, as noted, there was actually a large increase in spending after the law’s universal implementation. There is no convincing explanation for this phenomenon, besides the fact that in this quintile, the number of instances of “zero” expenditure on pre-compulsory education in 2011 was exceptional compared with

2010 and 2012, meaning that the average expenditure for that year was lower than in the year before and after (see the discussion of the reasons for “zero” expenditure in the previous section). This is a reminder of the need for great caution when addressing the sample data, although these are the best data available.

In addition to differences in average expenditure on preschools, the quintiles also differ in their total expenditure levels. A look at the ratio between expenditure per child and per capita consumption expenditure in each quintile makes it possible to determine which portion of their spending families devote to preschools; that is, to what degree preschool expenditure constitutes a burden on the family expenditure budget (the share of preschool spending out of total consumption expenditure will be referred to hereafter as “the expenditure burden”).

As can be seen in Figure 3, the expenditure per child in preschool constitutes a substantial portion of per capita consumption expenditure in all quintiles. The preschool expenditure burden on households belonging to the highest and lowest quintiles is quite similar, and is low compared with the burden on the other quintiles. Also, although the level of spending did not change between 2011 and 2014, the expenditure burden declined substantially. The reason for this is that in the highest and lowest income quintiles there was a rise in incomes and, accordingly, in consumption spending. Although spending on preschools in the highest quintile is rather high in absolute terms, in relative terms (as a share of total expenditure) it is low, because total consumption expenditure is higher (Appendix Figures 10 and 11).

Since 2011, the preschool expenditure burden has increased in Quintile 2 to a level identical to the burden borne by Quintiles 3 and 4. This worsening of the burden is due to the fact that spending on preschools in this quintile increased faster than did consumption spending. In households belonging to Quintiles 3 and 4 the opposite occurred — a more rapid increase in consumption spending than in spending on preschool — and a consequent decrease in the preschool expenditure burden in these quintiles until 2014. The burden on the second quintile did not change over these years.

Figure 3. Average monthly expenditure per child on preschool relative to per capita expenditure
By consumption quintiles



Preschool settings include daycare centers, private and public preschools. Consumption quintiles per standard person in households with children aged 2-5 in preschool.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

The reason for the lowest quintile's relatively low preschool expenditure is its more extensive use of the public system (especially for ages 3-4) which, through graduated government subsidies, tries to equalize the expenditure burden between the country's less affluent and more affluent strata.

The question of when a burden is "equal" is an ideological one. Some feel that when the burden (the expenditure) relative to income or expenditure is identical, the outcome is socially equitable, i.e., an expenditure of NIS 100 in a family whose consumption budget is NIS 1,000 has the same meaning in burden terms as does an expenditure of NIS 1,000 for a family with a budget of NIS 10,000. Another approach takes issue with this, as a family whose budget is NIS 1,000 and has to spend NIS 100 on schooling will be obliged to forego more crucial items in its household budget than a family with a NIS 10,000 budget that spends NIS 1,000 on preschool.

2. Education expenditure by sector and place of residence

Figure 4 presents the preschool expenditure burden on Jewish and other non-Arab Israeli households (hereafter: Jews) and on Arab Israeli households.⁷ The expenditure burden borne by a typical Jewish household is three times greater than the burden borne by a typical household in the Arab Israeli sector, even though Arab Israeli households have, on average, lower incomes. One reason for this is that the vast majority of children enrolled in preschools in the Arab Israeli sector are in public institutions. Many 3-4 year olds were exempt from tuition even before the law was fully implemented, due to belonging to clusters 1-2, while 2-year-olds attend daycare centers subsidized by the Ministry of Economy. Another possible reason is the fact that a higher share of households in the Arab Israeli sector that send their children to preschools have no payment data available for them.⁸

Until 2006, the expenditure burden gap between Jews and Arab Israelis widened, due mainly to a more rapid rise in education spending relative to consumption spending among Jews (Appendix Figures 11 and 12). Since 2012, the disparities have been shrinking, due to an expenditure burden reduction in the Jewish sector.

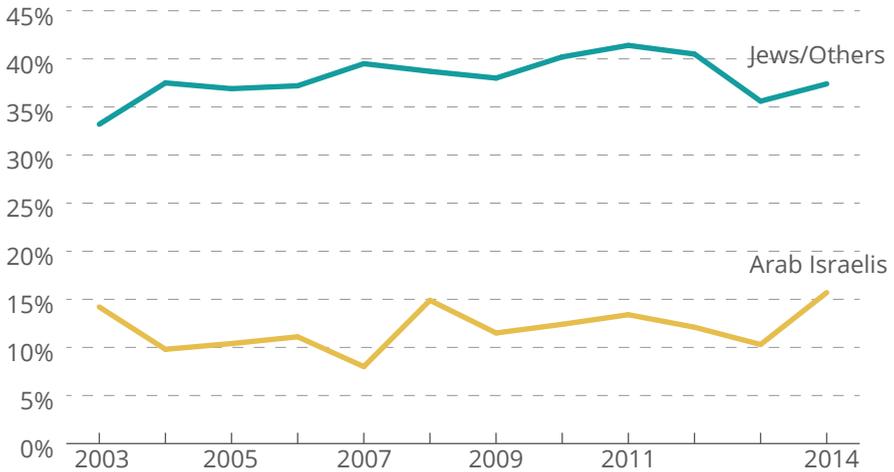
The rising percentage of households with no preschool expenditures may be a sign that full implementation of the law, by sparing households additional tuition expenses, has encouraged them to send children to public preschool. If this is indeed the case, then had the law not been implemented these children would have remained at home.

7 The category “other” refers to adherents of other religions, or to those classified as “religiously unaffiliated,” who are not Jews.

8 Expenditure survey data alone do not satisfactorily answer the question of why it is more common to find a shortage of information on household payments to educational institutions in the Arab Israeli sector than in the Jewish sector. A lack of means can provide only a partial explanation, as the lack of expenditure data also characterizes Arab Israeli households belonging to the higher consumption quintiles. It may be that some preschools in the Arab Israeli sector are unofficial and unrecognized by the state authorities, as with Islamic Movement preschools, where parents pay only a symbolic fee.

Figure 4. Average monthly expenditure per child on preschool relative to per capita expenditure

By sector



Preschool settings include daycare centers, private and public preschools.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

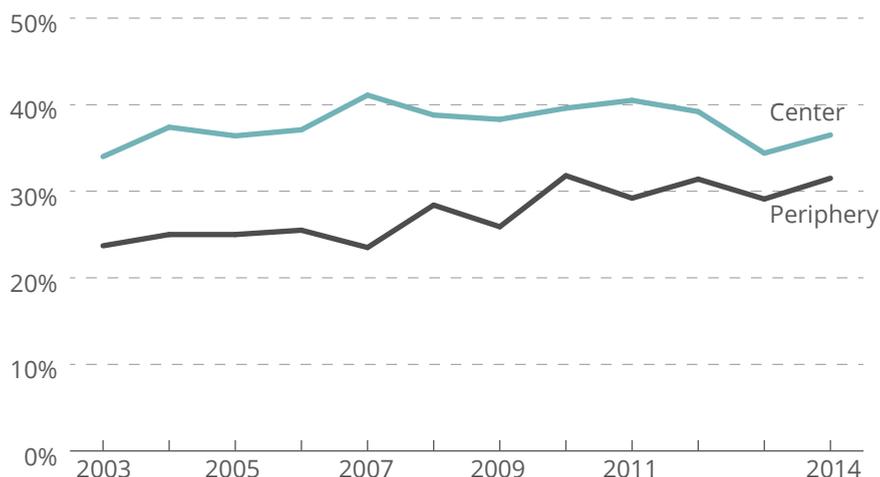
Data: Central Bureau of Statistics, Expenditure Survey.

Figure 5 shows the share of preschool expenditure in consumption spending by household place of residence: central Israel versus the periphery. Between 2003 and 2014, the expenditure burden borne by households in the center was greater, but the relative burden on households in the periphery increased more markedly. Up to 2007, there was no substantial change in the periphery burden, but 2008 ushered in an upward trend, with the expenditure burden stabilizing at a higher level. The reason for this is very likely an increase in the percentage of households in the periphery sending their children to private preschools (as demonstrated in Appendix Figure 4).

By contrast, households in central Israel showed an upward trend in the preschool expenditure burden up to 2007, followed by several years of stability and then a sharp decline after 2012 — after the law was implemented. Because the law's implementation did not have a similar effect on periphery households and, as noted, those households' expenditure burden actually increased over the past few years, preschool expenditure burden disparities between center and periphery declined during this period, especially in the years after the Compulsory Education Law was implemented for ages 3-4.

Figure 5. Average monthly expenditure per child on preschool relative to per capita expenditure

By area of residence



Preschool settings include daycare centers, private and public preschools. Periphery includes the following districts: Safed, Kinneret, Golan; Kinneret; Jezreel; Acre; Jezreel Nazareth; Golan; Ashkelon; Beer Sheva; Judea and Samaria; Gaza (until 2005).

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

The impact of the number of children per household

All of the analyses up to now have been normalized for household size, i.e., they did not take into account the effect of differences in household structure.⁹ It is interesting to look at household composition in the different groups. Figure 6a presents the average number of persons in households with children aged 2-5 enrolled in preschools by sector. Over the years, the average number of persons in Arab Israeli households has declined, while the average for Jews has risen. It is reasonable to assume that these trends are

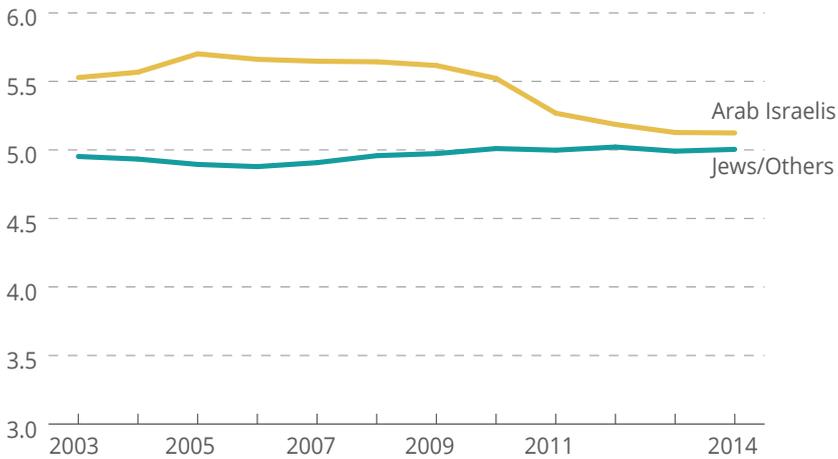
⁹ The data were also broken down by place of residence (center versus periphery), but were highly correlated with the sector variable — since most Arab Israeli households live in the periphery while the majority of central Israel residents are Jews — and are therefore not presented here.

the result of declining fertility rates among Arab Israeli women and rising fertility among Jewish women over the past decade (Appendix Figure 5).

The data in Figure 6b show that, in addition to a significant decline in the number of preschool aged children in Arab Israeli households, there has been a slight drop in recent years in the average number of children per household belonging to the lowest quintile. This decline, though apparently due to the Arab Israeli households belonging to this quintile, appears to be much more moderate than the Arab Israeli-sector trend, while the Jewish sector — especially among Haredi households, most of whom belong to the lowest expenditure quintile — is actually showing increased fertility. By contrast, the rise in the number of children in the highest quintile is explained mainly by a rise in the number of children in Jewish households, which constitute a large proportion of the quintile. This figure indicates that the increase in Jewish women’s fertility also characterizes affluent households and not merely those belonging to the lower socioeconomic strata, in which the Haredi population’s share is relatively high.

Figure 6a. Average household size for households with preschool-age children

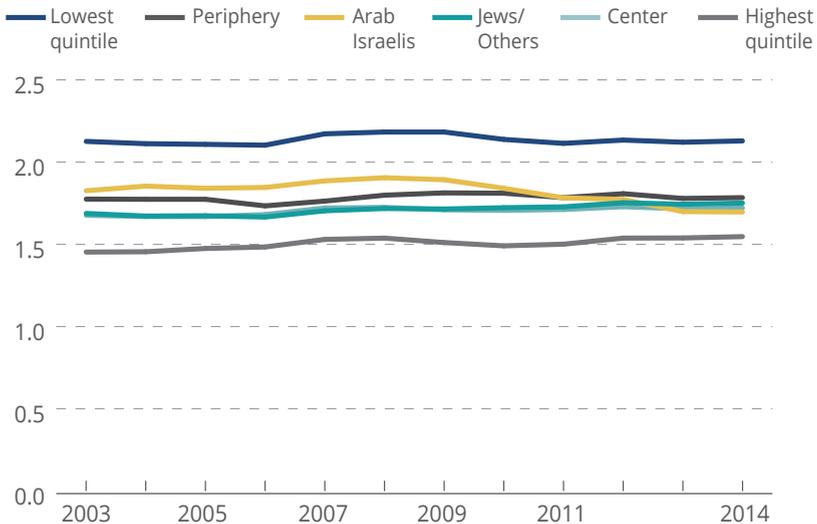
By sector, three-year moving average



Source: Kyrill Shraberman and Nachum Blass, Taub Center.
Data: Central Bureau of Statistics, Expenditure Survey.

Figure 6b. Average household size for households with preschool-age children

By sector, area of residence and consumption quintile



Periphery includes the following districts: Safed, Kinneret, Golan; Kinneret; Jezreel; Acre; Jezreel Nazareth; Golan; Ashkelon; Beer Sheba; Judea and Samaria; Gaza (until 2005). Consumption quintiles per standard person in households with children aged 2-5 in preschool.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistic, Expenditure Survey.

3. The impact of extending implementation of the Compulsory Education Law to ages 3-4

As noted in the Introduction, the research period witnessed a major policy change with regard to pre-compulsory education: the Compulsory Education Law was extended to include all children aged 3-4. This expanded coverage came in the wake of recommendations by the Committee for Socioeconomic Change (the Trajtenberg Committee), which convened after the social justice protests in Israel in the summer of 2011. Although the protests were initiated in response to continual increases in the cost of housing, “the Stroller Protest” — a more focused demonstration consisting of parents of young children — was particularly notable for its many demands and grievances.

The declared purpose of extending implementation of the Compulsory Education Law to 3-4-year-olds was to reduce parental preschool spending by granting full tuition exemption to children enrolled in preschools. Significantly increasing the number of places in public preschools, encouraging private institutions to accept supervision by government authorities, and offering benefits to those institutions in exchange for a commitment not to raise their prices for five years after entering into the arrangement were the means to achieve this goal. Before the law was implemented, pupils from the lower socioeconomic strata enrolled in daycare centers for 2-4-year-olds were eligible for subsidies from the Ministry of Economy or the Ministry of Social Affairs and Social Services, based on income. Today, following implementation, this arrangement is valid only for 2-year-olds, while for 3- and 4-year-olds, all payments for regular activity (before afternoon hours) come out of the Ministry of Education budget.¹⁰ The Ministry of Education bears responsibility both for providing the services to the public and for ensuring the services' quality. However, in public preschools — as in the daycare centers and preschools for 2-year-olds — there are additional charges for enrichment activities (parties, outings and the like), meaning that even fully subsidized tuition for ages 3-4 does not entirely do away with parental preschool payments.

Children are placed in public daycare centers from the age of 18 months, and in preschools from 33 months, depending on availability. In cases of over-registration, admission committees convene to decide which children will attend the given public institution (priority is given to low-income households and to older children).

This section will look at the change in placement numbers at public preschools for 3-4-year-olds, the law's target population. Following this, the average expenditures of households with children enrolled in preschools will be analyzed by children's age, to determine how the target population's expenditure was affected, and whether policy changes affected other populations as well.

10 Ministry of Economy subsidy of institutions for 2-year-olds is more substantial than that provided for ages 3-4, as the expenditure on preschools for this age group is higher. Until the 2012-2013 school year, the government subsidy for ages 3-4 in localities and neighborhoods not covered by the Compulsory Education Law was more limited, and given only to families with per capita incomes of less than NIS 2,500 (at 2014 prices). The percentage of those who received the subsidy intended for 2-year-olds was larger, and this was offered to households with per capita incomes of up to NIS 5,300 (at 2014 prices, Appendix Figure 4).

Public preschool enrollment rates. The fundamental change that implementation of the Compulsory Education Law for 3-4-year-olds was meant to bring about was an immediate increase in the preschool pupil population. To meet the demand, considerable resources were allocated for the massive construction of preschools, expanding access even in places where all 3-4-year-olds were supposed to have been accommodated before the law's full implementation. Since the vast majority of 5-year-olds are already in public kindergarten with just a few still in preschool, the 2 and under age group is the main child population not directly affected by implementation of the law.¹¹

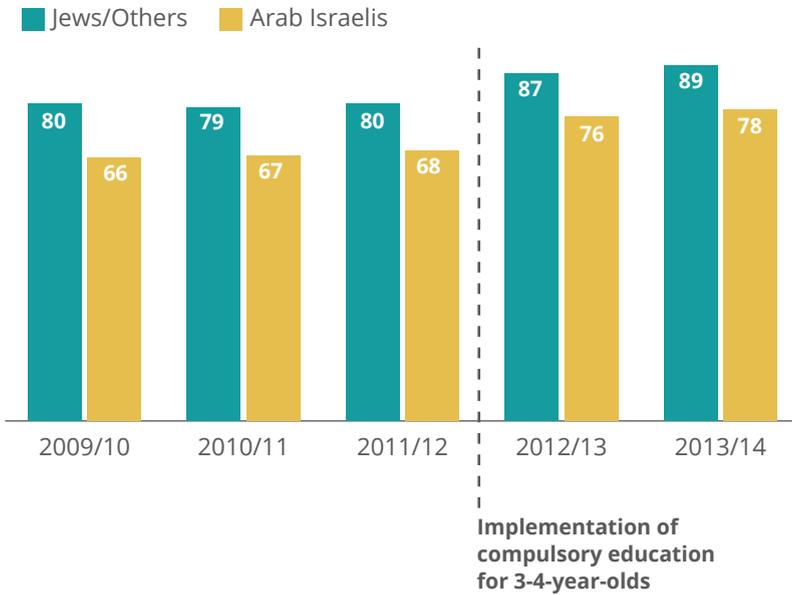
Figure 7 presents the rates of placement of 3-4-year-olds in public preschools between the 2009-2010 and the 2013-2014 school years. We can see that two years after the law was implemented, the Jewish placement rate had indeed increased by 9 percentage points, from 80 percent of all children in this age group in 2009-2010 to 89 percent in 2013-2014.¹² In the Arab Israeli sector, there was an even more notable increase during that period — 12 percentage points (from 66 percent to 78 percent).

11 The 2 and under age group may have been affected indirectly, due to increased disposable income, as will be shown.

12 See an in-depth discussion of this topic in this chapter's online appendix.

Figure 7. Children attending public preschool, ages 3-4

By sector, percent



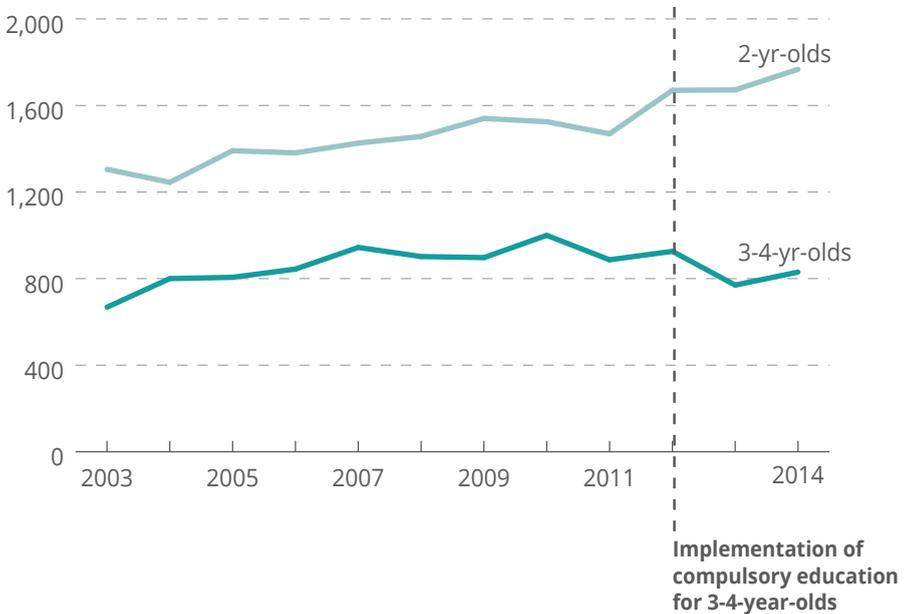
Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, *Statistical Abstract of Israel*, Tables 2.3, 8.5.

Parental payments. An analysis of the average preschool expenditure for ages 3-4 only¹³ (Figure 8a) shows an 11.5 percent decline in the average payment, from NIS 926 in 2012 to NIS 830 in 2014. The expenditure decline is much lower than the full tuition amount that had formerly been paid, for reasons mentioned in the first section of this work (some parents did not pay tuition in the past either, and it is likely that the preschool operators took advantage of the tuition exemption to increase other payments). In contrast, the payments of households with 2-year-old children only, went up: from NIS 1,670 in 2012 to NIS 1,767 in 2014, a 6 percent increase. The payment for the law's target population declined after implementation, while payments by households not belonging to the target population actually increased.

13 Expenditure data include education expenditure by household, not by individual. Due to this, we cannot identify the average expenditure per child of a given age in a household that has children of different ages. To work around this limitation, we focused on households with children in the 3-4 range only, or age 2 only (in the relevant sections).

Figure 8a. Average monthly expenditure per child on preschool
By age of child, 2014 prices, NIS



Preschool settings include daycare centers, private and public preschools.

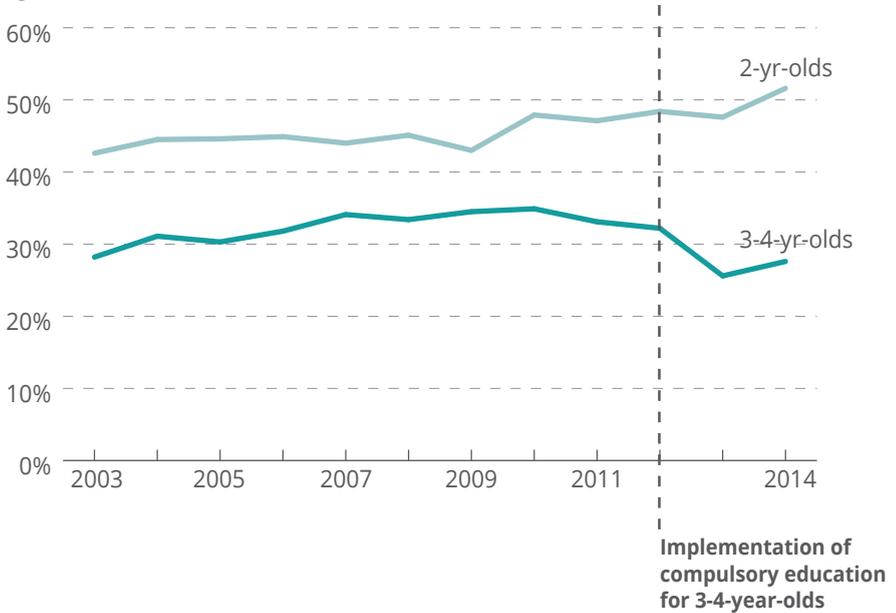
Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

When looking at the average preschool expenditure burden relative to total consumption spending, a similar conclusion is reached: since the law was fully implemented, the relative burden declined for families with children in the 3-4 age range only, but rose for households with 2-year-olds (Figure 8b).

Figure 8b. Average monthly expenditure per child on preschool relative to per capita expenditure

By age of child, 2014 prices



Preschool settings include daycare centers, private and public preschools.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

The differences in payments between the different age groups are not actually due to changes in preschool ownership (private or public), but rather to funding policy: ages 3-4 receive government funding of their tuition even if they are in private frameworks that meet Ministry of Education conditions. By contrast, households with children aged 2 only are not eligible for similar funding, and we may therefore reasonably assume that the increased parental payments for children in this age group are due to higher tuition in private preschools, and not to a rise in the enrollment rate (Appendix Figures 6 and 7).

Afternoon program payments. The law assures full funding of parental payments for children's participation in official public programs until 14:00, and in recognized but unofficial programs until 13:20. To enable children to remain in care after official hours, supervised public afternoon programs and after school clubs operate, with a variety of subsidy arrangements depending on the mother's work-hours and the household's per capita income. The subsidies range from NIS 250 to NIS 400 per month for children in afternoon programs or clubs. However, the subsidy covers only part of the cost, and parents are expected to make additional payments. Thus, the cost of afternoon programs for children aged 3 and up should be looked at as part of the parental payments.

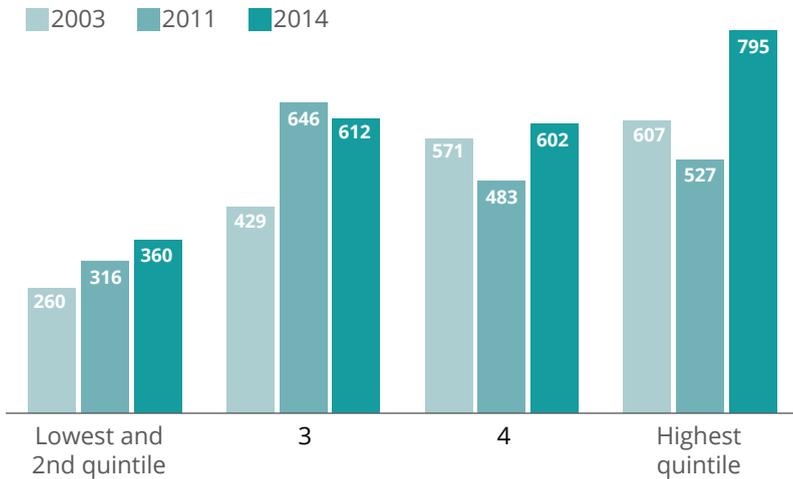
Unlike daycare center and preschool expenditures, which were assessed for all households with children of the relevant ages who are enrolled in education programs, afternoon program expenditures will be examined only for households whose children are in preschools and who opted for afternoon program care (for afternoon program utilization rates, see Appendix Figure 8). Additionally, because afternoon program expenditures are calculated for the entire household, the relative share of afternoon payments for children of the relevant ages was calculated.¹⁴ Due to the low number of observations, households in the two lowest consumption quintiles were combined (Quintiles 1 and 2).

As Figure 9 shows, average afternoon program expenditures rose in all consumption quintiles between 2003 and 2014, and the lower quintiles displayed the greatest increase (38 percent in Quintiles 1 and 2, and 43 percent in Quintile 3). In the higher quintiles, the average expenditure in 2011 was lower than in 2003, but by 2014 it had risen substantially – by 25 percent in Quintile 4 and by 51 percent in the highest quintile (compared with 2011). The total change between 2003 and 2014 was 5 percent for households in Quintile 4, and 31 percent for households in Quintile 5.

14 The allocation was made using the following calculation: each household with children of afternoon program age (ages 3 to 9) was broken down into children of preschool age and children at all other educational levels (compulsory kindergarten and primary school). Following this, each child was assigned his relative share of the afternoon program expenditure (his share of all of the children of afternoon-program age).

Figure 9. Average monthly expenditure on afternoon programs for children in preschool

By consumption quintiles, 2014 prices, NIS

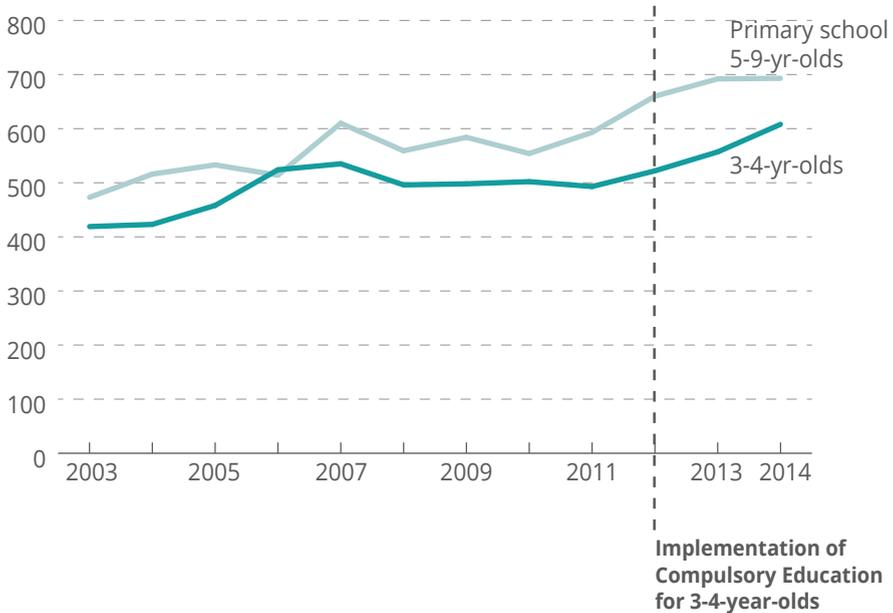


Source: Kyrill Shraberman and Nachum Blass, Taub Center.
Data: Central Bureau of Statistics, Expenditure Survey.

Figure 10 presents the average afternoon program payment per child (in this case as well the study population comprises only households for which data on afternoon program payments exist). Among households with children aged 3-4 only, a rise in the average expenditure was observed throughout the period, which intensified from 2012 to 2014: from NIS 419 in 2003 to NIS 522 in 2012 and NIS 608 in 2014, for a total increase of 45 percent between 2003 and 2014. For households with children in primary school, the average afternoon program expenditure was NIS 473 in 2003, NIS 660 in 2012, and reached NIS 693 in 2014 — a rise of nearly 47 percent between 2003 and 2014. During that period, the percentage of households with afternoon program expenditures (hereafter: afternoon program utilization rates) also increased in both age groups, especially from 2011 onward (see Appendix Figure 9).

Figure 10. Average monthly expenditure per child on afternoon programs

2014 prices, NIS



For children ages 5-9 in kindergarten and primary school.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

Overall — except for Quintile 3 — families behaved as expected: increased spending on afternoon programs is made possible (at least in part) by reduced spending on tuition. At the same time, despite additional government-subsidized spaces in afternoon programs, the average expenditure on these programs rose. Since there was an increase both in the number of children utilizing afternoon program services and in the average expenditure per child, the unavoidable conclusion is that the increase in demand for afternoon programs was greater than the increased supply of such programs. Though less likely, the other possible reasons for rising afternoon program costs are the expanded array of services such as hot meals and enrichment activities, and, perhaps, longer hours (on the assumption that some programs offer several different part/full-time options).

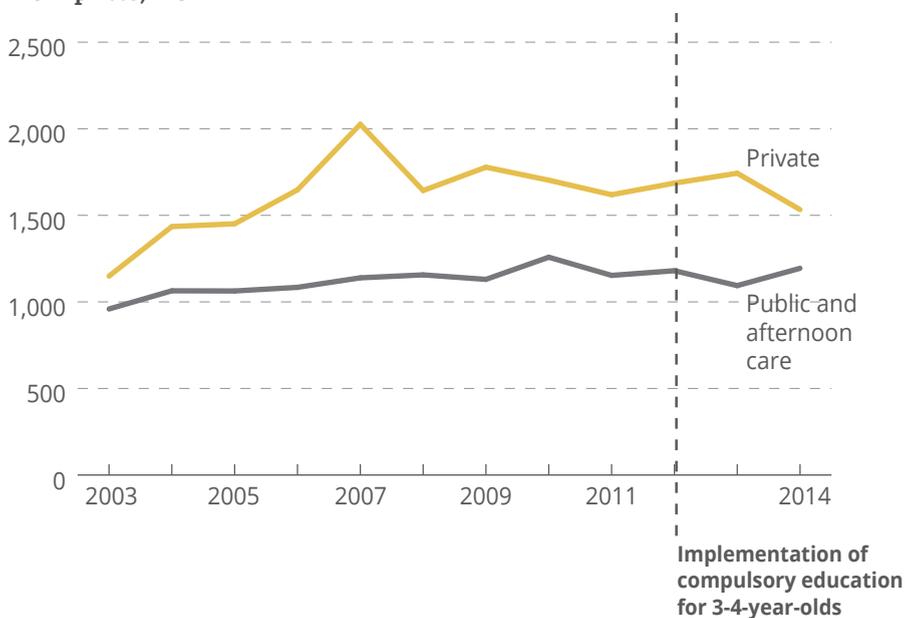
To a certain degree, afternoon program expenditures supplement expenditures on public preschools, which operate until the early afternoon only; many parents need afternoon services so that they can work full-time. By contrast, the vast majority of private frameworks provide service throughout the day, including the later afternoon hours. To determine whether, on the whole, the status of households with children aged 3-4 improved due to implementation of the Compulsory Education Law, we must compare expenditures on children in private preschools with expenditures on children in public preschools and afternoon programs. This ensures that we are looking at a similar number of hours per day for both types.¹⁵

Figure 11 shows the development of the average expenditure on education for ages 3-4 in the private and public systems. It appears that, in the years following implementation of the law, there was a decline in private preschool expenditure due to state subsidy of payments for the official, pre-afternoon hours. By contrast, there was a slight increase in parental spending on children in public preschools. The explanation seems to be that many more parents can afford to send children to afternoon programs, which enables them to work full-time or to increase their work hours, thereby raising household income at a higher rate than the afternoon program expenditure.

¹⁵ Household Expenditure Surveys do not assess service quality, but the assumption is that the quality of services provided by private preschools is very similar to that of services provided by public preschools.

Figure 11. Average monthly expenditure payment per child ages 3-4 in public preschool for afternoon programs

2014 prices, NIS



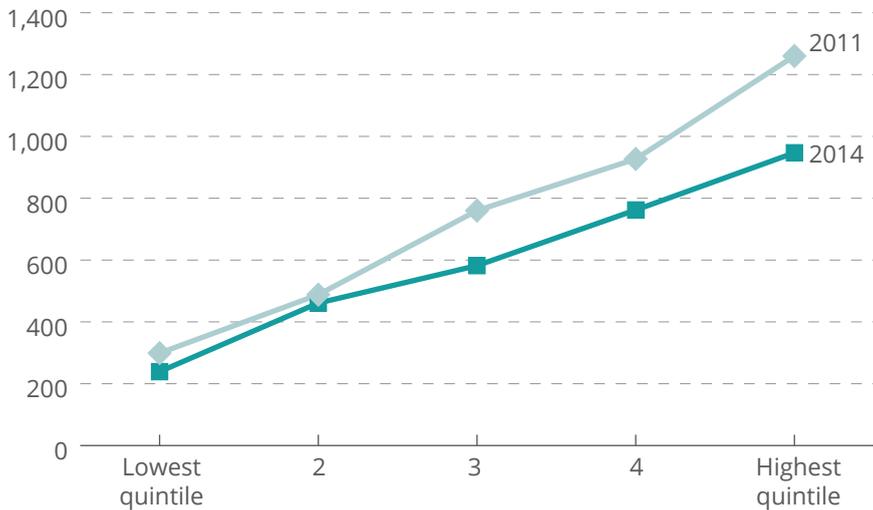
Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

Another aspect of the Compulsory Education Law's coverage of 3-4-year-olds is highlighted by examining its impact on households of different economic statuses. As noted, affluent households were expected to be most affected by the law's expanded implementation, as households in the lower socioeconomic strata already received preschool subsidies. Figure 12 shows the change for 2011 and 2014 in preschool expenditure among households with children aged 3-4 only, by consumption quintiles. As anticipated, the greatest drop in spending is seen among households in the highest quintile, with expenditure decreasing to lesser degrees as one moves downward across the quintiles, with almost no decrease seen in Quintile 1. This demonstrates that the implementation of the Compulsory Education Law was regressive in terms of distribution of benefit.

Figure 12. Average monthly expenditure on preschool children ages 3-4 only

By consumption quintile, three-year moving average, 2014 prices, NIS



Consumption quintiles per standard person in households with children aged 2-5 in preschool.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

Conclusion

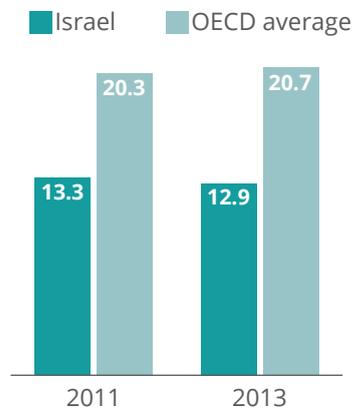
The rise in the number of children enrolled in public preschools and afternoon programs since the 2012-2013 school year, along with the overall decline in parental payments for preschool education, indicates that extending implementation of the Compulsory Education Law to the entire population has benefited parents of 3-4-year-olds. However, we can definitely put a question mark alongside the extent of the benefit. Parents who wish to work in a full-time job are still forced to finance a large share of their children's preschool activities in the afternoon hours, and these payments, to a large extent, offset any gain from the reduction in preschool tuition. On the other hand, it seems that the increased expenditure on afterschool care stems from more demand which became possible when the tuition fees were lowered. Thus, although the reductions could have been greater, the

law's implementation has allowed many more parents to work full-time, and consequently, to earn more than they did before. If these parents worked full-time before implementation, then the government subsidies in tuition fees were an added boon for them as well. In general, it can be said that the average expenditure for a 3-4-year-old in a public preschool has changed little since the law's implementation, and the expenditure for private frameworks declined. At the same time, the array of services provided to 3-4-year-olds has expanded, since many more children are now in preschools and afternoon care. The rise in the share of Jewish children in preschools since the law's implementation is 9 percentage points and in the Arab Israeli sector, it is 13 percentage points. It is important to note that the expenditure burden for preschool in the Arab Israeli sector is one-third of the burden in the Jewish sector, apparently due to the larger number of Jewish children in private and more expensive preschool settings.

Beyond the overall improvement, it is noteworthy that most of the expenditure decline was enjoyed by households of higher socioeconomic standing, since less-affluent households received a variety of benefits before the full implementation of the law. Moreover, the relative preschool expenditure burden for households in the geographic periphery increased during the research period, nearly reaching the level of burden borne by households in central Israel. This burden increase in the periphery may be the result of a surge in demand for places in private preschools and their higher prices due to limited places in the public preschools or a rise in incomes and parental desire to send children to what they feel are better quality schools.

It is important to note that implementation of the law was followed by reports of crowded preschool classes. The enrollment of non-toilet-trained children in the public preschools also contributed to increased teaching staff workload. This, in turn, caused some parents to demand additional staff. All of these

**Figure 13. National overall expenditure per pupil in preschool as a percent of per capita GDP
Ages 3 and over**



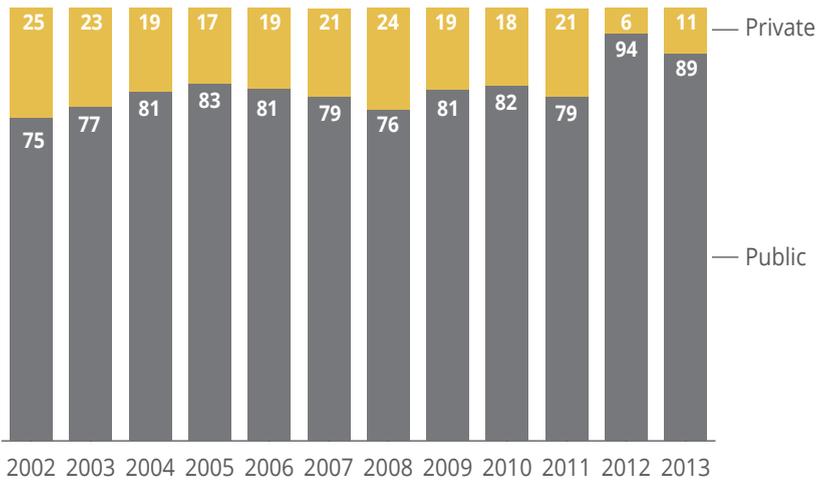
Source: Kyrill Shraberman and Nachum Blass, Taub Center. Data: OECD, *Education at a Glance*.

issues raise questions regarding the quality of service relative to years past, and call for in-depth scrutiny.

Beyond the positive impact that the law's implementation has had at the individual level, we can say that the economy as a whole will benefit from the increase in preschool attendance which will ultimately lead to upgraded human capital – an outcome of the improved cognitive and social abilities shown by children who attend preschool compared to those who do not (Elango, Garcia, Heckman, and Hojman, 2015). Nevertheless, an analysis of the national expenditure per pupil in preschool education¹⁶ as a percentage of per capita GDP (Figure 13) shows no real change in resource allocation between 2011 and 2013, the year after the new policy was implemented. The increase in governmental preschool expenditure, alongside the stability of preschool resource allocation has resulted in a rise in the government share in the public expenditure of preschool education in place of the parents' share (Figure 14).

Figure 14. Financing of national expenditure on preschool education

Percent



Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, *Statistical Abstract of Israel*, Table 8.2.

¹⁶ Ages 3 and over, per OECD definitions.

The disparities between Israel and the OECD in expenditure per preschool pupil suggest that spending on preschool education could be increased, although it is possible that differences in fertility rates between Israel and the OECD contribute to the disparities in resource allocation to preschool education. It is particularly important to emphasize that such an increase would require substantial new funding sources. Expenditure on preschool education can be seen as more of an investment, though, than an expenditure, since improving the skills (both cognitive and social) of young children improves their situation for many years to come. Improving the lives of children, along with additional social returns (like social-benefitting behavior and healthy lifestyle choices), will surely return the investment and even beyond (Elango et al., 2015). In any case, the question of whether social expenditure should be increased, and who should bear the burden of it, lie far beyond the aims of the present chapter. These questions should be part of a larger public debate regarding the degree to which individuals are responsible for their own well-being and for that of their children, and the extent to which citizens' well-being should be the responsibility of society and the state.

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Appendix

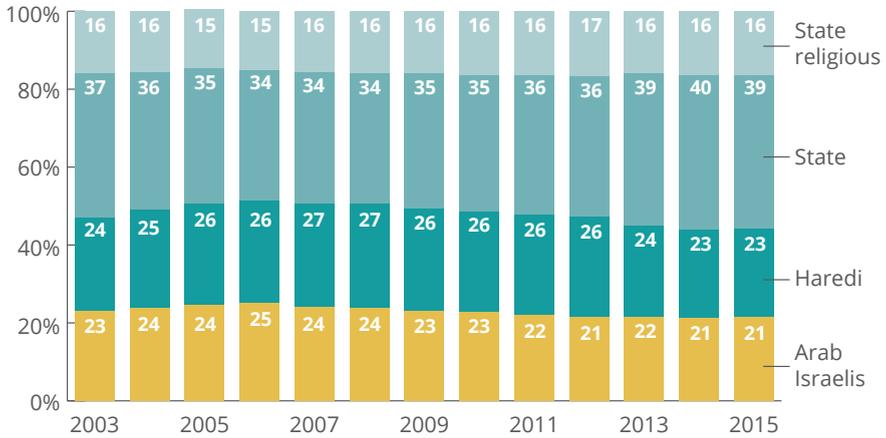
Public framework placement rates

In this chapter, a preschool framework was considered public if it is operated by the state authorities (official framework) or by other entities that meet the conditions for recognition by the authorities (recognized but unofficial framework). Haredi-sector preschools fall into the recognized but unofficial category, and are therefore classified as public in Central Bureau of Statistics' data (*Statistical Abstract of Israel*, Tables 8.4 and 8.5). In contrast, in the Expenditure Survey, Haredi frameworks are classified as private. To resolve this contradiction, the authors identified Haredi households and omitted them when calculating private framework enrollment rates.¹ To determine the identification method's reliability, the method was used to identify Haredi households in the 2014 survey, and the results were then tested for compatibility with data on religious observance levels. The correlation between the survey data and the calculated identifying variable was 0.67.

Appendix Figure 1 presents the distribution of 3-4-year-olds in public preschools by educational stream. As the graph clearly shows, the share of children in the Haredi sector does not vary greatly between 2003 and 2012, and actually declines between 2013 and 2015. These data indicate that even if the method used to identify Haredim in the Expenditure Survey was suboptimal, there is no reason to assume that the increased private preschool enrollment rate was due to a change in the percentage of Haredi children in Israeli preschools.

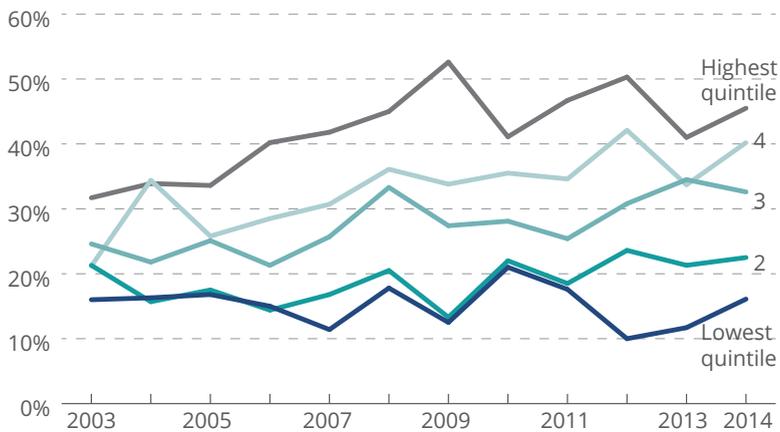
¹ Households were identified as Haredi if the father of the family (first or second degree relative) is a Jew who studied in yeshiva. As it is uncertain whether these households actually belong to the Haredi sector, a better name for this group would be "yeshiva students."

Appendix Figure 1. Distribution of children in public preschools
By educational supervisory authority, ages 3-4, percent



Source: Kyrill Shraberman and Nachum Blass, Taub Center.
 Data: Ministry of Education, *A Wide Perspective*.

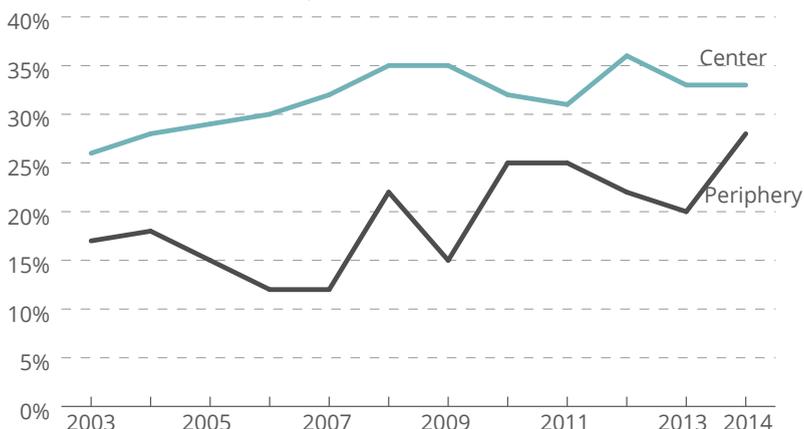
Appendix Figure 2. Private preschool use among households with children in preschool
Percent out of all households, by consumption quintiles



Source: Kyrill Shraberman and Nachum Blass, Taub Center.
 Data: Central Bureau of Statistics, Expenditure Survey.

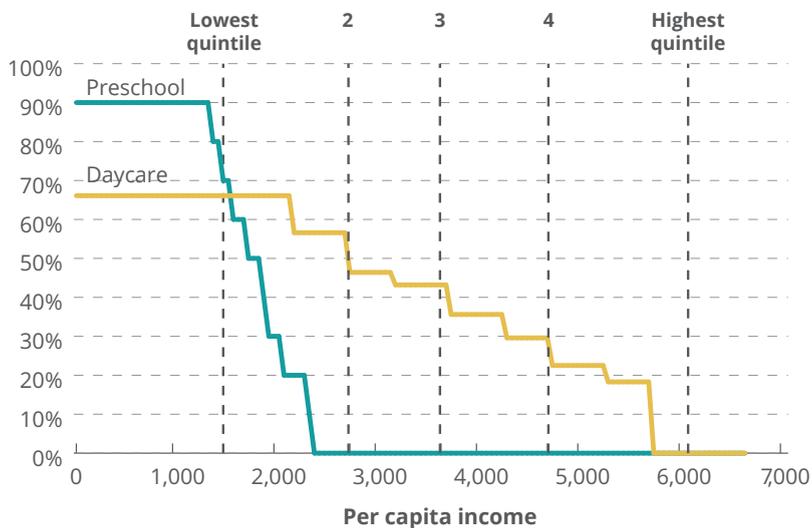
Appendix Figure 3. Private preschool use among households with children in preschool

Percent out of all households, by area of residence



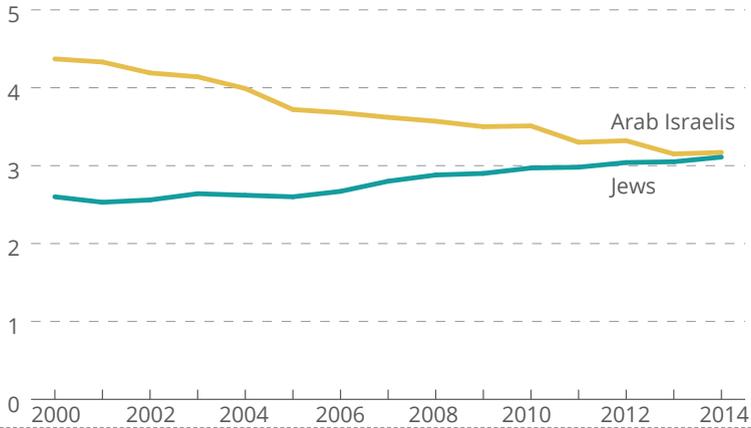
Children in preschool ages 2-5. Periphery includes the following districts: Safed, Kinneret, Golan; Kinneret; Jezreel; Acre; Jezreel Nazareth; Golan; Ashkelon; Beer Sheba; Judea and Samaria; Gaza (until 2005). Consumption quintiles per standard person in households with children aged 2-5 in preschool. Source: Kyrill Shraberman and Nachum Blass, Taub Center. Data: CBS, Expenditure Survey.

Appendix Figure 4. Level of tuition subsidy in monthly payments for daycare and public preschools, 2014 prices, NIS



Level of government subsidy, as a percent of the full tuition in private daycare in 2015. Source: Kyrill Shraberman and Nachum Blass, Taub Center. Data: Ministry of Economy, *Tuition Fees in Settings*.

Appendix Figure 5. Fertility rates for women ages 15-45
By sector, total number of children throughout woman's lifetime

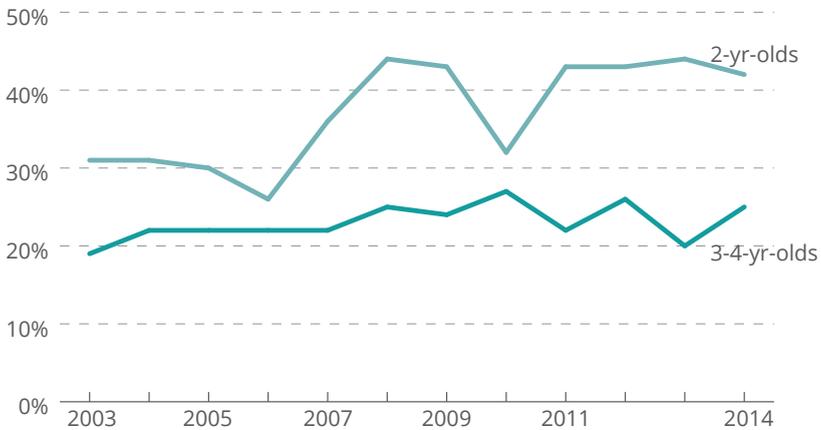


Until 2006, Jews and other religions are grouped together.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, *Statistical Abstract of Israel*, Table 3.14.

Appendix Figure 6. Rate of use of private preschools among households with preschool age children
Percent out of all households, by age of children in household

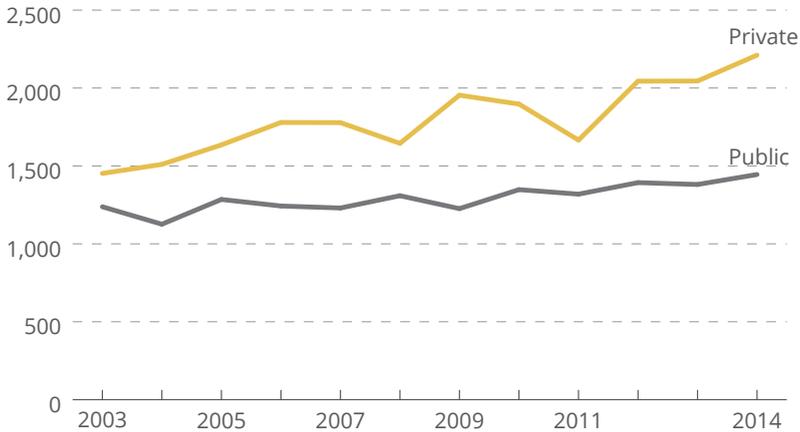


Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

Appendix Figure 7. Average monthly expenditure for a 2-year-old in preschool

2014 prices, NIS



Not including Haredi households.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

Appendix Figure 8. Rate of use of aftercare and after school programs

Percent out of all households, by age of child



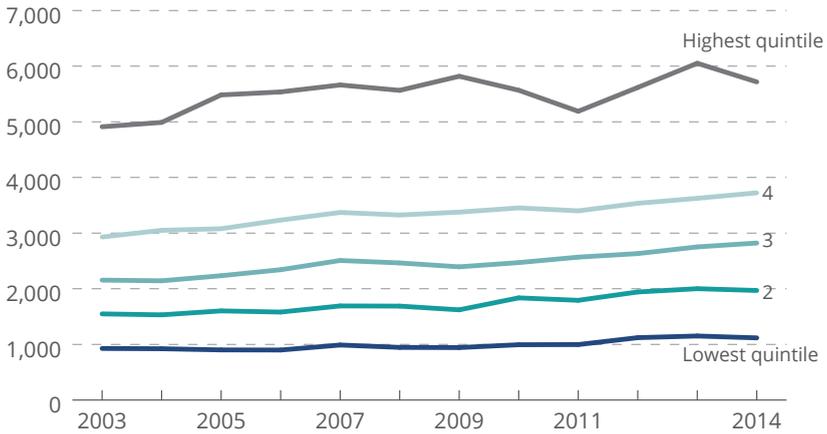
Primary school includes children in compulsory kindergarten (ages 5-9).

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

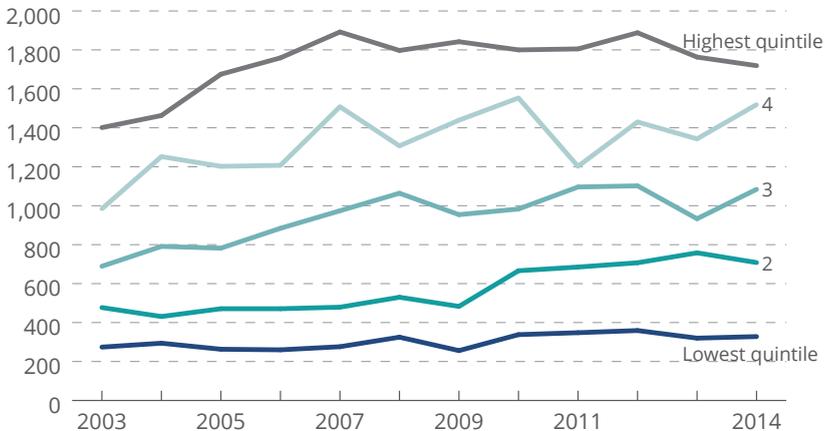
Appendix Figure 9a. Average monthly per capita consumption expenditure

Consumption quintiles per standard person for households with children ages 2-5 in preschool



Appendix Figure 9b. Average monthly expenditure for preschool

By consumption quintiles, 2014 prices, NIS



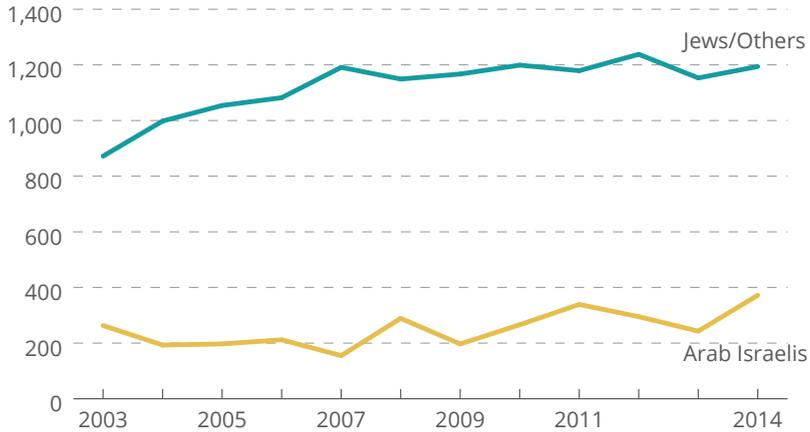
Preschool settings include daycare centers, private and public preschools. Consumption quintiles per standard person for households with children ages 2-5 in preschool.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

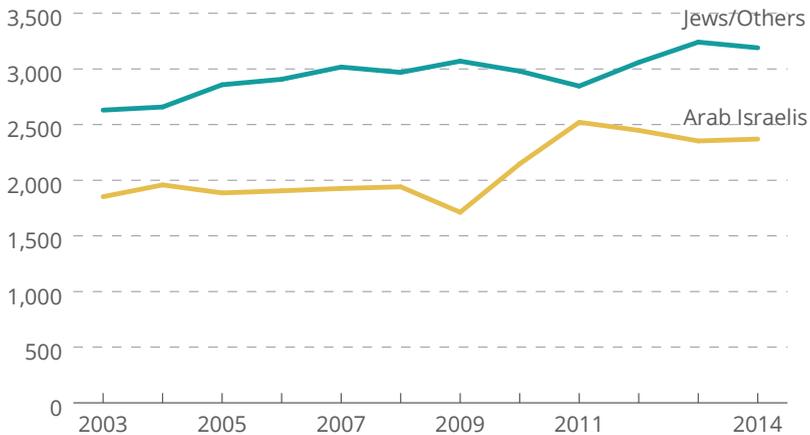
Appendix Figure 10a. Average monthly expenditure for preschool

By sector, 2014 prices, NIS



Appendix Figure 10b. Average monthly expenditure per capita

By sector, 2014 prices, NIS

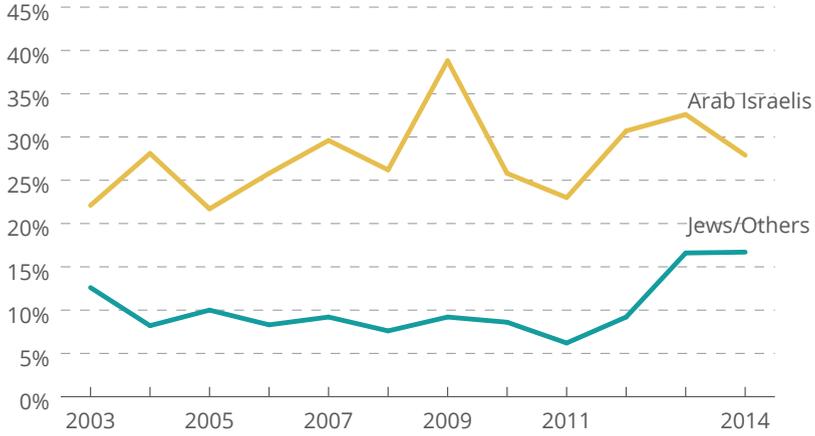


Preschool settings include daycare centers, private and public preschools.

Source: Kyrill Shraberman and Nachum Blass, Taub Center.

Data: Central Bureau of Statistics, Expenditure Survey.

Appendix Figure 11. Share of households with children in preschool with no information on their tuition payments
By sector, percent



Source: Kyrill Shraberman and Nachum Blass, Taub Center.
Data: Central Bureau of Statistics, Expenditure Survey.

